The Social Effects of Gestational Diabetes in “High-Risk Ethnic Groups”

by

Maki Iwase

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto

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Abstract

This ethnographically-informed doctoral study examines the social effects of gestational diabetes (GD) in “high-risk ethnic groups” in order to elucidate how contested categories of disease, risk, and race cross-articulate in authoritative texts, clinical practice, and everyday realities of women of colour. The questions that guide this dissertation study are organized around truth discourses, strategies of intervention, and modes of subjectification: What kinds of discourses are employed to constitute knowledge about GD, risk, and race/ethnicity? What types of subjects are constructed through discourses on GD in “high-risk ethnic groups?” How are race-based risk discourses accomplished locally in the clinical setting? How do women respond to, engage with, and resist race-based risk discourses and practices pertaining to GD? And how do such discourses and practices shape women’s subjectivities from diagnosis to post-partum? Study methods include discourse analysis of three authoritative texts, participant observation in two diabetes education centres in Southern Ontario, and interviews conducted with twelve women of colour in a three time sequence (after diagnosis, before delivery and post-partum). Data generated from these multiple sources were analyzed and interpreted through Foucauldian theoretical concepts of biopower, governmentality, and subjectification. The findings reveal that discourses are neither neutral nor value-free but infused with racial and moral assumptions.
Race-based risk discourses are accomplished in the clinical setting through a variety of strategies that reproduce racial logics by rendering power relations invisible. However, women in this study engaged with and resisted disciplinary practices in enabling and constraining ways that contributed to the formation of an emergent type of racialized subject. I argue that discourses and disciplinary practices participate in the processes of racialization and subjectification which may paradoxically produce unintended effects of contributing to the problem of diabetes. I conclude by calling for greater reflexivity beyond racialization and medicalization.
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“As for what motivated me, it is quite simple; I would hope that in the eyes of some people it might be sufficient in itself. It was curiosity – the only kind of curiosity, in any case, that is worth acting upon with a degree of obstinacy: not the kind of curiosity that seeks to assimilate what it is proper for one to know, but that which enables one to get free of oneself. After all, what would be the value of passion for knowledge if it resulted only in a certain amount of knowledgeableness and not, in one way or another and to the extent possible, in the knower’s straying afield of himself? There are times in one’s life when the question of knowing if one can think differently than one thinks, and perceive differently than one sees, is absolutely necessary if one is to go on looking and reflecting at all.”

(Foucault, 1985: 8)
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Chapter One
Introduction to the Study

Every doctoral research project has a story of an arrival. The arrival of this dissertation originates from a clinical encounter. Almost a decade ago when I was employed as a nurse clinician at a diabetes education centre, a woman of colour who was just weeks away from delivering her first baby approached me after a routine gestational diabetes clinic. She made the shocking observation, “I don’t have a pregnancy, I have diabetes.” I was perplexed because her comment seemed to be at odds with her protruding belly. I can recall thinking: how is this possible? As we talked, it occurred to me that her preoccupation with adhering closely to the diabetic regimen and anxieties around her blood sugars had the effect of distancing her from a bodily sense of pregnancy.

On reflection, I concluded that this woman’s comment is not entirely unintelligible considering what women go through when they are screened, diagnosed, and treated for gestational diabetes within a short period of time. Imagine the following scenario. You are a woman of colour in the second trimester of your first pregnancy, having a routine check-up with your obstetrician. After a brief physical assessment, your obstetrician tells you that everything is fine, but you’re at the point when you’ll need to be screened for gestational diabetes. You ask: what is gestational diabetes? Your obstetrician explains that gestational diabetes (GD) simply means having diabetes, or high sugar levels, during pregnancy, but it’s temporary and typically goes away after delivery. Your obstetrician assures you that it’s standard practice to screen all pregnant women for GD during the 24-28th week of pregnancy. She adds that the purpose of screening is to detect high blood sugars in order to prevent short-term and long-term risks to both mother and baby. Your back goes up after hearing the alarming word: ‘risk’ and you ask what those might be. She informs you that one of short-term risks of high blood sugars during pregnancy is having a macrosomic or ‘big’ baby, making delivery obviously very difficult. There are several other risks associated with GD but she decides not elaborate on them so as not to alarm you further. She tells you that GD is a risk factor for developing type 2 diabetes for you and the baby later on in life. She adds that your ethnicity is a risk factor; meaning, as a member of a “high-risk ethnic population,” you have a higher risk of developing GD. She then mumbles under her breath that you’re short and a little obese, which are also risk factors. All you hear is
short, little old beast and wonder if you were just insulted. Mistaking your knitted brow for an expression of concern, she tells you not to worry, reiterating that this is standard procedure. She hands you a lab requisition for the glucose screening test and advises you to go to the lab around the corner to get it done straight away.

When you arrive at the lab and submit your requisition, the lab technician hands you a bottle of orange liquid and instructs you to drink it entirely within five minutes. It is sickeningly sweet and makes you momentarily nauseous, but you manage to ingest all of it and return the empty bottle to the lab technician. She sets the timer for 60 minutes and instructs you to take a seat in the waiting area. When the timer finally goes off after an hour, she calls you into one of the cubicles and instructs you to sit down and pull up your left sleeve. She applies the tourniquet, palpates your vein, swiftly inserts the needle, and draws a vial of blood. You look away while she does this because you hate needles and anticipate a painful poke. In a matter of seconds, she’s done. Taping the cotton ball onto your arm, she informs you that you’re free to go and that your obstetrician will call you with the results within a few days.

Eventually, the secretary calls you to inform you that the lab results are back and your blood sugars are a bit above the normal range. She asks you to come in to see the doctor that afternoon. Trying to contain your worries about what this all means, you go to the appointment. Your obstetrician tells you that your sugars are a little high and hands you another lab requisition to see if you are diagnostic for GD. She explains that the first test was a screening test and your sugars weren’t high enough for a diagnosis of GD, so the next test is to determine if you do. She sees the worried look on your face and tells you the baby is fine and not to worry. She adds many women develop GD during their pregnancies and they manage just fine by changing their diet. You ask her if you should go to the lab right now and she instructs you to fast overnight and go to the lab first thing in the morning. She explains that they first take your blood followed by the glucose drink and then they take your blood again after one hour and then again after two hours. She advises you to take a book with you as you’ll be there for a few hours.

Despite feeling weak and hungry from fasting the whole night, you make it to the lab first thing in the morning, as instructed. The lab technician takes you to the same cubicle and draws a vial of blood. She hands you a bottle of the glucose and you manage to drink it within the time
limit without gagging or vomiting. Handing the empty bottle back to the lab technician, she sets the timer and asks you to take a seat in the waiting area for an hour. You pull out your book and make yourself comfortable. She calls you back into the cubicle after an hour and draws another vial of blood. She sets the timer again as you walk back to the waiting area and return to your book. After the second hour mark, she calls you in again and takes your blood for the last time. That’s done and you’re free to go home.

A few days later, you receive another call from the obstetrician who informs you that the lab results have returned. She reports that two of the three values are a little high which means that you are diagnostic for GD. Almost in the same breath, she tells you that she has gone ahead and sent a referral to the endocrinologist at the diabetes clinic. You’re speechless, but you’re freaking out inside. After a momentary pause, you ask if the baby is okay. Sensing the fear and panic in your voice, she tells you not to worry, reassuring you that she has many patients with GD who manage their blood sugars with diet. She encourages you to go to the Diabetes Education Centre (DEC) and attend a GD class that’s held every week. Before you can ask what foods to avoid, she quickly explains the nurse and dietitian will educate you on what to do and how to eat in order to keep the sugars down. Later that afternoon, you receive a phone call from the secretary at the DEC, informing you that you are scheduled for the upcoming GD class and provides you with information about the time, location, and duration of the class. She advises you to eat lunch beforehand because the class is approximately three hours long. When you inquire what to eat for lunch, the secretary responds by saying that’s what you’re going to learn in class.

You arrive at the DEC early, having had a modest lunch not knowing what to eat. The secretary at the front desk registers you into the system and asks you to take a seat. As you wait, you notice the arrival of other pregnant women of colour who are also attending the class. You try to guess their ethnic background based on their language and dress. Some have brought their husbands, family members, and children. Within ten minutes, the waiting area is crowded and noisy with roughly eight pregnant women. The nurse finally comes into the waiting area and escorts everyone into the classroom. As you enter, you notice the tables and chairs are arranged neatly in rows, reminding you of a time in childhood when you attended school. Once everyone is seated, the nurse and dietitian begin the class with a warm welcome and enthusiastic
introduction. The nurse outlines the agenda for the afternoon: she will teach the first hour, providing general information about GD, risks, and management strategies, followed by an hour with the dietitian regarding dietary recommendations, and the remaining time will be spent on learning how to use a glucometer. This last part comes as a surprise: no one mentioned anything about monitoring your blood sugars, especially the part where you have to poke your finger with a needle for a drop of blood.

During the first hour, the nurse explains GD in detail, providing far more information than your obstetrician. You find it informative but disconcerting because there are a number of risks that your obstetrician failed to mention. Hearing the long list of risks to the baby such as liver and breathing problems, malformations, and stillbirth makes you anxious and scared. You come to understand that controlling your sugars is to make sure those things don’t happen.

During the second part of the class, you learn another surprising lesson: the suggested serving size of rice is one cup – that’s half of what you’re used to eating. Prior to the class, you had a hunch that sweets would be entirely eliminated, but the part about the rice comes as a shock. Who knew that rice converts to sugar in the body? By the end of the class, you’ve found the education session helpful overall, but you feel exhausted and overwhelmed by the thought of making drastic changes in diet and monitoring your blood sugars four times a day. Before leaving, the nurse hands you an appointment card for the GD clinic next week to see the endocrinologist and reminds you to bring your logsheet recording of blood sugars and glucometer.

Over the next few days, you follow the meal plan and measure the portion of food but your sugars are not always within the specified target range. You tell yourself that it takes time to get used to all these changes and that it’s only a matter of time before the sugars go down, as long as you stick to the dietary recommendations. Some days are frustrating and discouraging because your sugars are high despite following the meal plan and walking 30 minutes a day. You worry whether the high sugar is harming the baby, but you’re doing everything you can to control your sugars. You think: what more can you do – it is, what it is.

On the day of the appointment with the endocrinologist at the GD clinic, you look at your logsheet while you wait to be called in. Half of the readings are good and half are a little high.
You figure, that’s not bad. As you wait, you look around and you’re struck by the number of pregnant women standing in line pressed up against each other. It dawns on you that they’re all Asian, but this only becomes apparent with the arrival of a blond pregnant woman. You think this is odd but you shrug it off and start wondering how much longer until they call your name. Just then, you hear your name being called by the nurse. She pulls you into her office and asks to see your glucometer and logsheet. You realize that she is scrolling through your past readings (there’s a memory feature on the glucometer that was not disclosed in class) and cross-checking the values with the ones you recorded on the logsheet. You feel exposed, scrutinized, and a little insulted, wondering whether she’s doing this to see if you’re lying about your numbers. She then proceeds to quickly circle all the higher values with a red pen, just like a teacher who is circling errors on a math test. Feeling ashamed as she does this, you have the impulse to justify the high numbers by recalling what you ate. She reassures you that it’s okay and takes you to see the dietitian.

When you walk into the dietitian’s office, she smiles and asks you how you did over the last few days on the diet. Feeling discouraged, you tell her that half of your numbers are high. She takes a look at your logsheet and points to one value, asking you what you ate to have yielded such a high number. You tell her that you went out with your family that evening to an all-you-can-eat Chinese buffet. The dietitian laughs and empathizes by saying it’s hard to keep track of your portion sizes when you go to a buffet. Her laughter puts you at ease and you confess that you treated yourself to a bit of ice cream for dessert. She chuckles and says that’s okay, adding she would have done the same. Her comment instantly relieves your guilt. After reviewing your logsheet and reinforcing portion sizes, she asks if you have any questions. You shake your head. She then escorts you to see the endocrinologist.

The endocrinologist greets you and quickly proceeds to take a health history and assessment. After a brief physical exam, he reviews the lab results for the screening and diagnostic tests and then asks to see your logsheet. He’s not satisfied with the higher readings and immediately decides to put you on insulin four times a day. You’re stunned and find yourself almost begging for one more week on the diet. He objects, saying that it’s better for the baby to start now and sees no need to delay insulin treatment. He closes your chart and tells you to come back after a week. Calling the nurse into his office, he hands her written orders for insulin
treatment. You leave his office feeling defeated and almost on the verge of tears. The nurse is sympathetic and gently puts her arm around you, whispering: everything will be okay.

The nurse takes you to the classroom where you learn about insulin with other women who are in the same boat. They don’t look happy either; one woman is wiping her tears with a tissue. The nurse begins her lesson with reassuring words, acknowledging feelings of shock and disappointment as well as dispelling any concerns about the effects of insulin on the baby. She systematically goes through information about insulin, the injection schedule, and what to do when you have a low blood sugar reaction (a side effect of insulin). Once the theory part of the class is done, it’s time for hands-on practice. The nurse passes out the supplies needed for the insulin injection. She goes through each step and encourages women to do a return demonstration without injecting the insulin itself. She explains that it’s a good opportunity to practice poking yourself under her supervision so that you don’t feel scared about it when you go home. The nurse observes and supports each woman as they practice poking themselves with the needle. It’s now your turn and you’re palms are sweating. You tell her that you hate needles, but she patiently guides you through it. You hesitate momentarily as the tip of the needle is positioned right above your skin, but you take a deep breath and go for it. You’re surprised that it didn’t hurt. In fact, you hardly felt the needle piercing your skin. You feel incredibly relieved and proud of yourself for mustering up the courage to do it despite hating needles.

By the time you pack up your supplies to leave, you’re overwhelmed with the whole regimen. The thought of having to inject insulin 4 times a day, test your sugars 4 to 6 times a day, watch your diet, and walk for 30 minutes every day until the day of delivery is daunting. The first few days are challenging. You decide to take some days off work because it’s too much to simultaneously juggle work duties and the diabetic regimen. Gradually over the next few weeks, you become habituated to the routine and manage to control your sugars. There are a few occasions when you had a low blood sugar reaction because you delayed your meal or didn’t eat enough. Those were scary moments of suddenly feeling shaky, sweaty, and weak. But you learned your lesson, and from then on, you made sure to eat on time with the right amount of food.
At weekly follow-up appointments with the endocrinologist, he tells you that you’re doing a good job but he incrementally increases the dose of insulin. Even though this makes you nervous, he reassures you that it’s not harming but helping the baby so that it doesn’t get too big. He adds having good sugars during pregnancy prevents the baby from getting diabetes later on in life. He looks straight into your eyes and tells you this is what it’s all about. You relay to him that managing your sugars is like a full-time job. You can’t wait until delivery because you can finally stop taking insulin. He reminds you that you only have a few more weeks left to go and after you give birth to your baby, you can eat whatever you want. You think to yourself: as long as the baby is healthy, you can get through this.

Considering the above scenario of being screened, diagnosed, treated and managed for GD within a short period of time, it doesn’t require a stretch of the imagination to understand what a woman means when she says, “I don’t have a pregnancy, I have diabetes.” Returning back to the clinical encounter, I felt deeply unsettled and devastated because my best intention to ensure optimal glycemic control overshadowed her embodied experience of pregnancy. Her comment left an indelible mark on my clinical memory and offered a point of entry into the topic of this dissertation – a point that I have kept returning to repeatedly throughout the doctoral research process in reflections, conversations, and hesitations in my attempts to articulate the social effects of GD in “high-risk ethnic populations.”

This clinical encounter is significant because it marked a moment which had a catalytic effect of arousing my sense of discomfort, uneasiness, and ambivalence around clinical practices. These inchoate affects had a pronounced effect of de-centering my clinical practice, rendering it – and myself – strange. Several clinical memories come to mind. As I stood in front of the classroom teaching diabetes education to women newly diagnosed with GD, I found myself silently questioning the very definition of GD and the fundamental meaning of disease. Moreover, I was increasingly becoming uncomfortable about the meaning of “high-risk ethnic group” and the use of ethnicity as a risk factor. I wondered whether the strategies enthusiastically embraced by clinicians (myself included) to manage GD through active changes in diet and lifestyle were appropriate and relevant for women from diverse ethnic backgrounds. Similarly, clinical protocols seemed to easily elide the social realities of women and eclipse the larger
socio-political context that gives rise to the increasing incidence of GD in “high-risk ethnic
groups.”

What’s more, there were moments when I would cringe inside when proscriptions and
prescriptions blurred the distinction between coercion and consent, thereby raising ethical
questions. I found myself bothered by the practice of intensively treating women with multiple
daily doses of insulin, wondering to myself: why are we treating gestationals like they’re type 1’s
(i.e., people who rely on insulin injections to live)? Yet at the same time, clinical encounters with
“a non-compliant patient” surfaced strange feelings of anxiety, fear, and responsibility which
were often accompanied by unspoken judgements about the mother as somehow irresponsible for
endangering the well-being of the fetus. Paradoxically, this incited greater effort on my part to
ensure tighter glycemic control and closer surveillance. Taken together, such affects and
emotions arising from clinical encounters piqued my curiosity and indexed a phenomenon that is
far more complex than it appears to be in clinical practice.

What makes the topic of GD in “high-risk ethnic populations” so vexingly interesting,
inspiring, and irritating is that it is typically unquestioned in quotidian clinical practice. For
clinicians in the field of diabetes education, GD is generally accepted unproblematically as a
temporary disease characterized by elevated blood sugar during pregnancy. Risk factors include
maternal age, weight, height, history of GD, family history of diabetes, and lifestyle factors to
name a few. Ethnicity is regarded as an axiomatic risk factor that defies explanation and
considered self-evident. GD is also understood to be associated with a number of short-term
risks, including fetal overgrowth, birth injuries, respiratory distress syndrome, neonatal
hypoglycemia, and jaundice, as well as long-term risks of type 2 diabetes, obesity, and other
chronic diseases. The lengthy list of perinatal and maternal risks give clinicians cause to screen
and diagnose GD between the 24-28th weeks of gestation. If tested positive, women are actively
managed and treated with diet, exercise, and insulin if needed. Perhaps the very taken-for-
granted nature of this phenomenon is what allows clinicians to easily exclude it as a concern.
However, it is precisely the straight-forward, routine, and unquestioned clinical practices that
seemed obliquely at odds with the growing pathos generated within me.
Grappling with the tension between pathos and practice, I turned to the GD literature for a sense of solace and sanity. My foray into this field felt like stepping into a strange and uncanny irreality. I was confronted with jarring contradictions, perplexing paradoxes, and alarming claims. The GD literature, as Goer (1996) so aptly puts it, “reads more like Alice in Wonderland than science.” Three enigmatic examples illustrate this case in point. First, despite not meeting many, if not any, of the traditional criteria for mass screening, GD screening programs have become widespread across the world. However, different screening strategies are employed between and within countries. In Canada, there are currently two approaches to screening: one that uses a new criteria and the other that uses the previous, yet “preferred,” criteria. This has wide-reaching implications for practice and health care resources. Not only does this new criteria double the incidence of GD, different screening approaches lead to unsettling consequences for women living in different provinces (Ryan, 2012). For instance, while a woman in British Columbia will be labelled with GD, referred to a diabetic clinic, given a diet to follow, instructed to monitor her sugar levels, possibly put on insulin, her counterpart in Alberta with the same result will be told all is fine.

Second, there is wide variation in the treatment and management of GD. These include any or all of the following: medical nutritional therapy, daily exercise, frequent self-blood glucose monitoring, and oral antihyperglycemic agents and/or insulin therapy, if necessary. Typically, if women with GD do not achieve glycemic targets within two weeks from nutritional therapy alone, the clinical practice guidelines (CDA, 2013) recommend initiation of insulin therapy with up to 4 injections a day. Although insulin is considered “the gold standard” for treatment of GD, it is paradoxically associated with a greater likelihood of developing type 2 diabetes six weeks post-partum (Min et al, 2013). Yet, women are intensively treated with insulin based on the understanding that intensive treatment will prevent short-term as well as long-term risks in hopes of decreasing the so-called “diabetes epidemic” in future generations.

Third, anxieties around the “diabetes epidemic” have generated various hypotheses and possible solutions. Most recently, the fetal programming hypothesis has gained conceptual traction, setting the stage for far-reaching interventions. This hypothesis claims that fetal exposure to maternal diabetes in utero triggers epigenetic changes in the offspring, increasing the risk of obesity, diabetes and other chronic diseases like hypertension later on in adult life.
Interventions that promote “primordial (i.e. in utero) prevention” specifically target the pre- and peri-conceptional, gestational, and lactational period of a woman’s life. The intention of such interventions is to curtail fetal programming, interrupt the vicious cycle of diabetes, and put a halt to future generations of diabetics. Despite the absence of sufficient evidence to support this hypothesis and its connection with long-term benefits of such interventions, experts have gone on to claim that primordial prevention is an urgent “public health imperative” (Gillman et al, 2010).

Moreover, in the context of globalization and diversity, it seems the so-called “diabetes epidemic” is increasingly being seen as a problem of the “Other.” It is difficult to find a discussion about diabetes in scientific debates without a discussion of its differential impact on people of colour. The term “high-risk ethnic populations” is used ritualistically and unproblematically in the Canadian Diabetes Association Clinical Practice Guidelines (2008, 2013), referring to “people of Aboriginal, Asian, South Asian, Hispanic and Black descent.” The use of ethnoracial taxonomies under the rubric of “high-risk ethnic group” is employed unreflexively in biomedical research and clinical practice guidelines without an explanation of what constitutes such subpopulations as “high-risk” and how or on what basis particular ethnic groups are categorized and compared. Nevertheless, heterogeneity within subgroups is disregarded and such subgroups continue to feature strongly in the statistical sense, thereby framing diabetes as an ethnoracial disease.

What is so intriguing is that any ambiguities, contradictions, and messiness surrounding notions of race, risk, and disease within the GD literature do not seem to register in everyday clinical practice. It is as though controversies and contestations curiously disappear from view, rendering invisible the social effects of discourses and practices pertaining to GD in “high-risk ethnic groups.” The aim of this doctoral research study is to make visible the discourses that constitute GD in “high-risk ethnic populations” in authoritative texts, describe how such discourses are accomplished in the clinical setting, and how they shape the everyday lives and subjectivities of women who are categorized as such. In doing so, the intention here is to return the medico-scientific gaze by examining the problematic assemblage of race, risk, and disease and its attendant effects on the subjects of ethnoracial risk discourses. From a poststructuralist orientation, race-based risk discourses are productive and creative in the sense that such
discourses consist of “practices that systematically form the objects of which they speak” (Foucault, 1972: 49).

The questions that guide this dissertation study are organized around truth discourses, strategies of intervention, and modes of subjectification: What kinds of discourses are employed to constitute knowledge about GD, risk, and race/ethnicity? What types of subjects are constructed through discourses on GD in “high-risk ethnic groups?” How are race-based risk discourses accomplished locally in the clinical setting? How do women respond to, engage with, and resist race-based risk discourses and practices pertaining to GD? And how do such discourses and practices shape women’s subjectivities from diagnosis to post-partum?

This ethnographically-informed study examines the social effects of GD in “high-risk populations” through three methods of investigation. First, I critically analyze the discourses that constitute authoritative texts on GD in “high-risk ethnic groups” to better understand how GD and subjects of ethnoracial risk discourses are represented. Second, through participant observation I examine how race-base discourses pertaining to GD are locally accomplished in the clinical setting. And third, interviews with women offer insights into how they engage with, respond to, and resist such discourses and practices and how they shape women’s subjectivities. I argue that discourses and practices related to GD in “high-risk ethnic groups” are far from being benign or neutral in their social effects but actively participate in the processes of racialization and subjectification.

The organization of this dissertation is as follows. In Chapter Two, I provide a reflexive review of the epistemological field in which I situate this dissertation. I begin by characterizing GD as an enigmatic entity, drawing attention to the controversies surrounding it, particularly in relation to “high-risk ethnic groups.” This is followed by a review of relevant literature on women’s experiences and perceptions of GD, focusing on their contributions and short-comings. I then turn to empirical studies from social sciences to gain insight on the cross-articulation of risk, race, and subjectivity in order to formulate a theoretical and methodological approach to this dissertation. I conclude this chapter with a discussion on how this dissertation will extend these contributions by sketching out a terrain of empirical investigation that warrants further inquiry.
In *Chapter Three*, I draw on theoretical concepts from Michel Foucault and scholars who have extended his work in order to assemble “a toolkit of concepts” (Rabinow, 2003: 2). More specifically, I elaborate on three theoretical concepts: biopower (in relation to race and reproduction), governmentality (in relation to risk), and modes of subjectification. These conceptual tools constitute a tripartite framework that informs the method of investigation and offers a theoretical orientation through which to analyze how ethnoracial risk discourses are represented in expert knowledges, how they operate in the clinical setting, and how they participate in the processes of subjectification.

In *Chapter Four*, I elaborate on the methodology and methods of data generation and analysis. I situate this dissertation as an ethnographically-informed project and describe three methods of data generation: discourse analysis of authoritative texts, participant observations in the classroom and clinic, and longitudinal interviews. I briefly review the research setting and design and then discuss how I approached the analysis of texts, fieldnotes and interview transcripts. Following a discussion on methodological considerations including reflexivity, positionality, and research relations, the chapter concludes with reflections on research rigor.

The findings of this doctoral study will be presented in chapters five through seven. In *Chapter Five*, I discursively analyze three authoritative texts that inform and guide clinical practice: the 2008 Canadian Diabetes Association Clinical Practice Guidelines, the 2009 International Diabetes Federation Global Guidelines on Pregnancy and Diabetes, and the 2009 International Diabetes Federation Kathmandu Declaration: Life Circle Approach. I illustrate how race, risk, and disease, respectively, are constructed through employing a vocabulary and codified language of race, expanding the rubric of risk, and legitimizing disease through wide-reaching interventions. I argue that medico-scientific discourses that constitute these three texts are not value-free but infused with racial and moral assumptions. Categories of race, risk and disease cross-articulate to paint a particular portrait of pregnant women of colour whose bodies and cultural behaviours require various interventions to arrest the “diabetes epidemic.”

In *Chapter Six*, I draw on ethnographic fieldwork to illustrate the ways in which discourses on GD in “high-risk ethnic groups” are accomplished locally in the clinical setting. I identify and describe strategies that operate in the clinic, including dividing and disciplinary
practices, etiological explanations, and racial carbopolitics. Through empirical examples, I aim to demonstrate the ways in which these strategies are mobilized to discipline, regulate and govern pregnant bodies of colour. It will be argued that practices and discourses directed at women from so-called “high-risk ethnic groups” run the risk of reproducing moralistic judgements and racialized interpretations. Moreover, race-based risk discourses and practices potentially produce iatrogenic anxiety and perpetuate racial logics, rendering power relations invisible and leaving assumptions about dominant cultural norms unexamined.

In Chapter Seven, I examine how women of colour engage with, respond to, and resist discourses and practices pertaining to GD in “high-risk ethnic groups” and how such discourses and ensuing practices participate in the production of subjectivities. I explore analytic themes that arise from women’s accounts, illustrating how food (more specifically, particular kinds of carbohydrates) plays a key disciplinary role in their everyday lives and social relations, how women figure out strategies to subvert the diabetic regimen, and how disciplinary practices make women into particular kinds of subjects. While the first two themes illustrate how women respond to and engage with race-based risk discourses and practices in ways that are both enabling and constraining, the third theme elaborates on how such discourses and practices participate in production of an emergent type of racialized subject.

Chapter Eight brings together findings from the analysis of authoritative texts, ethnographic field notes, and interviews to bear on the overall thesis of this dissertation. I argue that the processes of racialization manifested in discourses and disciplinary practices not only participate in the modes of subjectification, they participate in the reproduction of racial hierarchies that ultimately have both social and biological effects on people of colour. Moreover, I complicate the notion of compliance by highlighting the paradoxical and iatrogenic effects of intensive interventions. I also argue that representations of maternal diabetes in authoritative texts run the risk of discursively erasing maternal subjectivity by casting the mother in objectifying ways; moreover, disciplinary practices also run the risk of reducing pregnancy to a diabetic regimen.

In Chapter Nine, I conclude this dissertation by attending to key issues derived from the study findings by inviting “experts” to engage in greater reflexivity beyond reductionism,
racialization and medicalization, particularly as it pertains to knowledge production, clinical practice, and pedagogy. I focus on four conceptual interventions: articulation of the use of race/ethnicity, distinction between risk and disease, recognition of unintended effects of intensive interventions, and acknowledgement of the medico-moral assumptions underwriting discourses on maternal diabetes. By attending to these four areas, I offer strategies that might enhance clinical practice in a way that affirms feminist anti-racist politics and praxis.

The overall aim of this doctoral study is to provide a situated account of GD in “high-risk ethnic populations” that might enable greater reflexivity in the way race, risk, and disease are conceptualized and articulated in medico-scientific texts and clinical practice. Broadly speaking, the intention of this proposed research is to open up a space to better understand, as Montoya (2011: 189) puts it, “the problems with knowledge while simultaneously grappling with the knowledge of problems.” From this space of impossibility, I hope to open up possibilities to stimulate discussion, dare I say discomfort, in the ways in which GD in “high-risk ethnic groups” is currently conceived and shed light on its social effects in order to generate a better collective and individual response to this chronic disease problem in the 21st century.
Chapter Two
Reflexive Review of the Literature

The objective of this chapter is to provide a reflexive review of the epistemological field in which I situate this dissertation. This chapter begins with a description of GD as an enigmatic entity by drawing attention to the controversies within medico-scientific literature. The contestations within this epistemic field do not provide a definitive account of GD as it excludes women’s narratives. Thus, the next section focuses on extant qualitative research on pregnant women’s perception and lived experience of GD. Where contributions from applied qualitative research fall short in critically examining GD, risk, and race, I draw from social science research for empirical insights on the intersection of risk in relation to health, race, and subjectivity. These insights will inform the theoretical and methodological approach to this dissertation. The chapter will conclude with a brief discussion on how this dissertation will extend contributions from literature by sketching out a terrain of empirical investigation that warrants further inquiry.

1 Gestational diabetes: an enigmatic entity

GD is an enigmatic entity fraught with ambiguity, variability, and contradictions. Since the 1960’s when O’Sullivan popularized the concept of “gestational diabetes,” controversy has continuously surrounded this clinical condition. The initial criteria of diagnosis developed by O’Sullivan and Mahan in 1964 was not designed to identify pregnant women who are at increased risk for adverse perinatal outcomes but rather women who are at high risk for developing diabetes after pregnancy (Metzger et al, 2007). Nonetheless, it remains widely used today. This then raises the question whether GD is a disease or a risk factor for diabetes (Petry, 2014). At the heart of this question lies the enigma of GD: the blurred boundary between normal and pathological blood sugar levels. There is no apparent threshold of glucose at which the risks of adverse outcomes increase (Metzger et al, 2008). The following paragraphs examine debates within the medico-scientific literature that arise from the blurred boundary between normal and pathological blood glucose, beginning with definitional ambiguities followed by variability in risks, heterogeneity in screening and diagnostic practices, and paradoxes in treatment of GD.
Gestational diabetes mellitus is formally defined as “any degree of glucose intolerance with onset or first recognition during pregnancy” (Metzger & Coustan, 1998). Curiously, this definition applies “regardless of whether insulin therapy is necessary or the condition persists after delivery, and includes the option that unrecognized glucose intolerance may have preceded the pregnancy” (Metzger & Coustan, 1998). However, a defining characteristic of GD is that most women experience a return to normal glucose tolerance in the postpartum period (Damm, 1998). Thus, GD is commonly referred to as “a temporary condition that occurs during pregnancy” (Canadian Diabetes Association, 2000: 1). In other words, unlike its chronic cousins (type 1 or 2 diabetes), “true” GD is temporary in that it typically disappears after delivery. Longstanding tensions between GD as temporary condition and pre-existing diabetes as chronic disease have been at the root of the GD controversy. As illustrated below, the above definition lacks specificity, leaving space for ambiguous and confusing interpretations.

The formal definition of GD generates confusion because it transgresses the categorical distinction between “pre-gestational diabetes,” “pre-diabetes,” and “impaired glucose tolerance in pregnancy.” In the GD literature, “pre-gestational diabetes” refers to pre-existing or “overt” diabetes prior to pregnancy. That is to say, this term applies to pregnant women who have been previously diagnosed with diabetes before conception. “Pre-diabetes” (otherwise known as impaired fasting glucose or impaired glucose tolerance outside of pregnancy) describes a liminal phase in which blood glucose values are slightly above the normal range yet not high enough to be diagnostic for type 2 diabetes. In lay vernacular, pre-diabetes is often equated with “borderline” diabetes. “Impaired glucose tolerance in pregnancy” (also known as “mild” gestational diabetes) is analogous to “pre-diabetes” in the sense that pregnant women have glucose levels that are slightly higher than the norm but still below the diagnostic criteria for GD. However, the logic behind “pre-diabetes” (i.e. the phase before becoming diabetic) does not easily transfer over to, or apply seamlessly to, “pre-gestational diabetes” (i.e. diabetic before pregnancy). In fact, it is a curious reversal.

This confusion is further compounded by the conflation of three analytically distinct populations. In epidemiological and biomedical literature, women with pre-gestational diabetes, “true” gestational diabetes, and impaired glucose tolerance (IGT) in pregnancy are lumped into one overarching category based on a definition that lacks specificity. In other words, the current
definition captures a wide spectrum of glucose intolerance from mild to severe. Moreover, women diagnosed with GD or IGT in pregnancy may have had pre-existing diabetes that has gone undiagnosed prior to pregnancy (Langer, 2006). They are identified for the first time as GD rather than pre-gestational diabetes because of the timing of the screening test for GD (i.e., 24-28 weeks gestation). Even if women are screened prior to 20 weeks of gestation because of multiple risk factors (which suggests that they may have been diabetic before pregnancy), they are still classified as GD based on the current definition (“…first recognized during pregnancy”).

The problem with housing these three categories into a single rubric of GD is that women from analytically distinct categories do not share the same risks. In other words, elevated blood sugar during the first trimester may have very different outcomes on fetal development compared to elevated blood sugar starting in the second to third trimester of pregnancy. Given that the first trimester is a crucial period of organogenesis (when vital organs develop in the fetus), high blood glucose during the first ten weeks of pregnancy is considered teratogenic (capable of causing birth defects). Research has demonstrated a two-to-three fold risk of congenital malformations and miscarriage if blood sugars are consistently high during the first trimester of pregnancy (Hanson et al, 1990; Towner et al, 1995). Even prior to conception, there is a concern that women with pre-existing diabetes may have developed microvascular complications which may in turn jeopardize early fetal development. Unfortunately, by the time most women know they are pregnant, much of the organogenesis has already occurred and women may not have been aware of pre-existing diabetes to adjust their glycemic control accordingly. This has raised the concern that the current practice of screening and diagnosis of GD late in pregnancy might be akin to “bolting the door after the horse has fled” (Yajnik, 2010). However, hyperglycemia during the second to third trimester is not associated with congenital malformation but rather macrosomia or large-for-gestational age babies. While fetal malformation may be a problem for women with unrecognized pre-gestational diabetes in the first ten weeks of pregnancy, this is not a concern for women with “true” GD or impaired glucose tolerance during the 24-28th weeks of pregnancy because their blood glucose levels are normal during the first trimester.

The difficulty in detecting pre-existing diabetes in the first trimester arises from the common clinical observation that most pregnant women (regardless of diabetic status) in their first trimester generally have lower blood glucose levels on average compared to the non-
pregnant population (Alberti & Zimmet, 1998). Thus, women with unrecognized pre-existing diabetes may not be detected with a simple fasting blood glucose test early on in pregnancy. Even if women did have elevated blood glucose values in the first trimester, it generally goes unnoticed until the standard screening test is done in the 24<sup>th</sup>-28<sup>th</sup> weeks of pregnancy.

The absence of a clear threshold that marks normality from abnormality complicates this further. Returning back to the O’Sullivan and Mahan (1964) study for another point of contention, the authors also neglected to account for the normal linear rise in glucose values from the first to the third trimester (Goer, 1996). No corrections have been made for this during screening, treating, and managing women with GD in the last trimester of pregnancy. This explains how a woman could pass the screening test in gestational week 24 and fail in week 28. More importantly, the criteria for diagnosis does not demonstrate the onset or marked increase in fetal complications below levels diagnostic of true diabetes (Hollander, Paalberg & Huisjes, 2007). Although there appears to be continuum of gradually increasing risks with rising blood glucose values (Metzger et al., 2008), it is difficult to draw a clear line between what is considered pathological from normal physiology of pregnancy. Moreover, it remains unclear to what extent adverse outcomes associated with GD are explained by confounders, including obesity, pre-pregnancy weight, advanced maternal age, or associated medical complications (Jarrett, 1981; Hunter & Keirse, 1989; Spellacy, Miller, Winegar & Petersen, 1985).

Given the metabolic heterogeneity of GD, the exact incidence of GD is unknown. The percentages reported in the literature are variable and depend on the characteristics of the population studied and the criteria used for the diagnosis. Variation in screening and diagnostic practices have inevitably resulted in clinical populations with different degrees of glucose abnormality and differing rates of complications, proving comparisons between and interpretation of research studies very challenging and estimating the incidence of GD difficult. Although race/ethnicity is identified to be an important risk factor for GD, the comparability of the studies is limited due to the heterogeneity within sub-populations. This has led researchers to question the use of race/ethnicity as an independent risk factor for GD.

In a recent publication by Chu and colleagues (2009) entitled *Gestational Diabetes Mellitus: All Asians are not alike*, the authors demonstrate the heterogeneity within the meta-
category of Asian and Pacific Islander (API). Analyzing data from birth certificates from 2005-2006 in 19 American states, the authors calculated the GD prevalence estimates for subgroups of women. In over three million births in the US, APIs had a higher age-adjusted prevalence of GD (6.3%) than whites (3.8%), blacks (3.5%), Hispanics (3.6%), or Native-American (5.1%). However, within the API subgroup, age-adjusted GD prevalence varied significantly from 3.7% among women of Japanese descent to 8.6% among women of Asian Indian descent. Moreover, foreign-born APIs had significantly higher GD rates than US-born APIs except among women of Japanese and Korean ancestry. Chu and colleagues report that inter- and intra-ethnic differences remain difficult to analyze specifically due to the presence of multiple confounding factors such as age, obesity, lifestyle, socioeconomic status, migration, and marginalization. The authors conclude that APIs are a heterogeneous group by genetic background, culture, and diet and other lifestyle behaviours and recommend greater specificity when using racial categories in health research.

Savitz, Javenic, Engel, Kaufman and Herring (2008) argue that variability in the incidence of GD among ethnic groups may be related to potential artefacts associated with screening and diagnosis. In other words, a key question in their study was not whether there are missed cases or overdiagnosis of individuals (which is certain to occur) but rather whether these errors are systematically related to caregiver bias regarding ethnicity, creating artefactual patterns across ethnic groups. The authors contend that health care providers serving primarily ethnic minorities may be aware of the increased risk and thus more thorough in screening and documentation or set lower cut-off points, thereby increasing their reported risk. Moreover, given the general trend towards adopting lower thresholds for diagnosis, increasing emphasis on the need for screening and diagnosis, and widening definition of GD, there is a greater likelihood that artefactual patterns will increase the incidence of ethnic groups classified as having the condition.

As mentioned above, there is currently no agreement worldwide regarding the optimal screening and diagnostic approach for GD. Different screening and diagnostic guidelines are recommended from different professional associations (CDA, 2013: S172; see Appendix A). There is wide variability with regard to who is screened and when, method of screening and diagnostic tests used, and the fasting and post-test blood glucose thresholds/cut-off values for the
diagnosis of GD. To wit, the new diagnostic criteria established by the International Association of Diabetes and Pregnancy Study Group (IADPSG, 2010) have complicated screening and diagnostic approaches between and within countries and organizations. For instance, the American Diabetes Association (ADA, 2013) has endorsed the new criteria established by the IADPSG, but the American College of Obstetrics and Gynecology has been reluctant to update its diagnostic criteria, claiming that there is an absence of sufficient evidence to support adopting the new criteria (Ryan, 2012). In contrast to the ADA, the Canadian Diabetes Association (CDA, 2013) has been ambivalent about the new criteria, thereby offering two approaches in the latest Clinical Practice Guidelines (CPG): the preferred 2-step approach of screening followed by diagnosis and the alternative 1-step approach set by the IADPSG. Not only does this increased the incidence of GD to nearly 1 in 5 pregnancies, resulting in greater health care costs, this has implications for practice, arbitrarily labelling some women with GD while not others even with the same result depending on the approach and thresholds used for diagnosis.

There are multiple tensions with the different screening approaches being used today. Screening based on risk factors does not appear to be very reliable considering that the positive likelihood ratio is only 1.75. Meaning, women with risk factors are only 1.75 times more likely to have GD than those without (Stephenson, 1993). Given that a good screening test has a positive likelihood ratio of at least 6, Marquette and colleagues (2003) argue that screening based on risk factors is inefficient. Moreover, conducting a diagnostic test only in women with risk factors will miss many women with GD and unnecessarily subject many women without GD to a diagnostic test. As with screening for risk factors, the problems reported include many false-positives (Brody, Harris & Lohr, 2003) and sensitivity of only 86% at best (McElduff et al, 1994). Although fasting blood glucose and random blood glucose are popular ways to screen because they are easy to perform and not demanding for the patient, there is a lack of conclusive data documenting the reproducibility, sensitivity, and specificity of these tests (Berger, Crane & Farine, 2002).

The biggest problem with the “gold standard” for diagnosing GD is that, according to Hollander and colleagues (2007), “it is not a gold standard at all.” The 100 gram 3 hour oral glucose tolerance test (OGTT) was originally used to diagnose type 2 diabetes and validated only for this clinical entity. When the test was first introduced for pregnant women, it was hoped that
it would distinguish those who were susceptible to type 2 diabetes later in life in order to be able to initiate early treatment. That is, it was not meant to be used to prevent complications during the pregnancy itself. Like the GD Screen, the cut-off values depend on which source is used. There are currently two separate conversions for the O’Sullivan criteria in use today: the Carpenter and Coustan conversion and the National Diabetes Data Group conversion.

In addition to the variability in screening and diagnostic approaches, questions have been raised about the benefit of detecting and treating GD. A Cochrane review by Tieu, Middleton, McPhee and Crowther (2011) report that there is insufficient evidence to determine if screening for GD, or what types of screening, can improve maternal and infant health outcomes. Similarly, recent recommendations of the U.S. Preventive Services Task Force (2008), the U.K. National Health Service (Scott, Loveman, McIntyre, & Waugh, 2002), and the Canadian Task Force on the Periodic Health Examination (1994) assert that there is not sufficient high-level evidence to make a recommendation for, or against, screening for GD.

There are contradictory findings with regard to the effectiveness of treatment and management of GD. The results from two large, multi-centered randomized control trials and a meta-analysis have provided strong support and justification for the treatment of mild GD (Crowther et al, 2005, Landon et al, 2009; Horvath et al, 2010). The three sources indicate that treating GD decreases macrosomia and shoulder dystocia (shoulder of the fetus becomes lodged during delivery). However, a Cochrane review on the effect of treatment of GD by Alwan, Tuffnell and West (2009) found no difference in the outcomes regarding the percentage of caesarean sections, neonatal intensive care unit (NICU) admissions, or the incidence of macrosomia between the treatment and control groups. The only statistically significant difference between the treatment and the control groups was a lower incidence of neonatal hypoglycaemia in the treatment group; however, it is unclear how this affects the baby’s long-term prognosis. Paradoxical findings have also been reported regarding treatment of GD increasing the likelihood of caesarean deliveries (Naylor, Sermer, Chen & Farine, 1997) as well as contributing to the development of type 2 diabetes six weeks post-partum (Min et al., 2013). To date, there are no randomized controlled trial of sufficient sample size that have been able to conclusively demonstrate that treatment of GD (with diet and/or insulin) improves the outcome of pregnancy for mother and fetus.
Considering that there is insufficient evidence that demonstrates clear benefits of screening for and treating GD, the question that arises is whether there is more harm than good. Studies have reported a negative perception of health by women diagnosed with GD (Sjögren, Robeus & Hansson, 1994), even by those who had a false-positive screening test (Kerbel et al, 1997). Moreover, the diagnostic test itself is very demanding, and some patients report vomiting during the test (Hollander et al, 2007). Other negative consequences of the diagnosis of GD include iatrogenic consequences from medical interventions including more caesarean deliveries (Naylor et al, 1996), ketosis after dieting too strictly which can then affect the psychomotor development of the offspring (Rizzo et al, 1991), more small-for-gestational-age babies by too strict use of insulin (Langer et al, 1989), and higher health care costs (Ryan, 2012).

In light of the above contestations, the medico-scientific community can be divided into two groups: the proponents and opponents of GD. However, divisions are not always clear cut as investigators oscillate between the two groups. That is, some proponents are opponents, and vice versa. For instance, even though Greene (2000) questions whether GD is a disease, the same author, in a different editorial, strongly endorses intensive treatment practices for GD. In a review article analyzing the oral glucose tolerance test, Nelson (1988) finds it worthless, yet recommends continuing to use it to diagnose GD. Both simultaneously critique and continue to advocate for the screening, treatment and management of GD.

These observations aside, the proponents firmly believe that GD is a disease. Therefore, their objective is to contribute to knowledge that identifies risk factors for GD (see Appendix B) and reduce maternal and offspring risks associated with GD (see Appendix C). Proponents of GD such as Shivver and Lucas (1999) argue that nobody should be denied the “potential benefits of normality.” GD represents “a golden opportunity” for diabetes education and an early barometer for future trends in diabetes prevalence (Lyerly et al, 2009). Moreover, proponents regard screening and intensive treatment of GD as one strategy to turn the global “diabetes epidemic” around (Yajnik, 2010). They recommend targeting pregnant women from “high-risk ethnic populations,” or more pointedly “immigrant women from high prevalence countries” (Meakin et al, 2010). Through active interventions that focus on optimizing the intrauterine environment, the “vicious cycle of diabetes” can be interrupted, freeing future generations from developing diabetes later on in life (Yajnik, 2010).
Proponents of GD are deeply concerned about the long-term implications of diabetes as well as obesity. The so-called ‘epidemic’ of acquired diabetes and obesity has given rise to a conjoined concern in medico-scientific research that has become a neologism: diabesity. Literature on this substantive area often begins by emphasizing that both diabetes and obesity are serious conditions with potentially devastating complications that affect all age groups worldwide and goes on to cite the increasing trends over the last decades and estimated projections in the future (Haslam, 2013; Kaufman, 2005). The International Diabetes Federation Diabetes Atlas Sixth Edition (2013) reports that there are 382 million people living with diabetes globally, and this is expected to increase to 592 million by 2035. These concerns have historically invoked a variety of hypotheses, including the thrifty genotype, the thrifty phenotype and more recently, the fetal programming hypothesis which has gained conceptual ascendancy by linking maternal obesity, GD, and type 2 diabetes in the offspring. While the first and second hypotheses putatively ground etiological explanations in genetics and maternal malnutrition respectively, the key assertion with the latter hypothesis is that fetal exposure to a diabetogenic intrauterine environment programs the offspring to develop diabetes and/or obesity later in life (Hampton, 2004; Lau et al., 2011). Underwriting this literature is the view that diabesity begets diabesity: obese diabetic mothers give rise to a vicious cycle of diabesity, amplifying risk throughout future generations. The confluence of anxieties about the rising rates and intergenerational effects of diabesity is further compounded by moral and economic discourses associated with escalating healthcare costs, unhealthy diets, and sedentary lifestyles, thereby inciting urgency for greater surveillance, intensive interventions and education about nutrition, food choices, weight gain, and exercise.

In contrast, the opponents contend that GD is not a disease. Their central claim is that there is insufficient evidence in support of the current practice of screening for GD (Tufnell et al, 2003; Brody et al, 2003). Paradoxically, they also acknowledge that there is not enough evidence to recommend the discontinuation of this practice which has become the standard of care in North America. Rather than a “life-and-death” situation, the opponents argue that GD appears to be more of “quality-of-delivery” issue related to macrosomia (Casey, Lucas, McIntire & Leveno, 1997). However, macrosomia is contentious in light of the observation that a large proportion of macrosomic infants (80%) are born to mothers who are not glucose intolerant (Grassi & Guiliano, 2000). Nevertheless, the cornerstone of their argument is the following: if GD proves
only to be a diagnosis and not a disease, then all other issues (such as the need for screening, modalities of screening and treatment of GD) become moot. Some have gone so far as to claim that screening/diagnosis and treatment are not only unnecessary, they are iatrogenic (Goer, 1996; Mander, 2007).

In an article entitled Gestational Diabetes: The Emperor has no clothes, Goer (1996) has gone so far as to refer to GD as a “spectacular failure.” She writes: “an entire medical industry has grown up around diagnosing and treating GD in the belief that doing so prevents risk of perinatal and maternal complications…researchers have gone on adding rooms and stories to the GD edifice, never noticing that they have built a house on sand.” Goer’s comments might all too easily be dismissed as journalistic hype, were it not for several other authoritative sources and organizational bodies (Mander, 2007). A Guide to Effective Care in Pregnancy and Childbirth, the “bible of evidence-based care,” relegates screening for GD to be “forms of care unlikely to be beneficial” and considers aggressive treatment of GD to be “unethical” (Enkin et al, 2000: 77 & 501). As mentioned earlier, the American College of Obstetricians and Gynecologists (2001), the US Preventative Services Task Force (2008), the Society of Obstetricians and Gynaecologists of Canada (2002), and the Canadian Task Force on the Periodic Health Examination (1992) have unanimously concluded over the last two decades that there is insufficient evidence to justify that universal screening and treatment of GD result in better maternal and neonatal outcomes.

It comes as no surprise that GD has been characterized in multiple and contradictory ways. While proponents have claimed that GD is “a major health problem” (Beard & Hoet, 1982) with “serious health implications” (Crowther et al, 2005; Langer et al, 2005), opponents have accused advocates for being “too glucocentric” and “over-diagnosing” normal pregnancy (Vidaeff, Yeomans, & Ramin, 2003). Moreover, opponents have described GD as “a diagnosis still looking for a disease” (Hunter & Milner, 1985), a “non-entity” (Jarrett, 1993), and “over-medicalization in the making” (Moynihan, 2011). According to Langer (2006), “if GD is not a disease, then we liberate thousands of women from unnecessary treatment; if GD is a disease, care providers can provide interventions that will positively impact upon perinatal outcome.” Such controversy over GD as a clinical entity raises questions about the fundamental meaning of “disease.”
Likewise, epidemiological discourses on “risk” related to GD have ranged across the spectrum for mother and baby. On one end, there is the spectre of stillborn babies and congenital malformations (Hod, 1991), pre-eclampsia (pregnancy-induced hypertension and toxemia), birthing trauma due to delivery of a macrosomic baby (Crowther et al, 2005), including clavicular fracture and brachial plexus (spinal nerve injury) as a result of shoulder dystocia. On the other end of the spectrum, GD poses “fairly minimal risks” (Hollander et al, 2007), even “no risk” (Goer, 1996). Moreover, Naylor et al (1997) have pointed out that the diagnosis of GD alone has a labelling effect, increasing the likelihood of caesarean deliveries. Like “disease,” such variability throws the meaning of “risk” into question.

Risk becomes even thornier when racial groups are identified as “high-risk.” Race/ethnicity as an independent risk factor is fraught with tension, yet racial sub-groups are naturalized and reified in the GD literature as simply “high-risk populations.” It is as though GD is, as Lee, Moutain and Koenig (2001) would say, “caught in a tautology, both informed by, and reproducing, ‘racialized truths’… we assume that racial differences exist and then proceed to find them.” This loop of logic is evident in studies on low levels of hypoadiponectinemia in pregnant South Asians compared to Caucasians (Retnakaran et al, 2004, 2006a, 2006b, 2006c) and studies that contend that Indian babies are ‘thin-fat’ (i.e., have less lean mass but more fat mass) compared to British babies (Yajnik, 2000, 2001, 2002; Yajnik et al, 2003). Yet, as argued by Chu and colleagues (2009), there is enormous heterogeneity both between and within subpopulations. As mentioned earlier, race/ethnic categories may be creating artefactual patterns in prevalence rates in different ethnic groups. In other words, women are being subjected to increased screening and diagnostic tests with lower cut-off points by virtue of being non-white and categorized as members of a “high risk ethnic group” (Savitz et al, 2008).

Despite tensions around disease, risk, and race in GD literature, screening, diagnosis, and treatment of GD are considered standard practice in many parts of the world. Although there is enormous variability, such practices are considered routine and unquestioned. In the US, at least 96% of obstetricians universally screen pregnant women for GD (Gabbe et al, 2004). In the United Kingdom, 17% screen universally and 72% screen if other risk factors exist (Mires, Williams & Harper, 1999); while 11% have suspended all screening practices for the time being. In Canada, testing is also commonly performed, with 84% of obstetricians testing all pregnant
women and the other 16% have suspended all screening practices and treatment, while awaiting definitive research (Berger et al., 2002).

In summary, medico-scientific literature on GD is characterized by variability, ambiguity, and contradiction. Although there are longstanding debates about GD as a “disease,” including “risks” associated with adverse outcomes particularly amongst “high-risk ethnic groups,” practices of screening and diagnosis and ensuing intensive interventions for treating GD are considered routine worldwide. However, variability in screening and diagnostic approaches as well as insufficient evidence for intensive treatment of GD should give us pause to ask the following questions: What is going on here? How do risk, race, and disease cross-articulate in authoritative texts that inform clinical practice? How are discourses on GD in “high-risk ethnic groups” accomplished in clinical setting? How do women diagnosed with GD make sense of this enigmatic entity? I now turn to qualitative literature and reflexively review empirical findings to better understand and build upon women’s experience and lived realities of GD.

Before moving onto qualitative research on GD, it is worthwhile to note internal contradictions in quantitative research that investigates the perceived health and well-being of pregnant women diagnosed with GD. An earlier study reported that women with GD did not differ from non-GD controls in psychological status (Spirito et al., 1989). Moreover, they found that insulin injections did not affect their psychological mood, leading the researchers to conclude that women diagnosed with GD readily adapt to the new diabetic lifestyle. Similarly, Daniells et al (2003) reported no significant differences in anxiety scores between women diagnosed with GD and those with normal glucose tolerance. In contrast to the above findings, Sjögren et al (1994) found that women with GD reported significantly less well-being, reduced vigor and psychic health during pregnancy, a less positive experience of pregnancy, and more worries about health before and after delivery than women in the control group. This negative perception of health was also reported in women who had a false-positive result on the GD screening test (Kerbel et al., 1997). More recently, Crowther and colleagues (2005) found a positive effect on women’s quality of life and their mental well-being from receiving the diagnosis of GD. Furthermore, women in this study reported a desire to be screened and treated for GD in future pregnancies. With regards to limitations of such research, they fall short in
providing a description of the sociocultural context that might account for multiple and contradictory ways in which women perceive health when diagnosed with GD.

2 Qualitative literature on women’s experience of GD

Despite the paucity of qualitative research on women’s lived experience of GD, the following studies provide partial insights to the contradictory findings noted above. In addition to offering rich descriptions of a transformed pregnancy, extant qualitative research stimulate further questions regarding ethnic differences in response to risk discourses related to GD. A phenomenological study by Evans and O’Brien (2005) explored Canadian women’s experience of pregnancy that is suddenly judged “at-risk” as a consequence of GD. Conducting in-depth interviews with 12 white, middle-class women living in Western Ontario, the authors report four key themes that emerge from their study: Living a controlled pregnancy, Struggling with finding a balance, Being a responsible mother, and Being transformed in a positive way. The study findings revealed that women had multiple contradictory experiences which supplement the contradictory findings from the above quantitative studies. Women in their study simultaneously experienced heightened anxiety and constraint while adhering to an intensive regimen as well as moral obligation for the fetus. Yet, women derived a positive sense of self-efficacy and empowerment from closely following the diabetic regimen. Although Evans and O’Brien provide rich insights into women’s experience of GD, they fall short in extending their analysis and explicitly unpacking the contradictory findings in a theoretically-informed way. Moreover, they evade the topic of their inquiry: the meaning of being “at-risk,” offering no account of what this might mean for women. Given that the women in their study were homogeneous, one begins to wonder how GD is experienced in women from diverse ethnoracial groups who are considered “high-risk.”

An earlier ethnographic study by Lawson and Rajaram (1994) provides a more nuanced and detailed account of a transformed pregnancy. The researchers examined the psychosocial consequences of GD in 17 middle-class, American women diagnosed with GD (14 of whom were white, 2 black and 1 Asian-American). Lawson and Rajaram examined the impact of GD on the social role of pregnant women and behavioural adaptations initiated by women to manage the intensive diabetic regimen. The authors reported that GD had profound psychological effects
on women, resulting in fear, depression and anxiety. Women conflated GD with type 2 diabetes, associating GD as a debilitating disease with chronic complications such as blindness, amputations, and premature death. This increased their anxiety throughout pregnancy and six-weeks postpartum. Moreover, women experienced a transformed pregnancy characterized by personal disruption from adhering to the intensive regimen and reported tense interactions with health care providers. The respondents indicated that diabetes became the focus of medical attention rather than their pregnancy and many reported a loss of autonomy and decision-making responsibility. Like the above study by Evans and O’Brien (2005), Lawson and Rajaram (1994) succeeds in illustrating the transformation of women’s pregnancy as a result of being diagnosed with GD and engaging in self-care practices. However, they also fall short in critically analyzing the broader contexts and discursive forces that inform practitioners’ practices which in turn shape women’s understanding and experience of GD. Similarly, experiences of the three women who fall under the category of “high-risk ethnic groups” were not explicitly examined.

More recently, a Swedish study by Persson, Winkvist and Mogren (2010) examined women’s experiences of living with GD using a grounded theory approach. From interviews conducted with 10 women, the authors report that the experience of being diagnosed with GD may be understood as a process which they characterized as “from stun to gradual balance.” While this emerged as the core category, Persson and colleagues list eight other sub-categories: Having a personal responsibility, Being under surveillance, Struggling for protection, Feeling socially apart, Being sufficiently supported, Changing the self-image, Adapting to a new situation, and Waiting for the moment of truth. Similar to Evans and O’Brien’s (2005) findings, women gradually adapted to the diabetes regimen that was initially fraught with multiple challenges and inconveniences in order to gain control of their blood sugar. Not only did women perceive GD as a medical complication that threatened their pregnancy experience, women perceived the diagnosis itself as an indicator of future type 2 diabetes. Persson and colleagues’ study echoes many of the findings from the studies mentioned above. Rather than a grounded theory approach, a Foucauldian theoretical framework might have generated alternative insights considering that the study findings invoked notions of surveillance, exclusion, and truth discourses.
With the exception of the studies detailed below, there is very little research investigating the intersection of GD and race/ethnicity. In a recently published cross-sectional survey study of the attitudes and beliefs towards GD among a multiethnic sample of pregnant women in Australia, Carolan, Steel and Margetts (2010a) point out that women from non-Caucasian ethnicities (i.e., Indian, Filipino, Vietnamese backgrounds) may be at risk of poorer self-management of GD related to lower education, lower health literacy and a lower appreciation of GD as a serious condition. Yet in another journal published in the same year, the same authors reported that Caucasian women also scored poorly on GD knowledge despite demonstrating good level of comprehension, concluding that Caucasians are also at risk of misunderstanding GD and its treatment. The authors note that these findings came as a surprise given that “Caucasian women were recruited as a comparative group on the understanding that they would provide a benchmark against which other ethnicities might be measured” (emphasis mine, Carolan, Steel & Margetts, 2010b). Moreover, the authors found it remarkable that Indian women had the highest level of education and also recorded the highest scores for knowledge. Interestingly, all participants displayed a lesser appreciation of GD as a serious condition.

More recently, Carolan (2013) published another paper about women’s experiences of GD self-management, this time employing an interpretive phenomenological analysis. Although Carolan recruited 15 participants representative of the largest ethnic groups to give birth in Victoria, Australia, such as Caucasian, Asian, South Asian, Indian and Arabic, her findings sidestep the issue of race/ethnicity and offer an account of women’s experiences at the level of generality. Her findings illustrate that women undergo a linear process of adjustment following GD diagnosis as they learn to self-manage their conditions. This process is as follows: Shock of diagnosis, Coming to terms with GD, Working it out/learning new strategies, and Looking to the future. Each adjustment phase is underpinned by having a supportive environment. Carolan stresses that the process of adjustment is largely facilitated by the women’s interest in
maximizing fetal health which served as a powerful motivator for adherence to the diabetic regimen, making women more receptive to interventions to control GD and prevent type 2 diabetes in the future. This study echoes findings from previous studies but misses opportunities for a more nuanced analysis of how race plays out in self-management practices particularly around food (a recurrent topic noted in interview excerpts) as well as how women “worked it out” through subversive strategies that extend outside the gaze of biomedicine.

In a comparative qualitative study, Hjelm, Bard, Nyberg and Apelqvist (2007) reported dichotomous findings in their examination of Swedish and Middle-Eastern immigrant women’s perceptions of health care related to GD management. Whereas Swedish women expressed frustration due to a perceived lack of professional competence and subsequently challenged practitioners at the diabetes clinic, Middle-Eastern born women reported a reduction of anxiety as a result of receiving adequate care and acquiesced to biomedical advice by closely following the prescribed regimen. There are several limitations with this study. First, the researchers do not interrogate or elaborate on the underlying rationale of Middle-Eastern women’s satisfaction with their experience of care contrastive to Swedish women’s unsatisfactory experience of care. Second, the link between ethnicity/race and risk is accepted as a given and thus forecloses inquiry into women response to race-based risk discourses. Third, the power relations between patients and clinicians, including the sociocultural context that shape women’s experience of GD, remain unchallenged. The authors’ dichotomous representation of Swedish women as active agents and Middle-Eastern women as passive subjects reproduce essentialist assumptions rather than open up areas of inquiry that shows up the complexities and heterogeneity of women’s experience of GD, particularly of those who are identified as members of a “high-risk ethnic group.”

An earlier study by the same authors comparing Swedish and Middle-Eastern born women’s beliefs of gestational diabetes illuminates some aspects of cultural differences that were not addressed in their 2007 study. Hjelm, Nyberg and Apelqvist (2005) found that Swedish women demonstrated an internal locus of control by believing they could influence health through active self-care behaviours; whereas Middle-Eastern born women had more external locus of control and held fatalistic views of diabetes, maintaining that diabetes was the result of stress, supernatural or religious forces. The authors point out that Middle-Eastern women
reported that religious explanations superseded health care providers’ advice. In their study, Swedish women are represented as rational, while Middle-Eastern women are represented as irrational. Although these findings are informative of differences between these two ethnic groups, like their more recent qualitative study, the authors reproduce racialization by failing to examine how race-based risk discourses in biomedicine are shaped by historical, sociocultural, and political forces, and how women from different ethnic groups come to understand, respond to or resist such discourses in the context of their everyday lives.

Examining the lived experiences of GD among immigrant South Asian women in Australia, Bandyopadhyay and colleagues (2011) illustrate that women’s cultural practices and beliefs about food consumption and exercise in pregnancy conflicted with the advice they received after diagnosis. Women in their study struggled with the standard prescribed diet and found themselves dissatisfied with the advice they received because key elements of their “traditional” foods were “restricted.” An interesting finding from their study is that women experimented with their diet to obtain a “good reading” in order to avoid insulin. The authors’ analysis leaves much to be explored, particularly how racial politics play out through dietary regimens and how dominant cultural norms in food practices (manifested as “standard” prescribed diet) are mobilized to govern, regulate and discipline pregnant bodies of colour. Moreover, the authors do not expand upon women’s acts of agency and subversive strategies to avoid insulin. Although the authors conclude by calling for culturally appropriate advice, they fall short in examining power relations and racial ideologies that underwrite such practices.

Specifically focusing on food choice decision-making, Hui, Sevenhuysen, Harvey and Salamon (2014) interviewed women with GD living in Winnipeg. The authors identified that women experienced a decreased sense of control related to dietary restrictions of personally preferred foods, inability to increase food variety, and challenges with social eating. In particular, women who were prescribed insulin reported difficulties with quickly adapting to dietary management in a limited period of time which led to decreased control of GD and frustration. Women in the study reported that they did not have enough time to “figure things out.” Not only was life controlled by a measuring cup, life was controlled by a glucometer. Moreover, social eating and dining out was another context in which women experienced less control and stress from worrying about abnormal blood sugars after the social event. As a result
of losing control in many aspects of their lives, women reported the need for more support concerning decisions about food, food preparation, and purchasing. Although the authors indicate that their interview sample “consisted of 53% Caucasian women and the rest were Asian, African or Aboriginal,” they are curiously silent about cultural and taste preferences in food and how this differs from dietary advice provided by health care professionals. The authors are also reticent about food choice decision-making being heavily circumscribed and shaped by social determinants of health such as socio-economic status, education, gender, social exclusion and most importantly, food insecurity. As such, there is an erasure of the complex social arrangements and contexts that entail everyday dietary practices, especially under the individualistic and reductionistic rhetoric of “choice.”

In a thoughtful ethnographic study with Pima Indian women diagnosed with GD, Smith-Morris (2005) shows that women wrestled with the same sets of questions raised in professional debates about the diagnostic controversy surrounding GD. In other words, professional debates about GD were mirrored in Pima women’s narratives. Through home interviews, Smith-Morris illustrates that the concept of “risk” has multiple meanings for Pima women. While risk of diabetes is equated to risk of complications like blindness, dialysis and amputations, the concept of GD as ‘borderline’ is understood by women in their study as a temporary condition through which they can move in and out of. Smith-Morris (2005) also points out that Pima women’s understandings are informed as much by social and dietary experience, lay and popular information, and intuition, as by formal diabetes education. However, lay and biomedical accounts of disease did not necessarily align. Although the spectre of diabetic complications looms large in the collective memory of the Pima, the asymptomatic and transient nature of GD makes the concept of risk (for developing type 2 diabetes) a remote possibility.

While the findings from Smith-Morris’ study are incredibly insightful, there are several aspects of the study that occlude rather than open up understandings of risk for Pima women. One area that may have been expanded further is sociocultural and discursive contexts that constitute the problem of diabetes in Pima Indians. The racialization of risk is raised implicitly but not explored in terms of how this is accomplished in the clinical setting. Furthermore, there is no interrogation of the fact that pregnant Pima Indians and their offspring have been subjects and objects of research on the intergenerational effects of diabetes over the past three decades.
Another limitation concerns the researcher’s recommendation for clinical practice. There are several uneasy assumptions embedded in the suggestions: biomedical/disciplinary power is unquestioned, ethnicity as an independent risk factor is left unchallenged, the hypothesis of fetal programming is presented as an uncontested fact, solutions to the problem of GD in “high-risk ethnic groups” are biomedically-inflected, and intensive treatment and surveillance (i.e. increased medicalization of young girls) are presented as beneficial and unproblematic. Moreover, the iatrogenic risks generated by intensive practices associated with GD are overlooked entirely.

The qualitative studies described above illuminate the contradictions inherent in quantitative studies on women’s perception of GD as well as controversies in medico-scientific literature regarding GD as a disease. More importantly, they also poignantly capture women’s lived experience of GD. However, their analyses could be further extended methodologically and theoretically. Qualitative studies that employ interviews as their method of inquiry would benefit from participant observation and critical analysis of texts that shape clinical practice. Moreover, given that many of the findings gesture thematically towards surveillance and discipline, a Foucauldian theoretical framework can sharpen analysis and shore up findings in a way that productively illustrates the social effects of GD in “high-risk ethnic groups” and addresses how risk, race, and GD cross-articulate to constitute clinical practice and subjectivities of women.

With the above contributions and shortcomings in mind, I now turn to social science research for theoretical and methodological insights that will be carried forward to formulate the framework for a doctoral study situated at the intersection of risk, race, and disease.

3 Empirical insights from social science research

The following studies examine how women’s understandings of health and illness are constituted by a confluence of embodied experiences, dominant and competing discourses, social and cultural contexts, power relations, as well as political and economic interests and agendas. These empirical studies were selected because they open new lines of inquiry at the intersection of risk, race and/or subjectivity and carve out spaces for a Foucauldian analysis of risk discourses. For the purposes of clarity, empirical studies will be divided into themes in spite of considerable overlap: 1) risk in relation to women’s health; 2) risk and race/ethnicity; and 3) risk
and subjectivity. I conclude with a brief discussion on how these empirical insights inform my investigation on the social effects of GD in “high-risk ethnic groups.”

3.1 Risk in relation to women’s health

In her case study of women’s accounts of risk for breast cancer, Ann Robertson (2001) examines the phenomenological, social and political implications of prevailing discourse on risk. Through semi-structured focus groups and in-depth individual interviews with women who attended a breast health clinic in an urban teaching hospital in Canada, she shows how women’s health experiences and the discourses that shape those experiences are always situated and located within the broader social, political and cultural context. That is, the discourses on risk are produced and shaped within the same ideological contexts within which particular diagnostic/screening technologies are developed and deployed. Robertson demonstrates how prevailing discourses are reflected in the accounts of women in the study. Drawing on Foucault’s conceptualization of governmentality, she maintains that discourses on risk both reflect and reproduce a particular kind of subject (i.e. entrepreneurial) that is consistent with the neoliberal political rationality. A limitation of the study, which Robertson makes clear, is the homogeneous sample of participants (mostly northern European, middle class, professional women) and the absence of women from different sociocultural locations representing different experiences of embodiment. This raises the question whether women from diverse ethnoracial groups also adopt an entrepreneurial subjectivity.

Sociologist Tina Miller (2007) reveals that women who were transitioning to first-time motherhood discursively positioned themselves in dynamic ways that weaved together their personal experiences while simultaneously drawing upon and challenging dominant discourses that circumscribed their journey into motherhood. Through qualitative longitudinal interviews with women living in the UK (conducted once prenatally and twice postnatally), Miller explores prenatal and postnatal episodes of transition and juxtaposes these episodes in her analysis. She highlights the disjunction between expectations and experiences by drawing attention to the different ways women anticipate and gradually make sense of becoming mothers. In doing so, she demonstrates how birth experiences can act as a discursive turning point to challenge dominant discourses in creative ways and also underscores the obduracy of some strands of discourse on risk and maternal responsibility. While Miller provides a nuanced account of the
dynamic interplay between personal experience and gendered discourses, like Robertson’s study participants, the sample in this study was homogeneous: namely, white, middle class women who are privileged in structural location and access to resources. One is left wondering how risk discourses are taken up or resisted by pregnant women who are identified as members of a “high-risk population” in relation to their transition into motherhood.

In a paper entitled *The Meaning of Lumps: A Case Study of the Ambiguities of Risk* based on her empirical work examining women with breast cancer, Sandra Gifford (1986) shows how risk is a construct which can take on fundamentally different meanings within epidemiology, clinical medicine and lay experiences of health and illness. For epidemiologists, risk is an objective, scientific concept which expresses a statistical measure of the degree of association between a characteristic and a disease within a defined population. This epidemiological concept becomes more broadly defined when translated into clinical practice and lay perceptions of health and illness. For the medical practitioner, risk is understood as representing a physical entity, a sign of future disease, and as clinical uncertainty concerning diagnosis. The clinician must shift from thinking about risks as being a statement about disease rates in a population to thinking of risk as applied to one patient. Here, Gifford states that risk is a specific property of an individual (something that resides in the body and something from which the patient then suffers) and a sign of future disease that the clinician can diagnose, treat and manage. In this way, the clinician comes to understand and talk about objective clinical risk in the same sense as other objective clinical signs of disease. However for women in her study, Gifford emphasizes that risk is rarely a statistical probability or an objective concept; rather, it is internalized and experienced as a condition of non-health or state of being. Women transformed risk as an objective entity to a subjective experience or a symptom of a future and current illness. An individual’s subjective feeling about risk is mediated by their social and cultural background, context and experiences. Gifford asserts that different meanings of risk as understood and experienced by epidemiologists, clinicians and lay women further blur the already ambiguous relationship between health and ill-health, resulting in the medicalization of a woman’s life. This study stimulates further inquiry about the meaning of risk in relation to race/ethnicity, how race-based risk discourses are employed and enacted in the clinical setting, and how women engage with and resist such discourses and ensuing clinical practices.
In their ethnographic study on the impact of evacuation on childbirth for Inuit women living in the Keewatin, Kaufert and O’Neil (1990) illustrate that epidemiological terms had no meaning for Inuit women. The authors note that women’s definition of risk is primarily community-based, a “homegrown sense of statistic that is acquired through experience.” Lay articulation of a popular epidemiology is quite accurate in the sense that the vast majority of births are without complications. For Inuit women in their study, it requires a leap of faith in abstract reasoning to contrast their experiences with a number cited by a physician proclaiming the increased risk of postpartum haemorrhage. Here, the rates of risk are seen as a theoretical construct lacking local validity. In other words, it is a “pseudorate” that only has meaning in epidemiological discourse and only through its relationship to other sets of numbers. Rather than seeing the doctor’s use of the rates as informative, the authors indicate that Inuit women interpreted the situation in terms of power and politics, rejecting the doctor’s numbers on death as a statistical risk against their own experience of the absence of death during childbirth in their community.

Kaufert and O’Neil’s (1990) ethnographic study is inspiring in that the authors, like Gifford, describe the clinicians’ perception of risk in addition to the patients’ understanding of risk. Their findings illustrate that clinicians often switched from using epidemiological risk to the language of clinical risk in instances where they countered the Inuit women’s appeal to her experience by citing their own clinical experiences of risky childbirth. The authors suggest that the language of clinical risk is partly based on the practitioner’s fear of being seen as irresponsible. This also includes the fear related to feelings of helplessness, coupled with concerns about competence. The fear of postpartum haemorrhage is a “leitmotif,” a recurrent theme that is rarely derived from experience precisely because these complications are rare. Yet, fear of rare complications forever colours childbirth as a dangerous happening for obstetricians. For physicians in the study, risk in childbirth is a constant and frightening element in clinical life. Kaufert and O’Neil explain that “the combination of birth, blood, and death is universally and emotionally powerful, but the idea of seeing a woman bleed to death and being unable to do anything catches particularly at the medical imagination.” Even though medical ideology requires physicians to define themselves as objective, scientific and unswayed by emotion, the authors argue that the emotionally charged experience is very much part of the practice of medicine. Just as Inuit women did not grasp the emotional force behind the physicians’ objection
to birthing in the community, the physicians in their study failed to understand why the place of birth is a political issue for Inuit women. Insights from this study take us closer to examining the intersection of risk, race and disease and raise curiosities about the role of affect and emotions in pedagogical and clinical practices in terms of how women take up or resist risk discourses.

3.2 Risk in relation to race/ethnicity

In a qualitative study exploring ‘risk’ of diabetes and its consequences on First Nation’s people of Ontario, Sunday and Eyles (2001) point out divergent definitions of risk in the biomedical and community narratives. While biomedical narratives are focused on quantitative measurements of blood sugar and implication of poor management on complications, community narratives focused on the social rather than physical consequences of diabetes. For First Nation’s peoples in the study, it was the loss of freedom associated with the onset of diabetes that needed to be redressed for normality to be achieved. Their inability to achieve this normality, despite knowledge of recommended changes in lifestyle, identified that danger is beyond the individual’s control, resulting in denial and stress. Thus, inclusion of only biomedical definitions of risk within diabetes management highlights the extent to which quantitative risk assessment literature fails to account for socially produced understandings of risk and the unintended social consequences of intensive treatment and surveillance. Although the study offers valuable insights on how quantitative assessment of risk translates scientific uncertainty into definitive therapy, there is little done to deconstruct the designation of Aboriginal and other ethnoracial groups as “high-risk,” or how clinicians’ etiological explanation about the elusive link between risk and race align with and/or rub up against First Nation’s peoples’ understanding of racial disparities in diabetes.

Natalie Armstrong’s (2005) qualitative interview study in the East Midlands area of England with women from diverse ethnic backgrounds (identified as White British, South Asian, and African Caribbean) demonstrates how women “at risk” for cervical cancer do not passively adopt expert knowledge on risk factors and screening practices. Rather, women responded to risk in diverse and dynamic ways, and engaged in a process of “self-positioning” that made risk more relevant to them as individuals who occupy particular sociocultural and religious positions. Armstrong asserts that such findings suggest that risk factors do not exist in a vacuum but are situated within particular social and cultural contexts which produce and shape those
experiences. Armstrong argues that the governmentality perspective on risk is in danger of focusing too much attention on discourses and strategies employed to discipline individuals at the expense of exploring how individuals respond to risk discourses and related practices. Drawing on Foucault’s concept of resistance, Armstrong places emphasis on the process through which the individual comes to understand and position themselves in relation to the discourses with which they are faced. Extending Robertson’s (2001) interpretation of risk, Armstrong asserts that risks are located within particular social and cultural contexts that are further mediated through factors such as class, age, and ethnic or religious identity. Rather than accepting medically-recognized risk factors, women resisted risk discourses through pursuing their own understandings of risk in terms of their importance and their social acceptability as well as how and whether risk factors applied to everyday realities. This process of “self-positioning” is an instructive insight that encourages closer attention to subtle acts of resistance to risk discourses and self-care practices that contribute to the constitution of subjectivities.

Anthropologist Lisa Handwerker (1994) illustrates how pregnant women are categorized by health care practitioners as high-risk, medium-risk, and low-risk of experiencing adverse maternal and perinatal outcomes based on their race/ethnicity. Drawing on ethnographic fieldwork in a public prenatal clinic in Northern California, Handwerker argues that risk does not represent scientific certainty. Rather, the designation of “high-risk” has cultural rather than scientifically defined dimensions. During her fieldwork, she observed that health practitioners had a tendency to designate Caucasians, Asians, and Hispanics patients as “low-risk” while African-American patients were frequently categorized as “high-risk,” based on phenotype rather than other factors such as diet and women’s health status. While health practitioners view the screening process as a humane measure to identify and protect vulnerable women and their babies, Handwerker points out that screening cannot be assumed to be neutral but rather it is linked to issues of race/ethnicity, power relations, and institutional structures. Her findings are helpful in that they generate questions about how dividing practices play out in relation to race/ethnicity and how health practitioners justify categorization of risk to patients and themselves. Moreover, her study also indexes areas of further inquiry into the social effects of reifying race in clinical practice when practitioners rely upon taken-for-granted assumptions about ethnic risk factors of disease and mobilize epidemiological terms in self-evident ways.
In his book *Targeting Immigrants: Government, Technology, and Ethics*, Jonathan Xavier Inda (2006: 36) asserts that risk discourses do not target everyone equally. Drawing on printed source materials including government publication, archival documents, newspapers, and magazines, Inda traces the languages, voices and subsequent actions of those authorized to create knowledge and make truth claims (i.e. politicians, government bureaucrats, policy analysts, social scientists) about illicit immigration as an ethical problem to be addressed and managed at the US-Mexico border. Inda (2006: 38) emphasizes that post-social responsibilization, or “ethopolitics” as coined by Nikolas Rose, constitutes a central aspect of the politics of citizenship. Namely, “good” citizens are ones who manage their own relationship to risk through self-monitoring and self-assistance, policing their own conduct in order to maximize the quality of their lives, and for mothers, that of their offspring, and minimize economic burden to the state. Inda (2006) locates the contemporary management of immigrants in the “repressive underbelly of ethopolitics.” He offers an example of the poor immigrant woman as the archetype of the underclass, portrayed as a class of economically dependent and ethically suspect persons who lack moral character and unwilling/unable to be self-sufficient and take responsibility for their own care. Moreover, the figure of the poor immigrant woman is imagined as a mother who is prone to bearing children she cannot support and thus anathematized as the anti-prudent “unethical subject” (Inda, 2006: 112). Inda explains that subjects who are rendered suspect are vulnerable to authoritarian interventions which locate them in the realm of abjection where they could be subjected to all kinds of punitive measures in the name of protecting the welfare of the population. Inda’s work opens up a space to analyze the techniques of governing ethnoracial populations and how certain knowledges, particularly numerical ones housed under official guidelines, produce “truths” about members of a “high-risk population.”

Examining the racialization of disease, Melbourne Tapper (1999) shows how sickle-cell anemia first worked to construct African blackness and then how blackness was used to explain sickle-cell anemia. He argues that the scientific analysis of the disease was based on notions of racial difference, purity, and superiority. By re-establishing the concepts in seemingly objective terms of laboratory medicine, they were given even greater validity. Through an examination of anthropological, genetic, medical and political texts in the decades after its identification in 1910, Tapper outlines the predominant discourses on sickle cell anemia and illustrates the role medicine and anthropology had in shaping the way Africans and African Americans have been
perceived and acted upon. He also shows how sickle cell anemia was used to question the racial identity of whites afflicted by the disorder and to characterize the black body as inherently diseased and therefore inferior. Moreover, Tapper shows how the public health campaigns dovetailed with post-civil rights movement demand for full citizenship for African Americans; thus, making membership conditional upon regulation of their bodies (i.e. choice of partners, screening, adoption) to control the spread of the sickle-cell anemia. Tapper’s study raises questions whether a similar tautological phenomenon is occurring with GD and offers theoretical and methodological insights to uncover racial subtext in authoritative texts.

Anthropologist Michael Montoya (2011) probes further into the racialization of disease to investigate how race operates constructively and destructively in the scientific research in his book *Making the Mexican Diabetic: Race, Science and the Genetics of Inequality*. Through ethnographic research in wet and dry labs, DNA sampling field office on the US-Mexico border, and at scientific conferences, Montoya (2011: 194) develops his concept of “bioethnic conscription,” a process whereby the social origins of human differences are folded in to a biogenetic or clinical claim. Montoya examines how the complicated social and biological meanings of race and ethnicity simultaneously shape biomedical production and reproduction of diabetes knowledge. He traces DNA from its point of origin through the pathways of knowledge production into medico-scientific representations of diabetes knowledge to illustrate that researchers use poorly defined ethnic taxonomies to categorize populations as well as social history to rationalize their categorical choices. He demonstrates how social identities and life conditions of DNA donors are grafted onto biological explanations of diabetes causality in objectionable and constructive ways. While Montoya offers valuable insights into how race operates from lab to research publications and then taken up by pharmaceutical companies particularly at professional conferences directed towards clinicians, his analysis stops short in describing how ethnoracial risk discourse operates in the clinic and ‘loops back’ to reify race in the clinical practice in ways that contribute to the formation of Mexicanas/os subjectivities.

Along similar lines of inquiry, an ethnographic study conducted by Ian Whitmarsh (2008) illuminates the biomedical ambiguities in race and disease and how they are taken up to have different relevance among American genetic researchers, Caribbean medical practitioners and participant families. In his book *Biomedical Ambiguity: Race, asthma, and the contested*
meaning of genetic research in the Caribbean, Whitmarsh (2008) draws on his ethnographic fieldwork to provide insights about the new medical meanings of illness and ethnicity created by genetic research/technologies on race and disease. He states that “medical practitioners come to see disease and race as genetically linked – a bond only knowable through sophisticated and opaque technologies and expertise.” While observing genetic researchers conducting home visits with participants, Whitmarsh notices the ways in which participation in the research study is gendered. He explores what responsibilities, expectations, and identities comprise their experience of being categorized as Barbadian mothers of asthmatics. Whitmarsh observes that this responsibility is unambiguously placed on the mothers and reinforced in multiple ways: in pharmaceutical marketing pamphlets, in family doctors’ and specialists’ statements and techniques of care, among nurses and pharmacists. Through this process, mothers of asthmatic children become medicalized as they take on multiple roles: as a pharmaceutical facilitator, ambulance substitute, constant monitor, and director of preventive measures. Whitmarsh explains that many women participate and come to appreciate the value of the study as a form of personalized attention that is considered absent in the health care system. Thus, Bajan mothers forge a medical identity in their participation through a mix of frustration, hope, and doubt about the applicability of study results. Whitmarsh’s study is informative in illuminating the social effects of genetic research on participant mothers, and also creating space to raise questions relevant to this dissertation. Do women diagnosed with GD and categorized as members of a “high-risk ethnic group” also adopt the subject position as the medicalized mother? And how do race-based risk discourses and practices pertaining to GD shape the subjectivities of women?

In her ethnographic study on the reproductive decision making of low-income African American mothers of children with sickle-cell disease (SCD), Shirley Hill (1994) illustrates the importance of paying close attention to power relations, cultural values, and the social context. Hill found that education and screening programs for SCD was premised on a health belief model which failed to acknowledge the sociocultural context that shapes health decisions. In her study, the options that were presented to women (i.e. to screen both mothers and fathers and to forego parenthood) were not feasible for them as they did not have enough power in their relationships with their partner to insist that they be screened. Also, the mothers did not have access to adequate health care or hold prochoice attitudes towards abortion. For women in the study, motherhood is seen as one of the few ‘status-attaining’ and satisfying options available,
and women are unwilling to sacrifice their right to have children. Thus, medical knowledge about SCD was perceived by women as a threat to their reproductive autonomy. Moreover, the health belief model did not coincide with women’s everyday realities. As a result, women in the study responded by obfuscating medical knowledge. In other words, expert knowledge did not represent definitive truths, and for them, SCD was not as dreadful as medical science portrayed. She contends that such complexities are too often ignored by policy makers and practitioners and easily lead to racialized and reductionistic explanations which in turn translate to insidious forms of regulation, surveillance, and interventions that give rise to fear, intolerance of the ‘Other,’ and social inequality. Hill’s study is valuable in pointing out spaces of possible resistance to authoritative knowledges that reify race and legitimize racial projects in biomedicine.

3.3 Risk and subjectivity

In Making the Biopolitical Subject: Cambodian immigrants, refugee medicine and cultural citizenship in California, Aihwa Ong (1995) points out that biomedicine not only attends to the health of bodies, it is also constitutive of the social, economic and juridical practices that socialize subjects of the modern welfare state. Through ethnographic observations in the clinic and home setting as well as interviews with clinicians and Khmer refugees, Ong explores how subjects of regulation draw the medical gaze and how their resistance to biomedical interventions both invite and deflect control. She illustrates that refugee medicine is a mix of good intentions, desire to control disease and deviant populations, and the exigencies of limited resources which often favour medicalization. While clinicians in her study (many of whom were Asian-American) held strong convictions that Western medicine would help third world patients to function in the new country, Khmer refugees sought specific resources while eluding medicalization of the body and mind. By controlling the medical terms and practices and seeking to instill them in patients, Ong argues that academic and medical workers are part of an overall scheme of power that defines the form and content of refugee illness and well-being while producing the truth effects that shape the subjectivities of Southeast Asian immigrants. However, the refugees in her study were not ‘normalized’ in the intended ways: as better patients or governable citizens. Ong’s findings and analysis through Foucault’s conceptualization of biopolitics and discipline is helpful in thinking through the micropolitics of clinical encounters. She demonstrates that both clinicians and refugees are “caught up in webs of power involving
control and subterfuge, appropriation and resistance, negotiation and learning that constitute biopolitical lessons of what becoming American may entail for an underprivileged Asian group.”

Examining the intersection of risk and subjectivity, Root and Browner (2001) suggest that pregnancy is characterized by a “split subjectivity” whereby women straddle the authoritative and the subjugated, the objective and the subjective, and the haptic as well as the optic, in strategic ways. Through participant observations and semi-structured interviews with pregnant women (mostly European and Mexican Americans) in southern California, the authors explore how biomedicine (which she refers to as a “vaguely defined set of diverse texts, technologies and practitioners”) shapes the experiences of self and body. Like Ong, Root and Browner draw on and challenge Foucauldian insights to explore social relations in medicine, particularly how pregnant women negotiate diverse subjugated and authoritative knowledges to suit their individual needs and desires, in order to gain a better understanding of contemporary pregnant subjectivities. In the narratives of women in the study, the authors point out slippages between authoritative knowledge that is derived from externally imposed constraints and subjugated knowledge based on bodily experience and haptic interpretation. The authors note the vacillating grammatical choices during interviews. They suggest that pregnant women’s subjectivities are transformed from individuated experiences of their pregnant bodies (‘I’) to bodies that are subject to social scrutiny and medical disciplinary regimes (articulated as a pregnant ‘You’). This slippage, or in Foucault’s term “fragmentation,” reflects women’s attempts to forge hybrids among their own bodily knowledge intrinsic to pregnancy, biomedical discourse, and dominant cultural representations of how expectant mothers should behave. The authors conclude by stating that the interaction between different practices, institutions, and individuals is critical to understanding the processes by which the experience of pregnancy and the evolution of pregnant subjectivities change over time and across contexts. Following Root and Browner, I will explore how authoritative discourses and disciplinary practices intersect with the care of the (pregnant) self as a productive means to understanding the nexus of power/knowledge and its role in subjectification.

In her study of post-Chernobyl Ukraine, Adriana Petryna (2002) examines the political, scientific, and social circumstances that followed the disastrous meltdown of the nuclear reactor in 1986 and its effect on the formation of subjectivities. Through her analysis of historical and
ethnographic data, Petryna coins the term “biological citizenship” to illustrate how citizens exposed to the radiation effects demanded that their rights to compensation were recognized on account of their damaged biological bodies. Petryna highlights the patterns by which science became a crucial resource in the management of risk and in nation building projects, and how Ukrainians employed knowledge of biological injury as a means of negotiating public accountability, political power, and further state protections in the form of financial compensation and medical care. Her conceptualization of biological citizenship is informative and relevant for this research project in that the language of biology and biomedicine has changed the way humans define and relate to themselves. Her analysis is also instructive in the sense that it offers methodological insights of attending to the language employed in texts, mobilized by clinicians during pedagogical moments and clinical encounters, and taken up by women in ways that shape how they act upon and think about themselves.

Michel Callon and Vololona Rabeharisoa (2004) explore the tension between subjectivity and resistance to biomedical networks of knowledge. They present a poignant case of a patient, Gino, with limb-girdle muscular dystrophy (LGMD) in Reunion Island who refuses to be part of biomedical networks of knowledge dissemination and rejects a form of subjectivity that emphasizes the free, autonomous, and responsible subject. Through their ethnographic observation and interview with Gino and his family, the authors examine three brief instances in which Gino breaks his silence to participate in the conversation. In all three occasions, Gino demonstrates the logic of refusal: not to consult a doctor, not to join the local LGMD association, and not to get his children to take the genetic test. By refusing a particular subject position, the authors indicate that Gino is opting for a different form of morality and humanity, one that struggles to preserve the opacity, integrity and impenetrability of his restricted life. Rather than embracing biomedical networks of knowledge, Gino and many in similar circumstances demand exclusion from open public discussions, demand non-argumentation given that nothing can be done about it, and demand opacity rather than transparent visibility of their entanglements in front of an audience. Through deliberate strategies of silence, alternate forms of subjectivities are open to possibility that escape the control of visibility and articulation. The findings from this study are insightful in that it serves as a useful reminder to attend closely and reflexively to silent spaces of refusal and to dwell deeply on the value of opacity and dis-articulation in clinical encounters.
In summary, the intention of this reflexive review of literature is to elaborate on the enigmatic entity of GD in “high-risk ethnic populations” and to showcase scholarship that informs and shapes this research project. Although extant research studies employing quantitative methods on women’s perception of health and well-being with GD provide valid contributions in pointing out the multiple and contradictory findings, they fall short in examining women’s lived reality of GD and subjective positions. Qualitative studies supplement these findings with rich descriptions of women’s lived experience of GD and illustrations of a transformed pregnancy. However, extant qualitative research falls short in critically examining the intersection of GD, risk, and race. As a result, these studies occlude the sociocultural context and power relations that shape clinical encounters and subjectivities of women.

Empirical studies from social sciences research offer useful insights by opening up lines of inquiry for formulating an approach to empirical investigation that examines the cross-articulation of risk, race/ethnicity, and subjectivity. The findings from these studies indicate that risks are always situated within particular sociocultural, political and economic contexts which are further mediated by class, gender, and race/ethnicity. Moreover, the literature shows that women do not accept risk uncritically but discursively position themselves in multiple and contradictory ways that makes risk more relevant to them. Women who are disproportionately exposed to race-based risk discourse may embody a sense of obligation to conduct themselves in particular ways and/or resist taking up certain subject positions. An ethnographically-informed study on the ways in which women respond to, engage with or resist ethnoracial risk discourses may open up space to examine how such discourses are implicated in the formation of subjectivity and provide added insight as to how this then ‘loops back’ to complexify and perhaps reify race-based discourses in clinical practice.

For this doctoral research project, I aim to explore what occurs when variable, ambiguous, and contradictory meanings of disease, risk, and race come together in authoritative texts, clinical setting, and lived realities of women of colour. That is, to better understand how medico-scientific discourses on GD constitute biomedical practices and how they are translated culturally in ways that shape the subjectivities of women categorized as “high-risk.” The following chapter will draw on theoretical tools to think through this research problematic.
Chapter Three
Theoretical Framework

The objective of this chapter is to “assemble a toolkit of concepts,” as Rabinow (2003: 2) puts it, in order to approach and better understand the discourses and practices that constitute GD in “high-risk ethnic groups” and their social effects on women of colour. By drawing on theoretical concepts from Michel Foucault and scholars who have extended his work, possible points of tension and contestation that make up this research problematic can be opened up for further scrutiny. The focus of analysis is on the micro-politics of power/knowledge, particularly how discourses that constitute authoritative texts are played out in specific domains (i.e. the clinic) and in turn, implicated in the constitution of selfhood or subjectivity (Barns, Dudley, Harris and Petersen, 1999: 3). Following a discussion on the ontological and epistemological assumptions of poststructuralism, this chapter will elaborate on three theoretical tools that make up the analytic toolkit of concepts: biopower: race and reproduction, governmentality and risk; and modes of subjectification.

1 Poststructuralism: theoretical assumptions

This dissertation study will be conducted within the paradigm of critical social theory guided by a poststructuralist theoretical framework. Poststructuralism is “a school of thought which is opposed to and seeks to move beyond the premises of structuralism, to develop new models of thought, writing and subjectivity” (Barns, Dudley, Harris and Petersen, 1999: 3). While structuralism focuses on describing the underlying rules, social structures, and systems of a social phenomenon in order to develop grand synthesizing theories, poststructuralism focuses on the “inextricable and diffuse linkages between power and knowledge, and on how individuals are constituted as subjects and given unified identities or subject positions” (ibid). The focus of analysis is on the interconnections between macro-level and the micro-level workings of power, particularly how these shape our understandings of human subjects and their awareness of themselves as subjects. More broadly, the aim of this analytic approach is to disrupt the certainties of the present in order to allow new perspectives to emerge (Barns et al., 1999:4).
There are several key ontological and epistemological assumptions inherent in poststructuralism regarding the nature of reality and knowledge that will be brought to bear on this dissertation study. Poststructuralism adopts a position of skeptical relativism which assumes that reality is relative rather than absolute. Meaning, a claim of any kind is only “true” in relation to its context, culture, or specific point of view (Ward, 2007: 219). That is to say, poststructuralists challenge the notion that language and knowledge inscribed in texts are objective, neutral, and universal. Thus, scholars working from this theoretical perspective interrogate and expose language as being constituted by and constitutive of the social reality that it seeks to represent (Lupton, 1999: 28). For instance, the notion of “risk” is never fully objective or knowable outside of belief systems and moral positions. As such, what we measure, identify, and manage as risks are always constituted from pre-existing knowledge and discourses. That is, pre-existing realities involve the reproduction of meanings through social interaction and socialization, and rely on shared definitions. François Ewald (1991: 199) captures the relative nature of risk most aptly: “nothing is a risk in itself; there is no risk in reality, but on the other hand, anything can be a risk; it all depends on how one analyzes the danger, considers the events.”

A central epistemological assumption from a poststructuralist perspective is that all knowledge is bound to the political and sociocultural contexts from which it is generated. As such, scientific knowledge, like any other knowledge, is never value-free but rather it is a product of historically, socially, and politically contingent “ways of seeing” (Lupton, 1999: 29). For example, medico-scientific knowledge pertaining to GD is not static or objective, but rather constantly constructed and negotiated by multiple actors, organizations, and institutions as a part of the network of social interaction and the formation of meaning. Although expert knowledge about GD may be portrayed in scientific literature as unbiased, neutral and universal, they are equally as constructed through implicit social and cultural processes as are lay people’s judgments. However, considering that knowledge production through science follows a methodology that legitimizes a particular form of knowing as superior to others, it is privileged as the dominant discourse and plays a major role in constructing current “truths” (Lupton, 1999: 29). Truth discourses or regimens of truths are then used as the basis of normalization, regulation, and hence, a strategy for social governance.
As illustrated in the epistemological assumption above, power relations hold particular significance in poststructuralist writings. Rather than conceptualize power as a possession or something that is held by a group of people or an institution, power is seen as a diffuse, mobile and strategic relation that “structure the possible field of action of others” (Foucault, 1982: 221). In *Power/Knowledge*, Foucault (1980: 98) puts it in the following way: “Power must be analysed as something which circulates...Power is employed and exercised through a net-like organization ...Individuals are the vehicles of power, not its points of application.” In contrast to critical structuralists’ views of power as prohibitive, coercive, or oppressive, Foucauldian poststructuralists conceptualize power as also productive, giving rise to new forms of behaviour and events (Mills, 2003: 36). Furthermore, power relations are productive in the sense that they are always implicated in the constitution of knowledge (Lupton, 1999: 26). There is no knowledge that can be said to be neutral or disinterested, including poststructuralists’ own truth claims. With regard to the indivisibility of knowledge and power, Foucault (1980: 93) writes: “we are subjected to the production of truth through power, and we cannot exercise power except through the production of truths.” For Foucault, power and knowledge are inextricably linked to each other, which is why he coined the term “power/knowledge.” Power makes possible particular ways of knowing which “presuppose and constitute at the same time power relations” (Foucault, 1977:28). Thus, what we know to be true and false and how we come to see ourselves in the world are the effects of power/knowledge.

Poststructuralism emphasizes the importance of identifying discourses that participate in the construction of realities, meanings, and understandings. The term “discourse” is a significant concept for Michel Foucault and scholars influenced by his work. In *The History of Sexuality*, Michel Foucault (1978: 100-101) characterizes discourse in the following way that is worth citing in full. “Indeed, it is in discourse that power and knowledge are joined together. And for this very reason, we must conceive discourse as a series of discontinuous segments whose tactical function is neither uniform nor stable. To be more precise, we must not imagine a world of discourse divided between accepted discourse and excluded discourse, or between the dominant discourse and the dominated one; but as a multiplicity of discursive elements that can come into play in various strategies. It is this distribution that we must reconstruct, with the things said and those concealed, the enunciations required and those forbidden, that it comprises; with the variants and different effects – according to who is speaking, his position of power, the
institutional contexts in which he happens to be situated — that it implies; and in the shifts and reutilizations of identical formulas for contrary objectives that it also includes. Discourses are not once and for all subservient to power or raised up against it, any more than silences are. We must make allowance for the complex and unstable processes whereby discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling block, a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines and exposes it, renders it fragile and makes it possible to thwart it.”

Although Foucault was equivocal about the term and admitted to having “used and abused [it] in many different senses,” he states “in the most general, and vaguest way, it denotes groups of verbal performances” (Foucault, 1972: 107). Albeit broadly stated, he does draw a distinction by referring to discourse as serious speech acts which produce certain knowledges in contrast to those of everyday life, or as Lorna Weir (2006: 10) puts it, discourse refers to “rare yet repeatable truths” imbricated in power relations. Dreyfus & Rabinow (1982: xxiv) provide added clarification to Foucault’s notion of discourse by placing emphasis upon certain kinds of knowledges: “what experts say when they are speaking as experts.”

Through discourses, we perceive and understand the social, cultural, and material worlds in which we inhabit. Not only do they delimit and make possible what can be said and done about phenomena such as risk, race and disease, discourses serve to organize the ways in which we perceive and deal with such phenomenon. They also contribute to practices, or what Foucault calls “technologies of the self,” which are involved in the constitution of selfhood or subjectivity. However, discourses are not static but rather are constantly in a state of flux (Lupton, 1999: 26). That is to say, some discourses on a phenomenon may come into being or prominence at certain times but then make way for others. The shift in meanings around a phenomena and struggle over those meanings has important implications for our understanding of and response to that phenomenon. Taken together then, I understand discourse to mean a set of “truths” that brings together power and knowledge at a particular time and place; despite internal contradictions and instability, it has the coherence and force to shape and regulate practices, having the effect of constituting social realities and subjectivities.
The above poststructuralist assumptions will be brought to bear on how I approached this dissertation study. The objective of this inquiry is to examine the discourses that are so normalized in quotidian clinical practice that they become invisible and unquestioned, leaving out other possible ways of knowing. Rather than determining the verity of knowledge or interrogating whether discourse on a particular phenomenon is real or false, the focus of this dissertation study is to better understand the ways in which discourses on disease, risk, and race are constructed and acted upon. Careful attention is directed to the relationship between expert knowledges and the kinds of strategies of intervention that ensue from them (Barns et al, 1999: 9). Multiple and incommensurable meanings of disease, risk, and race will be examined in order to illustrate the operations of power/knowledge and its effect on shaping social realities and subjectivities. Contrastive to neoliberal discourses that portray subjects as rational, responsible and calculable, this poststructuralist approach to empirical inquiry acknowledges subjectivities as constantly shifting, differentially experienced, and irreducible to a single actor (Barns et al, 1999: 10). Just as there can be multiple competing realities, human beings can have multiple, non-coherent selves (Lupton, 1999: 30).

For this dissertation study, categories and concepts employed in biomedical discourse are rendered strange, dislodged and deconstructed. More specifically, the notions of disease, risk, and race are problematized insofar as they represent undifferentiated categories and discourses. In other words, rather than an a priori understanding of such concepts or conceiving them as existing within a vacuum unfettered by broader social forces, the heterogeneity within categories of disease and race as well as the multiple meanings of risk will serve as starting points of analysis in this research project. Adopting this theoretical perspective, the taken-for-granted understandings of concepts that have been taken up to shape the human subject are deconstructed and troubled. By focusing on quotidian practices which constitute our social realities, we gain a better understanding of subjugated or disqualified knowledges. Having situated this dissertation study within poststructuralism, the following sections move forward to describe three theoretical tools that constitute a framework from which to formulate a suitable methodological approach and analyze data generated from the methods of investigation.
Biopower: race and reproduction

Biopower, or power over life, refers to the governance and regulation of populations and individuals through practices associated with the body. For Foucault, one of the ways in which he conceptualizes biopower is that it represents a historical rupture in political thinking and practice that is marked by a rearticulation of sovereign power. Foucault points out that since the seventeenth century the sovereign’s power over death was gradually replaced by a new form of power that seeks to promote life. In “Society Must Be Defended”: Lectures at the Collège de France, 1975-1976, Foucault contends that the classical sovereign’s right to “take life and let live” underwent a gradual transformation in the nineteenth century during which the modern state power burgeoned to wield an expansive right to “make live and let die” (Foucault, 2003: 241). In his later publication of History of Sexuality, Vol. 1, Foucault clarifies that the function of this new kind of power was “no longer to kill, but to invest life through and through...the old power of death that symbolized sovereign power was now carefully supplanted by the administration of bodies and the calculated management of life” (Foucault, 1978: 139-140). Modern state power is dedicated to ensuring “the ‘right’ to life, to one’s body, to health, to happiness...the ‘right’ to rediscover what one is and all that one can be” (Foucault, 1978: 145). Thus, life rather than death became the central focus of state power.

Foucault traces this transformation by analyzing the mechanisms, techniques, and technologies of power. In his analysis, Foucault describes two technologies of power that emerged sequentially at different times yet they dovetailed into one another to optimize life and take control of life processes (Foucault, 2003: 249). During the later part of the seventeenth century and the first half of the eighteenth century, there was an emergence of a disciplinary technology of power that centered on the individual body “as a machine” (Foucault, 2003: 243; Foucault, 1978: 139). Foucault conceptualized the heterogeneous techniques of disciplinary power as “anatomo-politics.” Disciplinary techniques included all strategies that were used to distribute, organize, and train human bodies in “a field of continuous visibility” in order to control and increase their productive force by rendering them “docile bodies” (Foucault, 2003: 242 & 249). With the rise of the administrative state in multiple sites (e.g. in hospitals, schools, armies and factories), a range of disciplinary practices emerged to transform individual bodies in
ways that were economically and politically useful through instrumental techniques of surveillance, hierarchies, and bookkeeping (Foucault, 2003: 242).

In the latter half of the eighteenth century, a new technology of power subsequently arose that was different from, yet inclusive of, disciplinary techniques (Foucault, 2003: 242). This new regulatory power operated on a “massifying” scale directed at “man-as-species,” or population, making use of different instruments to control biological processes such as birth, death, health and longevity at the level of generality (Foucault, 2003: 243). Foucault refers to this new technology of power as “biopolitics.” It deals with the population as a problem that is “at once scientific and political, as a biological problem and as power’s problem” (Foucault, 2003: 245). This “technology of population” employed various instruments including statistical measurements, demography, and surveys to predict the probability of random events of biological processes (Foucault, 2003: 243). Population-based statistics were then mobilized in the development of a widespread field of economically rational interventions that attended to modifying problems such as fertility, morbidity and mortality of epidemics and endemics, accidents, as well as environmental effects (Foucault, 2003: 244-245). By installing security mechanisms around random events in a population, the state of life could be optimized in a general way that establishes homeostasis and achieves a state of equilibrium or regularity within a population (Foucault, 2003: 246 & 249). Thus, these mechanisms controlled and protected the security of the population from inherent dangers and optimized the state of life. Foucault (2003: 247) states that it is this regulatory power over the population that transformed sovereign power into one of biopower – a power that intervenes to make live and maximize life.

In Foucault’s account, although disciplinary and regulatory technologies of power do not exist at the same level, they are not antithetical or mutually exclusive (Foucault, 2003: 250). Rather, these two technologies of power are mutually constitutive and “intersect along an orthogonal articulation” (Foucault, 2003: 253). For Foucault, biopolitical and disciplinary mechanisms are connected through the ways in which the norm is deployed. In other words, the norm is the “single element” that can be applied to discipline the body and regularize the population (Foucault, 2003: 253). As such, various techniques of discipline and regulation organized around the norm constitute the matrix that lies between the individual body and
population (Foucault, 2003: 253). That is, the norm circulates between the processes of disciplining and regularization, articulating the individual and the population.

Foucault was not always consistent about the distinction between biopolitics and biopower. In his texts, these two terms constantly shift meaning and are employed without neatly differentiating the two. However, there are three ways in which Foucault uses biopower and biopolitics interchangeably in his work. As noted above, the concept of biopower stands for a historical rupture in political thinking and practice that is marked by a rearticulation of sovereign power. The second way Foucault discusses biopower/biopolitics is related to the role it had in the rise of modern racism. And third, Foucault explores biopower/biopolitics in relation to his concept of governmentality, which broadly refers to the distinctive art of government that historically emerges with liberal forms of social regulation and individual self-governance. I will elaborate on the latter two in the following sections, specifically focusing on biopower in relation to racism and reproduction as well as governmentality in relation to risk.

2.1 Biopower and race

In Society Must Be Defended, Foucault offers important albeit fragmented insights into the relationships between biopower and race. Here, he contends that the biopolitical function of state racism is not only to maximize life but also to determine inferiority and death of unfit races. According to Foucault (2003: 255), the hierarchy or distinction that “certain races are described as good and that others, in contrast, are described as inferior” is “a way of fragmenting the field of the biological that power controls.” In other words, Foucault clarifies that the first function of racism is to subdivide the species it controls as races. Such “dividing practices” have a long history in colonial and biomedical projects with tremendous consequences of constraining the rights, reproduction, and/or power of groups. The second function of racism offered by Foucault (2003: 255) is to establish a positive biological relationship between life and death in the sense that “death of the bad race, of the inferior race (or the degenerate, or the abnormal) is something that will make life in general healthier…and purer.” That is to say, those who are of the inferior race are “threats, either external or internal, to the population and for the population” (Foucault, 2003: 256). As such, the elimination of the biological threat and the improvement of the species or race are justifiable in the biopower system as a necessary precondition.
Scholars drawing on Foucault have examined the function of state racism in various ways to clarify the relationship between biopower and race as it relates to inferiority and death of unfit races. Closely attending to Foucault’s lectures of 1976, Rabinow and Rose (2006: 205) highlight that the link between race and biology as fundamental to biopower, asserting that “[r]ace, together with health, and in variable relations with it, has been one of the central poles in the genealogy of biopower.” Rose (2007: 254, 258) asserts that the specificity of modern racism is its inextricable imbrication with the technique of power in that the State is “obliged to use race to exercise its sovereign power.” The key point Rose is highlighting is that death is not a biological phenomenon alone but also a political one. However, through a post-colonial reading of Foucault, Renisa Mawani (2009: 29) extends and pushes Foucault’s account beyond the notion of biological and political death, suggesting that death is also deeply cultural. Mawani explains that cultural death not only purges the individual of the excesses and irrationalities associated with a particular race but ultimately renders this racialized populace to be “a relic of the past or a distant memory that is replaced with a liberal and ‘modern’ population.” This conceptualization of cultural death is useful in thinking through this dissertation in the sense that racial improvement and assimilation operate through institutional technologies of power and manifest in pedagogical ways that promote normalization thereby enacting cultural death.

Racial taxonomies, categorization, and classification have historically characterized colonial projects. Following Foucault and his post-colonial interlocuters, Mawani argues that colonialism was not solely a military or economic endeavour but also a cultural one that generated a stockpile of new truths demarcating and amplifying racial and cultural difference. Citing Nicholas Dirks, Mawani emphasizes that the production of colonial knowledges was critical to empire’s global expanse, as it “both enabled conquest and was produced by it.” In other words, “knowledge was what colonialism was all about” (Mawani, 2009: 22). That is to say, empire was contingent not only on the proliferation of knowledges but also on the coercion and violence that the formation of categories and the aggregation of populations made possible.

Drawing on the work of Ian Hacking, Mawani and Rose underscore the ways in which categories became institutionalized through consensus and enumeration. In the words of Hacking (2004: 107), “the category and the people in it emerged hand in hand.” Hacking recounts that the legacy of enumeration started with the first European colonists conducting census of the Spanish
in Peru and carried out heavily in the British census of India during which the population was enumerated into many overlapping classification systems from religion, nationality, language and caste (Rose, 2007: 163). What made numbers so powerful was their seeming neutrality and objectivity. Albeit in different ways, Ian Hacking (1990) and Mary Poovey (1998) have argued that numbers had an indispensable role in the European imagination, rendering social life newly observable, quantifiable, and understandable. Poovey (1998: 5) points out that numbers came to epitomize the “modern fact” and became the British government’s preferred way to generate knowledge of and for the nation. Thus, numbers became important technologies of knowledge in the colonies, aggregating populations and allowing comparisons between peoples who might otherwise appear distinct and incomparable.

Rose (1999: 221) contends that enumeration was closely tied to modern forms of governance particularly during the height of British imperialism when the political and social value of numbers was increasingly employed. Throughout the nineteenth century, historians of colonialism have demonstrated how “dividing practices” (i.e. prisons, madhouses, and hospitals) underpinned the rationales and techniques of government for those allocated to different categories according to their perceived capacity of self-control, foresight and responsibility necessary for civility. Along similar lines, Ann Stoler (1995:8) argues that such classification practices also shaped the European colonists self-identification and the meaning of whiteness which have persisted well into the twentieth century, most remarkably with national socialism and the race-based science of eugenics.

Rose (2007: 164) highlights Foucault’s assertion that the idea of populations as races undergirded the primary strategies of eugenics. The massive biologization of race in the nineteenth century, strengthened by pre- and post-Darwinian evolutionary thinking, applied within states and colonial domination and infused into strategies of eugenics in the first half of the twentieth century. Through a biologized understanding of race and by linking individual characteristics to population quality, Rose (2007: 164) states that the rights and reproduction of groups defined by their racial origins could be constrained or restricted. Such ideas of race underpinned early twentieth century attempts by many nations to control the racial constitution of their population by placing restrictions on immigration. Racial anxieties consisted of the infiltration of “lower races” from the outside and subsequent excessive breeding of
“degenerates” from the inside undermined the population. Notwithstanding the unsettling historical consequences of classification, Rose asserts that racial categories were never static but were flexible and shifting particularly in response to new political and social exigencies and circumstances. The absence of uniformity in the definition of race stems from the lack of any scientific basis for racial classification; as such its definition can only be an approximation or an attempt to define the indefinable. Although racial classification is essential for practices of government, Rose (2007: 168) contends that race-based categorization is always elusive despite the objectivity and legitimacy generated by scientific knowledge.

The classification of race, as Bowker and Star (1999) point out, is one of the more socially constructed aspects of medical science. The authors explain that the work of classification involves a complex interweaving of science, myth, medicine, biography, and bureaucracy. Although categories of race exist on these multiple registers, they are often used without much reflection in many aspects of daily life. Yet, racial categories can simultaneously provoke active speculation when cases of ambiguity emerge, especially when “social and political circumstances, individual biography, or race itself when compared to other notions historically or geographically, do not comply with categories” (Bowker & Star, 1999: 324). Such instances can lead to a sense of disconnect or dissonance where lived experience are “torqued” by classification and vice versa (ibid). As multiple filiations or threads intertwine, the authors explain that profound insights can be gleaned from the ways in which they tense or rub up against each other.

Bowker and Star (1999: 319) contend that classifications do not offer an explanation that deepens our understanding of a phenomenon, but rather it “tie[s] a person into an infrastructure – into a set of work practices, beliefs, narratives, and organizational routines.” The authors emphasize that classifications have consequences: “perceived as real, it has real effect[s].” In this sense, the authors argue that classifications are powerful technologies. Further, when classifications are embedded in working infrastructures, they become relatively invisible without losing any of that power. Bowker and Star assert that “everyday categories are precisely those that have disappeared into infrastructure, into habit, into the taken for granted.” The classification of race clearly demonstrates that they maintain and are maintained by organization, governments, and individuals.
In the contemporary era of biomedicine, we see a similar trend in the proliferation of scientific knowledges from epidemiological studies that employ racial taxonomies and subsequently inform clinical decision-making. Despite extensive arguments over the biological basis of race and the utility of race in biomedicine, recent scientific research particularly in the field of genomic medicine is increasingly attempting to link disease susceptibility and treatability to race/ethnicity. Several anthropologists and social scientists have critically examined the use of race in medical research and health service. Many argue that race is a biologically meaningless cultural construct, stating that there is more variation within groups than between groups (Duster, 2003; Lee et al, 2001; McDermott, 1998; Montoya, 2011; Reardon, 2005). Racial categories overemphasize homogeneity within groups and thus, contrasts between groups are misleading (Lee et al, 2001). This also results in oversimplifying the ways in which individuals assign themselves into groups and the ways in which researchers and clinicians assign participants/patients into ethnoracial categories. Not only does the use of race confound the associations between ethnicity, class, poverty, and lifestyle, it conflates divisions based on nationality, skin colour, physiognomy, country of origin, ancestry, descent, and self-identification (Rose, 2007: 171). Thus, racial and ethnic categorization lacks conceptual coherence and specificity, and fails to capture the multiple and incommensurable dimensions of difference.

Biomedical research is caught in an uncomfortable position in which racial classifications are simultaneously utilized yet critiqued. Whitmarsh (2008: 6) notes that market and moral pressures to address disparities in health are producing an expedient approach to race in which several criteria are considered sufficient for racial classification. That is, multiple forms of race identification including skin colour, self-identification, parental ethnicity, and geographic ancestry (inferred or stated) serve as a diagnostic of race. At times, there is a slippage whereby one can stand for another. Such heterogeneity and variability is common to concepts of race, historically and cross-culturally. Yet, the ambiguities and contestations inherent in race have been sources of the concept’s strength within science (Tapper, 1999). Race in biomedicine is simultaneously biological, medical, geographic, and socially constructed. However, plurality is precluded by the biomedical framing of race in order to stabilize the concept of race for medical intervention. Although such knowledges are hegemonic, they are never absolute as they rest on shaky foundations grounded on competing and contradictory truths, anxiously regrouping, reinventing and reinscribing their authority against their own internal instability.
Foucault’s analysis of racism has been criticized as limited and selective for neither systematically addressing the problem of colonialism nor elaborating on the interrelationship of nation, citizenship, and racism. However, Lemke (2011) points out that Foucault offers several analytical assets. Rather than conceptualizing racism as an ideological construct, an exceptional situation, a response to a social crises, or defined by individual action, Foucault refers to racism as an expression of a schism within society that is perpetually provoked by the on-going biopolitical agenda of cleansing of the social body (Lemke, 2011: 43). For Foucault, racism, as Lemke puts it (2011: 44), “structures social fields of action, guides political practices, and is realized through state apparatuses.” Furthermore, Foucault challenged old notions of race wars as a discourse directed against sovereign power by transforming it to a discourse of power concerned with the imperative to “defend society” against biological dangers and medical-hygenic conformity with the norm. Lemke (ibid) suggests that this speaks to Foucault’s notion of “tactical polyvalence” of discourse. That is, race discourses have the capacity to transform in ways that allow for possibilities and account for contemporary neoracist strategies that do not so much stress biological difference but rather assert cultural differences between ethnic groups.

Emphasizing the “make live” aspect of biopower in the 21st century, Rose encourages empirical investigation in relation to health to be centered on the strategies for the governing of life and the modes of subjectification. Rose (2007:185) asserts that “in our present configuration of knowledge, power, and subjectivity, what is at stake… is not the resurgence of racism, the specter of stigmatization, a revived biological reductionism, or the legitimation of discrimination.” Rather, he shifts attention to “the changing ways in which we are coming to understand individual and collective human identities… and the implications of these for how we govern our differences” (ibid). Health, he claims, is the key target of ethical work that humans do upon themselves and shapes individual identities and collectivities. Rose points to the assemblage, which he calls the “bioethical complex,” as the site where biology moves from fate to obligations of choice. In other words, he suggests locating the biopolitics of race, particularly in the age of genomic medicine and somatic identity, in the field of biological citizenship.

While this dissertation will follow Rose’s emphasis on the “make live” aspect of biopower, this project will not lose sight of the discursive effects of race in regulating populations and disciplining individuals. As Thobani (2007: 11) usefully reminds us, Foucault’s
concept of biopower as productive and relational needs to be approached with some caution given its Eurocentric focus, particularly when attention is directed to the nation’s outsiders who have been constituted as “non-western” or “non-modern,” and therefore not in possession of the exalted qualities of “western” nationalities. Rather than situating the project under the pernicious underbelly of necro-politics which focuses on the death-function of race and biopower, emphasis will be directed on the imperative of health underwriting race-based risk discourses and practices. Given that such discourses consist of “practices that systematically form the objects of which they speak” (Foucault, 1972: 49), this project intends to attend closely to the processes of race-based risk discourses that are circulated and accomplished in the clinical setting, and its effect on the formation of subjectivities of women diagnosed with diabetes during pregnancy.

2.2 Biopower and reproduction

For Foucault, sexuality was crucial to the emergence of biopower because it connected the anatomo-politics of the human body with the biopolitics of the population. Sexuality became a “field of vital strategic importance in the nineteenth century” precisely because it fused anxieties regarding the individual body with the social body. Not only did sexuality give rise to “infinitesimal surveillance permanent controls, extremely meticulous ordering of space, indeterminate medical and psychological examinations,” it generated “statistical assessments and interventions aimed at the entire social body or at groups taken as a whole” (Foucault, 1978: 145-6). Foucault maintains that the increasing preoccupation with sexuality and the population as a biological entity informed the well-being of the species, its longevity, vitality, and virility.

Rabinow and Rose (2006: 208) assert that sexuality has become increasingly disengaged from the practices of reproduction in the past fifty years. By this, they mean that reproduction as we know it today has “become the object of a series of forms of knowledge, technologies and political strategies that have very little to do with sexuality” (ibid). A variety of concerns such as over-population, abortion, and infertility has rendered reproduction a problematic space linking together technological, political, legal, and ethical domains. More recently, new reproductive technologies constitute a site of discursive explosion in the Anglo-American world. New technologies involving micro-manipulaiton of eggs and sperm, pre-implanation genetic diagnosis, and embryo selection have given rise to political and ethical controversies. Rabinow and Rose echo a key concern expressed by feminists: “the principal biopolitical achievement lies
on the axis of subjectification: these strategies exhibit the characteristic formation in which apparent choices entail new forms of ‘responsibilization’ and impose onerous obligations.”

With much attention directed at the ‘molecular’ pole of new reproductive technologies, Rabinow and Rose (2006: 209) note that less attention has been paid to the ‘molar’ pole of the management of reproduction, particularly in relation to population limitation strategies in China, India, and Latin American countries. In order to avert the problem of over-population and concerns about the impact of population growth on economic wealth and the need for governments, biopolitical strategies have given rise to policies that curtail reproduction, particularly amongst the poor. These have varied in coerciveness from China’s One Child Policy and sterilization campaigns in India, to others that adopt principles of informed consent such as “voluntary surgical contraception” in Mexico. Rather than being heredity or eugenics in focus, such strategies are underpinned by truth claims of economics and demography. Despite the rhetoric of informed choice that resonates with the ethic of autonomy, critics have argued that they amount to global eugenics. However, Rabinow and Rose (2006: 210) contend that efforts to limit population growth in the interest of national economic prosperity does not operate as eugenics nor is it the same as purification of the race by elimination of degenerates. Rather, they argue that “contemporary biopolitics operates according to the logics of vitality, not mortality: while it has its circuits of exclusion, letting die is not making die.” Whether interventions are applied to the molecular or molar pole of reproductive management, the authors observe that contemporary strategies are more on the side of maximizing targets for pharmaceutical and other health care interventions in campaigns of disease awareness and treatment in the name of the maximization of life.

Although Foucault provides useful formulations of sexuality as the object and effect of modern power, Mawani (2009: 83) reminds us that feminist scholars have pointed out Foucault’s gendered and racial blind spots, insisting that biopolitical concerns were never evenly dispersed across the population. Mawani argues that concerns of the social body and society’s defense against internal enemies were exercised in part through the governance of women’s bodies. Thus, sexuality and reproduction became key targets of power as states aspired to reinvigorate the population through the careful regulation of sexual relations and through the bearing and rearing of children. Foucault does not specifically discuss pregnancy per se, but he makes several
suggestive references for thinking through the anxieties surrounding race, gender and sexuality. Mawani (2009: 84) points out that the racialized female body has historically been conceived as the gendered exemplar of degeneracy in that her existence is thought as a threat to defile not only the individual body but also the social body, or the population could be corrupted through her diseased corporeality, unrestrained reproductive capacity, and contaminated offspring predisposed to a diseased future. In this context, the biopolitics of sexuality, reproduction, gender, race, the body and the species all converge.

According to Pratt (2004: 34), the state makes different kinds of biopolitical investments and deploys varying technologies of power in relation to different subject populations. Of increasing concern within many first-world nations is the fact that third-world-looking migrants appear to be subjected to different modalities of power than others. Postcolonial scholars drawing on Foucault have indicated that ethnicity may supplant the workings of sexuality as biopower. In other words, it is now ethnicity that functions “to produce, organize and cohere subjectivities in the multicultural age” (Chow, 1996: 206). Like sexuality, Chow (1996: 213) asserts ethnicity is ultimately about the management of human reproduction. Just as Foucault traces the way that discourses of sexuality both supplanted and reinforced systems of family alliance, discourses of ethnicity draw us back into the family alliance. Given the diminishing social welfare provisions, families – in particular, women – are increasingly expected to take up a wider range of caregiving roles. Perhaps such gendered valorization of women as the agent of care and domesticity functions to reanimate the family as a caring substitute for the welfare state.

The above discussion on biopower in relation to race and reproduction is helpful in theoretically analyzing the underlying anxieties surrounding maternal diabetes contributing to the “diabetes epidemic” through the reproduction of “undesirable” and “unfit” races. Discourses of the “high-risk ethnic population” can easily construct images of the racialized female subject. Such discourses not only inflect racial logics but also illuminate the paradox inherent within biopolitics: the transnational and nation state’s concern surrounding the maximization of life coexists with the government of external and internal “others” who compromise the health of future citizens and economics of the nation state. The racialized pregnant body thus occupies a liminal space in Western society. She is the figure of exclusion in sexuality, disease, and degeneration that threatens to undermine the health of the nation state, yet simultaneously she is
the figure of inclusion through the gendered valorization of woman as the agent of care, passivity and domesticity. This then raises questions of modern governance which, according to Foucault (1991: 87), include “how to govern oneself, how to be governed, how to govern others, by whom the people will accept to be governed, and how to become the best possible governor?”

3 Governmentality and risk

As a strand of biopower, governmentality operates through the orchestration and regulation of populations and individuals. Often described as “the conduct of conduct”, governmentality is an approach to social regulation and control in the maximization of wealth, welfare, and productivity (Lupton, 1999: 85; Higgs, 1998: 185). Broadly speaking, the notion of government refers to “any activity aiming to shape, guide or affect the conduct of some person or persons” (Gordon, 1991: 2). Closely aligned with neo-liberal political rationality in the contemporary era, governmentality can be conceived as a strategy and rationale which champions individual freedom and rights against the excessive intervention of the state (Lupton, 1999: 86). It is heavily reliant on systems of expert knowledge which constitute and define the objects of their knowledge. Knowledge gained through mass surveillance, monitoring, observation, and measurement is crucial to disciplinary power which uses such knowledge to regulate individuals. Through discourses and strategies of normalization, individuals are discursively positioned and fabricated within a network of instruments and techniques of power.

Governmentality is, as Wendy Brown (2006: 80) puts it, “a term that explicitly fuses government and rationality, designed to capture the uniquely modern combination of governance by institutions and by knowledges, to stress the dispersed nature of modern governance, and to grasp the circulation of political rationalities.” The strategies of governmentality in neo-liberal states are both coercive and non-coercive (Lupton, 1999: 87) in that they rely heavily on individuals’ voluntary compliance to be in alignment with the interests of the state. A fundamental aspect of governmentality in neo-liberal states is that the regulation and discipline of an individual is directed at the autonomous, self-regulated citizen. Rather than passive subjects of governance or acquiescent recipients of social rights, citizens are active in policing themselves as normalized subjects who are in pursuit of self-improvement, happiness and health (Lupton, 1999: 88).
Likewise, Rose (2007: 25) points out that the “ethic of active citizenship” in advanced liberal democracies dictates the optimization of lifestyle, health, and quality of life to the point of being almost obligatory. Those who do not adopt an active, informed, positive and prudent relation to the future are subject to negative judgment. Such “citizenship projects” demand its citizens to tend to his or her own body and, for a woman, those of her spouse and offspring, and to exercise biological prudence, for their own sake, that of their families, that of their own lineage, and for their nation as a whole (Rose, 2007: 24). Petersen (1997: 194) also discusses neo-liberalism as a form of rule that calls upon individuals to engage in their own self-governance through never-ceasing and ever-vigilant self-examination and self-care in order to moderate the burden of the individual on society. The notion that individuals should take responsibility to protect themselves and their kin from risk is a political rationality which has displaced the former notion that the state should protect the health of individuals. Thus, the concept of risk has become privatized such that an individual deemed “at risk” is expected to take control to prevent risk through their own actions rather than rely on social insurance apparatus as a safety-net (Lupton, 1999: 100).

Most notable for linking the concept of risk with that of governmentality, Castel (1991) has drawn attention to the emergence of new preventive strategies of social administration evident in contemporary societies. In his oft-cited quote, these new strategies “dissolve the notion of a subject or concrete individual, and put in its place a combinatory of factors, the factors of risk” (Castel, 1991: 281). It is this combination of abstract factors which render more or less probable the occurrence of undesirable events such as illness. By shifting the focus from individuals to risk factors (statistical correlations of heterogeneous elements), Castel notes that experts have multiplied the possibilities for preventive interventions.

Drawing on Ian Hacking’s work on the rise of risk thinking, Rose (2007) emphasizes that risk denotes a family of ways of thinking and acting that involve calculations about probable futures followed by interventions in the present in order to control that potential future. In other words, risk strategies such as screening and risk profiling are closely intertwined with interventions which subsequently direct the trajectory of those deemed high-risk in the present to a more desirable and less diseased future. The key feature here is the forward vision of these strategies: “to reshape the vital future by action in the vital present” (Rose, 2007: 18). These
interventions are not intended to treat the disease per se, but rather to attend to the “infinitely expandable and malleable empire of risk” (Rose, 2007: 87). Thus, Rose asserts that it is the “treatment of risks” (rather than disease) has come to be a defining aspect of contemporary politics of life.

Risk operates as a mobile form of government through the conjunction of disparate technologies of power, mechanisms, and forms of reasoning. As articulated by Weir (2006: 13), risk is a technology of both security and disciplinary power. Drawing on Foucault’s notion of biopolitics, Weir (2006: 188) indicates that they are at once “mutually enforcing but analytically distinct.” While discipline acts on individual bodies by training, correcting and optimizing their performance and utility, security acts on populations and anticipates the probability of future outcomes through analyzing aleatory events in large populations. By calculating the mean and standard deviations, security mechanisms assist in the development of interventions which are then applied to vital phenomena to modify the likelihood of its occurrence at the level of the population (Weir, 2006: 188).

In the clinical context, security and discipline conjoin through two distinct risk techniques. The first type of risk rationality apparent in clinical practice is epidemiological risk (Weir, 2006: 18; Lupton, 1999: 98). This kind of risk rationality is concerned with the rates of morbidity and mortality among populations (Dean, 1999: 142). The calculus of epidemiological risk is undertaken by bringing together assessment of a range of abstract factors with the incidence of health outcomes, such as perinatal and maternal morbidities, in a targeted population (Weir, 2006: 18; Lupton, 1999: 98). As Castel (1991) points out, it has become linked to the “screening” of populations as procedures for monitoring populations in order to engage in “systematic pre-detection” that eliminates or minimizes future pathologies through interventions on “modifiable risk factors.” Here, epidemiological risk has a preventive rather than restitutive ethos.

In contrast to epidemiological risk, clinical risk is linked to the clinical practice of qualitatively diagnosing and treating patients (Weir, 2006: 19; Lupton 1999: 97). This form of risk involves the qualitative assessment of individuals and groups, as falling within “at risk” categories. However, this type of risk rationality utilizes epidemiological knowledge of risk in
certain populations and projects it directly onto clinical practice (involving diagnostics and therapeutics) with individual patients. In doing so, Weir (2006: 19) points out that a transformation takes place in which clinical risk enters into technical uncertainty. That is, unlike epidemiological incidence measures or methodologically precise statistical calculations over populations, the outcome of a disease for an individual is not calculable or prospectively predictive in the clinical practice. Despite the fact that the statistical identification of risk factors most often does not demonstrate causality nor predict individual outcomes, epidemiological findings do affect medical interventions and clinical decision-making. In order to close this gap of uncertainty, Weir (2006: 110) explains that clinical risk “spreads horizontally” into clinical reasoning by resorting to different forms of judgments.

Clinical risk attempts to increase its reliability by hybridizing two historically and analytically distinct forms of reasoning: risk judgment and diagnostic judgment (Weir, 2006: 19 & 68). Drawing on the work of David Armstrong, Weir emphasizes that risk judgment (an inherent aspect of modern Surveillance medicine) and diagnostic judgment (employed in Hospital medicine) are dissimilar with regards to their conceptualization of time and space. Whereas diagnostic judgment of the normal and pathological is determined in the present tense in relation to internal processes within the depths of the human body, risk judgments are oriented to the future and locates risk in the intracorporal and extracorporal space, with the latter often represented as either “environment” or “lifestyle” in risk judgment (Armstrong, 1995: 401). The conjunction of two incommensurable judgments results in the reconstruction of risk factors as “objective clinical signs of disease” (Gifford, 1986: 222). In other words, diagnosing risk comes to stand in for the disease state in and of itself. Thus, clinical risk dissolves the distinction between outside-inside, normal-pathological, health-illness and present-future, rendering it incoherent and ambiguous. This practice becomes thornier when racial groups are identified as “high-risk ethnic populations.”

The above accounts of governmentality and risk offer useful analytical tools for approaching an empirical investigation on the social effects of GD in “high-risk ethnic groups.” Foucault and scholars who draw upon his work have illustrated the ways in which risk reflects and constructs distinct rationalities and approaches to the government of populations and individuals. The discourses, strategies of interventions, and institutions are what bring “risk” into
being (Lupton, 1999:84). That is, truth discourses form the basis for action, requiring intensive management and on-going surveillance by institutions and individuals. In turn, such strategies of interventions, or what Foucault calls “technologies of the self,” contribute to the formation of selfhood or subjectivity.

## 4 Modes of subjectification

One of Foucault’s projects is to understand how “humans are made subjects” (Foucault, 1983: 208). Foucault (1980: 97) writes: “We should try to discover how it is that subjects are gradually, progressively, really, and materially constituted through a multiplicity of organisms, forces, energies, materials, desires, thoughts etc.” He details three modes of objectification which transforms human beings into subjects: dividing practices, scientific classification, and subjectification. While the first mode of objectification of the subject entails dividing the subject through modes of manipulation that combine the mediation of science and the practice of exclusion, the second mode involves practices through which individuals come to understand themselves scientifically (Foucault, 1983: 208). Rabinow (1984: 11) considers Foucault’s third mode of objectification as his most original contribution, referring to “the way a human being turns him- or herself into a subject” (Foucault, 1983: 208). While the first two modes are techniques of domination applied to those who are defined as marginal and locates the individual (either in space or as a case in a dossier) in a passive, constrained position, the third mode characterizes the person as active in the processes of self-formation.

In *Discipline and Punish: The Birth of the Prison*, Foucault (1977) first elaborates on the process through which various institutions (i.e. prisons, factories, hospitals) create subject positions (i.e. the prisoner, factory worker, patient) through various modes of disciplinary practices. That is, these institutions, through different methods, discipline individuals to fit the norm. As such, the norm becomes internalized to the extent that individuals continue to behave and expect others to behave within the norm even when no authority figure is present. Each individual occupies a myriad of subject positions, and his/her subjectivity is the sum of these different subject positions.

Foucault (1977: 170) asserts that “discipline ‘makes’ individuals.” More specifically, discipline “produces subjected and practiced bodies” which he refers to as “docile bodies”
A docile body is one that can be subjected to analysis and manipulation, and thus, transformed and improved (Foucault, 1977: 136). As elaborated below, all projects of docility involve subtle, uninterrupted, and calculated methods of control that entail microscopic and meticulous attention to detail in order to obtain the effects of utility and obedience (Foucault, 1977: 37).

Disciplinary power correctly trains individuals “as both objects and as instruments of its exercise” by using three modest yet pervasive mechanisms: hierarchical observation, normalizing judgment, and examination (Foucault, 1977: 170). Whereas hierarchical observation makes it possible to see the induced effects of power and visualize those whom coercion has subjected (Foucault, 1977: 171), normalizing judgment is a form of punishment that instantly trains the individual by imposing comparison and exclusion, as well as enforcing homogeneity and hierarchy (Foucault, 1977: 182-3). However, the ultimate power of discipline is demonstrated through the culmination and combination of hierarchical observation and normalizing judgment which he calls examination (Foucault, 1977: 184). Not only does examination increase visibility, assuring that power is exercised over all subjects, it introduces individuality into the field of documentation and thus making each individual a ‘case’ to be described, judged and compared with others (Foucault, 1977: 191). One becomes a case through the careful compilation of deviation from the norm.

Central to these disciplinary mechanisms described above is the notion that “being able always to be seen” keeps the disciplined individual subjugated (Foucault, 1977: 187). Foucault makes use of Jeremy Bentham’s architectural plan for the ideal prison to articulate the conceptual model of constant surveillance. In Bentham’s Panopticon, cells are arranged around a central observation tower. Inmates are always observable to watchers in the tower, but the watchers are not visible to the inmates. Because the inmates do not know when they are in fact being observed, they must behave as if constantly observed. Even though inmates know that they cannot be individually constantly watched, they know they may be being watched at any given time. Thus, the practical effect is the same as constant surveillance. Taking Bentham’s idea further, Foucault suggests that panopticism can convert deliberate obedience of regulations into habitual compliance with norms. In turn, habitual compliance itself converts to the adoption or internalization of those norms. What follows is a shift in emphasis from the enforcement of rules
and regulation to the inculcation of norms through disciplinary techniques, producing new subjects who carry within them the norms that constitute self-surveillance.

In his later works which include *The History of Sexuality, Volume II: The Use of Pleasure* and *Volume III: The Care of the Self*, Foucault attempts to balance his previous focus on technologies of domination with an exploration of what he terms the “technologies of the self.” Foucault (1988: 18) defines technologies of the self as “techniques that permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection or immortality.” In a seminar on this topic, Foucault (1997: 87) also characterizes techniques of the self as “the procedures, which no doubt exist in every civilization, suggested or prescribed to individuals in order to determine their identity, maintain it and transform it in terms of a certain number of ends, through relations of self-mastery or self-knowledge.” Although these techniques of the self vary according to the historical period, in reference to ancient times these practices of the self included diet, exercise and sexual austerity. Foucault does not discuss contemporary techniques of the self, but his analysis, particularly with regard to dietetics have relevance today. Technologies of the self are aimed at transforming the self to become other than what one is, or as Foucault (1984: 46) puts it, to realize “the possibility of no longer being, doing, thinking what we are, do, or think.” That is, the creation of possibilities or new forms of life can be achieved through the practices of the self in non-disciplinary, non-normalizing ways of being and relating. Thus, through this concept, a theory of possible resistance can be developed.

For Foucault, care of the self included self-knowledge, particularly as it pertained to bodily practices. In his studies of Antiquity, Foucault attends to the significance of the body in practices of the self. In order to capture what he means by practices, Foucault invokes the Greek term *askēsis* to describe “any kind of practical training or exercise” to create an art of living. In *The Use of Pleasure*, Foucault (1985: 99) engages in a discussion about the ancient view of dietetics which gave rise to medicine as one of its particular applications. Dietetics entailed close consideration and attention to what one eats, when one eats, and how it affects one’s body. Foucault (1985:101) writes, “it is clear that ‘diet’ itself – regimen – was a fundamental category through which human behaviour could be conceptualized. It characterized the way in which one
managed one’s existence, and it enabled a set of rules to be affixed to conduct; it was a mode of
problematization of behaviour that was indexed to a nature which had to be preserved and to
which it was right to conform. Regimen was a whole art of living.” Moreover, regimens
concerning the diet and health required a careful record of activity which encouraged reflection
on oneself set down in writing in order for such practices of the self concerning the body to
become an art of existence. As Foucault (1985: 108) points out, “[t]o become an art of existence,
good management of the body ought to include a setting down in writing carried out by the
subject concerning himself.” Here, writing contributes to the subject’s own active self-
constitution.

What most interests Foucault about writing is that it plays a central role in the relation
between truth and the subject. Tracing the importance of writing as a technology of the self,
Foucault (1997: 101) points out that self-writing, for the Greeks, served as an askêsis of truth, a
practice of the self important for ethical subjectivity. The notebooks, or hupomnêmata, of the
ancient Greeks served as guides for one’s ethical behaviour, consisting of quotes and records of
events and served as aids for self-examination, self-regulation and self-reflection, playing an
important part in self-governance (Foucault, 1997: 273). The hupomnêmata were meant to be
reread and consulted, providing a medium of meditation, reflection, and conversation. This
cultivation of the self through writing continues to be key aids in pedagogical and clinical
settings.

Confession can be conceptualized as an extension of writing which can be brought to
bear on the constitution of subjectivity. Practices of the self include truth telling, or parrhesia,
which contributes to the formation of the ethical subject. It involves a double sense of subjection
whereby one is compelled to tell the truth about oneself in relation to institutional norms while
simultaneously the speaking subject constitutes him/herself through this articulation of one’s
desires and thoughts. Confession therefore serves as a link between Foucault’s discussion of the
practices of domination that result in the objectification of individuals and the practices of
subjectification that involve the processes of self-constitution that ties one to one’s identity.
Although confession reinforces one’s domination insofar as it takes place within normative
institutions and practices, the process of telling the truth does not necessarily result in
domination and can contribute in the formation of the self in ways that are non-normative. That’s
not to say that technologies of the self have replaced technologies of domination, but rather they co-exist in mutually reinforcing ways. However, the importance of a particular type of technology depends on the historical context. For instance, although technologies of the self were the primary modes of self relation during Antiquity, technologies of domination began to play a larger role with changes in economic and political structure as well as the development of specialized areas of knowledge. Thus, confession as well as writing must be understood in the larger framework of practices of the self that are poised between being an exercise of subjection and an exercise of subjectification. Nonetheless, they both contribute to the individualization and the self-constitution of the subject.

To recapitulate, throughout Foucault’s discussions of subjects and subjectivity particularly in his genealogical works, the notion of ‘the subject’ has two aspects: as subject to power and as a self-constituting entity. Prado (2000: 56) elaborates on both these aspects of Foucault’s definition of the subject. The first is that an individual is subject in the sense of “being subject to institutional and state authority.” Here, power/knowledge produces and constitutes the subject as an effect of power. The second aspect is that an individual is a subject in the sense of “being a subject of experience.” While the former aspect of the subject is clear, Prado admits that the latter is more elusive in Foucault’s work. Prado (2000: 80) explains that, “[w]hat it is to be a power-constructed self, in the self-of-experience sense, is for a habit-invested body to adopt a certain perspective on itself and its surroundings.” He adds, “[t]he individual comes to experience the world in certain ways as a result of behaving in certain ways, being categorized in certain ways, and being dealt with in certain ways.” Prado (2000: 56) expands upon the second aspect of Foucault’s subject as “experiencing subjectivity, of being aware,” but also includes “having aims, desires, and a self-image or sense of who and what one is.” Thus, the double aspect of “the subject” includes the subject as a member of a governed society and as a self-aware identity.

In the contemporary biomedical context, Rose (2007: 25) asserts that the practices and knowledges of biomedicine have not only changed our relation to health and illness, they have helped make us the kinds of people we have become. He points out that we are increasingly coming to relate to ourselves as “somatic” individuals. In other words, our individuality is not only grounded within our fleshy, corporeal existence, but also in part constituted by the language
of biomedicine. The biomedical discourse of disease, risk, and race shape how we experience, articulate, judge, and act upon ourselves as well as those with whom we are connected. Rose (2007: 27) coins the term “ethopolitics” to refer to the attempts to shape the conduct of human beings by acting upon their sentiments, beliefs, and values. That is to say, by acting on ethics. In other words, he argues that ethopolitics concerns itself with “the self-techniques by which human beings should judge and act upon themselves to make themselves better than they are” (Rose, 2007: 27). Such ethics is the medium within which the self-government of the autonomous individual can be linked up with the imperatives of good government.

Relatively new forms of expertise have emerged in the latter half of the twentieth century in the field of risk management. Following Rose (2007: 6), the role of this new pastoral expert is to “advise and guide, to care and support, individuals and families as they negotiate their way through the personal, medical, and ethical dilemmas that they face.” This form of pastoral power, according to Rose (2007: 74), is described as relational as it works through the relation between the affects and ethics of the guider and the guided. Unlike the kind of pastoralism where the priest-like shepherd directs the souls of troubled sheep, these “pastors of the soma espouse ethical principles of informed consent, autonomy, voluntary action, choice and non-directiveness” (Rose, 2007: 74). Rose offers useful insights that supplement Foucault’s technologies of the self by highlighting the necessary role that communicative interactions play in the formation of the self. Rose’s relational dimension is crucial for understanding the attainment and maintenance of one’s sense of self and for understanding the possibility of agency, resistance, and self-transformation. However, this relational dimension can take repressive forms with respects to race.

Jonathan Xavier Inda (2006: 36) argues that risk discourses locate the contemporary management of immigrants in the “repressive underbelly of ethopolitics.” While “good” citizens are ones who manage their own relationship to risk through self-monitoring and self-assistance, immigrant women are imagined as the anti-prudent “unethical subject” (Inda, 2006: 112). Inda explains that these subjects, who are rendered suspect, are vulnerable to authoritarian interventions which locate them in the realm of abjection where they could be subjected to all kinds of punitive measures in the name of protecting the welfare of the populations. Inda’s work opens up a space to analyze the art of governing ethnoracial populations and raises questions
about the modes of subjectification that shape the subjectivities of women diagnosed with GD as well as the bodily practices that contributes to the subject’s own active self-constitution.

Foucault’s earlier and later works on modes of subjectification, as well as scholars who have extended his thinking within the context of health and biomedicine, offer productive theoretical tools to analyze the discourses and practices related to GD in “high-risk ethnic groups” that shape the subjectivities of pregnant women of colour. Both technologies of power and technologies of the self will contribute in showing up repressive as well as productive and enabling capacities that constitute women’s subjectivities.

5 Conclusion

Employing Foucault’s analytics of biopower is helpful in organizing this study around truth discourses, strategies for intervention, and modes of subjectification. Rabinow and Rose (2006) offer a valuable tripartite framework of biopower for orienting and formulating this empirical investigation, both theoretically and methodologically. First, an analytics of biopower must include “one or more truth discourses about the ‘vital’ character of living beings, and an array of authorities considered competent to speak that truth” (Rabinow & Rose, 2006: 197). Thus, it is necessary to comprehend the regime of truth that constitutes the background of biopolitical practices. This involves inquiring about the kinds of knowledge of the body and life processes is assumed to be socially relevant, what experts have legitimate authority to tell the truth about health or a given population, in what vocabulary are such things described, how are populations represented, and what definitions of problems are recognized (Lemke, 2011:119). In relation to this dissertation, such inquiries can be methodologically addressed through a critical discourse analysis of authoritative texts that guide clinical practice.

Second, given that the regime of truth cannot be separated from power, the focus then turns to the ways in which power mobilizes knowledge to generate “strategies for intervention upon collective existence in the name of life and health” (Rabinow & Rose, 2006: 197). This perspective allows us to take into account structures of inequality, hierarchies of value, asymmetries that are (re)produced as well as investigate forms of domination, mechanisms of exclusion, the experience of racism and sexism inscribed onto the body (Lemke, 2011:119). As a method of empirical investigation, participant observations will be conducive to gaining a better
understanding of how race-based risk discourses related to GD are accomplished locally in the clinic.

Third, the analytics of biopower must also take into account modes of subjectification. That is, the manner in which “individuals are brought to work on themselves, under certain forms of authority, in relation to truth discourses, by means of practices of the self, in the name of individual or collective life and health” (Rabinow & Rose, 2006: 203-204). Lemke (2011: 120) offers the following questions to bring to bear on empirical inquiry that focuses on modes of subjectification: How are people called on, in the name of life and health, in view of defined goals, to act in a certain way? How do subjects engage with and modify scientific interpretations for their own conduct? In order to gain a better understanding of how race-based risk discourses participate in the formation of subjectivities, this research project will take up Lupton’s (1999: 102) charge of paying greater attention to lay people’s own everyday knowledge and rationalities. Through interviews with women diagnosed with GD, their accounts of risk can provide the basis for exploring contradictions and tensions around contested meanings of illness and the imperatives of health underwriting discourses and ensuing practices. By attending to the rationalities employed by women diagnosed with GD and identified as members of a “high-risk ethnic group,” we can recognize the complexities and ambiguities surrounding disease, race and risk.

The above analytics of biopower presented by Rabinow and Rose (2006) are instructive in formulating a methodology of empirical investigation and for encouraging a transdisciplinary dialogue among different cultures of knowledge, modes of analysis and explanatory competencies. Employing the toolkit of concepts, I explore how race-based risk discourses are represented in expert knowledges, how they operate in the clinical setting, and how they participate in the process of subjectification. The aim of this research project is not to assess the validity of existing medico-scientific discourses on GD nor adjudicate on the reality of disease, risk, and race. Rather, it is to bring to light the complexity, and even messiness, of the discursive field of GD in order to examine its social effect on women who are categorized as “high-risk” by virtue of their race/ethnicity. That is, to explore the use of risk, race, and disease that constitutes scientific knowledge, medical practices, and subjectivities. The relevance of this study is to gain better insight on contemporary forms of subjectivities that are taking shape in advanced liberal
democracies. This has consequences for the ways in which individuals are governed and the ways in which they relate to and govern themselves. Having organized this study theoretically around truth discourses, strategies of intervention, and modes of subjectification, the following chapter moves forward to describe the methodology and study methods used in the present study and the analytic approaches that were used to analyze data generated from multiple sources.
Chapter Four
Methods of Investigation

The aim of this chapter is to describe the methodology and methods for investigating the social effects of gestational diabetes (GD) in “high-risk ethnic groups.” This chapter begins by drawing on Rabinow’s meditation on “problematization” to discuss the methodological starting point that forms the basis of the research questions guiding this dissertation study. After situating this dissertation as an ethnographically-informed project, I describe the following methods of data generation: collection of authoritative texts, participant observations, and interviews. I then briefly review the research setting and design, followed by a discussion on how I approached the analysis of texts, fieldnotes, and interview transcripts. Following a discussion on methodological considerations including reflexivity, positionality, and researcher-researched relations, this chapter concludes with reflections on research rigor.

1 Methodological starting point: problematization

InAnthropos Today: Reflections on Modern Equipment, Rabinow (2003) offers “a toolkit of concepts,” to conduct inquiry into the contemporary world. Drawing on Foucault’s notion of “problematization,” Rabinow (2003: 18) encourages us to meditate on the “ensemble of discursive and nondiscursive practices that make something enter into the play of true and false and constitute it as an object of inquiry (whether in the form of moral reflection, scientific knowledge, political analysis, etc).” Rabinow (ibid) explains that a problematization is essentially problematic because “something prior must have happened to introduce uncertainty, a loss of familiarity; that loss, that uncertainty, is the result of difficulties with our previous way of understanding, acting, relating.” With regard to the topic of this dissertation, it was precisely this loss of certainty and familiarity with the fundamental meaning of disease, risk, and race that gave rise to a distinct affect which Rabinow refers to as pathos. This has been my starting point and a point which I have kept returning to repeatedly in reflections throughout the research process.

The pathos that surfaces from the ambiguity, variability, and contradictions found within the medico-scientific literature on GD in “high-risk ethnic groups” calls for a diagnosis of “what makes these responses simultaneously possible” (Rabinow, 2003: 18). Problematization emerges
out of what Rabinow (2003: 19) calls “a cauldron of convergent factors,” constituted by and through politico-economic conditions, scientific knowledges, expert and lay actors, including related factors such as clinical practice and ethics. Rabinow thus encourages us to engage in a “modal shift” of regarding a situation not as “a given” but as “a question.” The point of problematization is to turn a given situation into a set of questions in order to productively generate alternative ways of thinking and acting.

Rabinow’s meditation on problematization is an instructive methodological starting point for formulating the questions that guide this study. The controversy surrounding GD and the use of race/ethnicity as an independent risk factor present us with a duel problem that throws into question the distinction between normal and pathological as well as the elusive link between race/ethnicity and risk. Rather than regarding this situation as a given, the starting point for this research study is to generate questions and forms of engagements that enable us to perceive new possibilities and perspectives from a different point of view, or as Foucault would say “free up possibilities” in our ways of understanding, acting, and relating. Thus, the following section aims to bring this problematic into a set of questions as the basis of inquiry in order to propose diverse and specific responses.

1.1 Research questions

Following the tripartite framework of biopower outlined by (Rabinow & Rose, 2006), the questions that guide this dissertation study are organized around truth discourses that constitute authoritative texts, strategies of intervention employed locally in the clinical setting, and modes of subjectification through which individuals are brought to work on themselves.

1) What kinds of discourses are employed to constitute knowledges about GD, risk and race/ethnicity?
2) What types of subjects are constructed through discourses on GD in “high-risk ethnic groups?”
3) How are race-based risk discourses accomplished locally in the clinical setting?
4) How do women respond to, engage with, and resist race-based risk discourses and practices pertaining to GD?
5) How do such discourses and practices shape women’s subjectivities from diagnosis to post-partum?

1.2 Methodologically situating the study

Rather than conceive of GD in “high-risk ethnic groups” as a medico-scientific problem, this dissertation study will productively examine this phenomenon as an anthropological problem. Ong and Collier (2005: 4) define “anthropological problem” in the following way: “They are the domains in which the forms and values of individual and collective existence are problematized or at stake, in the sense that they are subject to technological, political, ethical reflection and intervention.” This kind of anthropological problem however does not make ethnic groups as its primary object of study. Rather, as Rabinow (2003: 77) points out, “it concerns a different range of objects (problematization, apparatuses, and assemblages) and entails a mode that puts the self, in its relationship to itself, to others, and to things, in motion as well as in question.” Bringing these diverse aspects together is dependent upon the practice of self-reflexive inquiry, involving the experiential and writing dimensions of empirical investigation. Finding oneself amongst an anthropological problem is to place oneself within the relationships of heterogeneous reasoned discourses which are always already embedded within the problematization (Rabinow, 2003: 55-56). Thus, the following paragraph situates the research problematic in a methodological approach that offers a rationale for examining expert discourses and their social effects.

There are several reasons for situating the proposed study as an ethnographically-informed project. For one, as illustrated in the reflexive review of the literature, the health of the offspring is conveniently laid on pregnant women, regardless of whether or not they have complete control of their fetus’ intrauterine development. Second, intensive interventions and surveillance of women who are categorized as members of “high-risk ethnic populations” are legitimizied and justified in the name of future generations. Third, obstetrics and gynecology has shown that it is much easier to initiate a practice even based on inadequate evidence than it is to discontinue a practice that is already part of daily clinical life. Fourth, the diagnosis and treatment of a symptomless and temporary disease complicates and exacerbates the tension between biomedical, authoritative knowledge and women’s lay, experiential knowledge. And fifth, the ways in which race-based risk discourses play out in pedagogical/clinical settings have
not been fully examined ethnographically in extant research. “Without good ethnography,” as Davis-Floyd and Sargent (1997: 15) contend, “then those who would help from the outside cannot know what the inside experience is like, cannot offer assistance that is truly useful.” For these reasons combined, an ethnographically-informed study is suitable for gaining insight into the ways in which discourses on GD in “high-risk ethnic groups” are accomplished locally in the clinic as well as the ways and degree to which women engage with and respond to race-based risk discourses. Following Ginsburg (2006: 491), this ethnographically informed project aims to “call attention to the way people engage in self-conscious mobilization of their own cultural practices to defend, extend, complicate, and sometimes transform both their immediate worlds and the larger socio-political structures that shape them.”

I digress briefly here to highlight Hsiung and Raddon’s (2002: 13) cautionary note about the categorical analysis of race/ethnicity in order to underscore their views on how qualitative research can contribute to an anti-racist worldview. The authors point out that researchers often run the risk of unconsciously replicating practices of racialization and contributing to racist divisions when simple categorical approaches are employed in their methodologies. Hsiung and Raddon remind us that “categories themselves have no ‘essence’ apart from the specific social practices involved in constructing and contesting them.” Rather than simply classifying individuals into racial taxonomies, they suggest examining how the processes of categorization work in addition to their social effects. The authors also suggest exploring how social life, from face to face interactions to institutional processes, is organized on the basis of beliefs about who belongs to what social category. Qualitative research can contribute to anti-racist and feminist politics and praxis by demonstrating how the categories of race and ethnicity are variable, contingent, and constructed, and also by revealing how social practices bring them into being.

The intention of this ethnographically-informed project is to provide a partial and situated account of how discourses pertaining to GD in “high-risk ethnic groups” are represented in authoritative texts, accomplished locally in the clinic, and taken up by women who are categorized as such. The findings that emerge from this study can contribute towards greater reflexivity on the ways in which disease, risk, and race are currently conceptualized in medico-scientific discourses and practices that flow from them and their effects on social relations and
subject formation. Reflexivity on such matters will generate a better collective and individual response to this clinical, public health, and anthropological problem.

2 Study methods

This qualitative dissertation study employs a triadic approach to methods of investigation. The first method involves discursively analyzing authoritative texts that hold significance in shaping clinical practice. Analysis of discourses that constitute authoritative texts will contribute to better understanding the way GD, risk, and race are represented in expert knowledges and the ways in which subjects are constructed. The second method entails participant observation in the GD clinic to elucidate how race-based risk discourses are accomplished locally in the clinical setting. The third method involves interviews with women of colour diagnosed with GD in a three time sequence (after diagnosis, before delivery and post-partum) in order to yield insights into how women engage with and/or resist race-based risk discourses and practices and how such discourses and practices shape women’s subjectivities. In the following sections, I elaborate on these methods of investigation.

2.1 Discourse analysis of authoritative texts

Critical discourse analysis offers a strategy to examine the taken-for-granted assumptions about disease, risk and race/ethnicity underwriting authoritative texts. These texts include the following: 1) the 2008 *Canadian Diabetes Association Clinical Practice Guidelines* (see Appendix E); 2) the 2009 *International Diabetes Federation Global Guidelines on Diabetes and Pregnancy* (see Appendix F); and 3) the 2009 *Kathmandu Declaration: Life Circle Approach* (see Appendix G). By “authoritative,” I refer to discourses that derive exclusively from medico-scientific inquiry which produce and accrue their authority by virtue of their scientific origins (Root and Browner, 2001: 197). A discursive analysis of these three authoritative texts seeks to answer the first two questions mentioned above: What kinds of discourses are used to constitute certain kinds of knowledges about GD, risks, and race/ethnicity? And what types of subjects are constructed through discourses on “GD in high-risk ethnic populations?” In doing so, I aim to productively challenge assumptions about GD in “high-risk ethnic groups” and ways of viewing health and health care practices.
Critical discourse analysis (CDA) is an analytic strategy primarily concerned with the use of language and the reproduction of dominant ideologies, or ways of knowing, doing and being (Lupton, 1992; Fairclough, 2003: 8-9; Gee, 2011: 2). That is to say, CDA examines how language shapes and is shaped by broader sociocultural, historical, political and economic forces, as well as how language mediates and constructs our understanding of reality (Lupton, 1992). Hence, CDA situates texts in their social, cultural, political and historical context and uncovers the unspoken assumptions that have shaped the very form of the text.

The main intention of analyzing texts, as Fairclough (2003: 11) points out, is to understand their social effects. Texts have both short-term and long-term causal effects in that they bring about changes in our knowledge, beliefs, attitudes and values as well as contribute to shaping social relations and people’s identities or subjectivities (Fairclough, 2003: 8). By “causal effects,” Fairclough is not referring to a mechanical notion of causality in the sense that texts automatically bring about particular changes in a cause-effect pattern. Rather, contextual factors determine whether such texts have effects or lead to a variety of effects on the transformation of social realities and subjectivities. One of the causal effects that Fairclough (2003: 9) underscores is the ideological effects of texts. That is, the ways in which texts have effects on inculcating, sustaining, or changing ideologies. By ideologies, he means representations of the social world which can be shown to contribute to establishing, maintaining, and changing social relations of power. Fairclough encourages us to situate and analyze the texts in a social context in order to better understand their effects on power relations. In other words, although ideologies are primarily representations, they have social effects on power relations and contribute to shaping the identities of social agents.

At any time in history, Fairclough (2003: 24) asserts that certain discourses will operate in such a way as to marginalize or even exclude others. The discursive frame that is afforded presence is a consequence of the effect of power relations. In the context of contemporary health care, the truth status of medico-scientific discourse shapes dominant taken-for-granted understandings of what is considered appropriate and acceptable practice. Furthermore, Fairclough (2003: 11) argues that what is ‘said’ in a text always rests upon the ‘unsaid’ assumptions. Thus, part of the analysis of texts is trying to identify what is assumed. By recognizing the ‘said’ and ‘unsaid’ as well as the effects of a particular discursive frame’s
dominance, Fairclough (ibid) points out that it is possible to open up a space for other discourses or ways of thinking.

As a form of inquiry informed by poststructuralist assumptions, language cannot be considered to be transparent or value-free. Even the language we take as ‘natural’ or objective does not have universal meaning. Lupton (1999: 26) explains that particular meaning is assigned by both speakers and listeners according to the situation in which language is being used. Not only do texts represent and reflect a certain version of reality, Lupton (2002) asserts that they also play a part in the very construction and maintenance of reality itself. Thus, there is a dialectical relationship between text and the context in which the text is produced. That is, texts are both constitutive of and in turn constituted by their context. However, like any text, they only convey and produce a partial perspective of the reality being presented.

CDA is based upon the assumption that language is an irreducible part of social life (Fairclough, 2003: 2). That is to say, CDA is not a matter of reducing social life to language or that everything is discourse. Rather, Fairclough asserts that CDA is one analytical strategy amongst many and encourages the use of CDA in conjunction with other forms of data generation and analysis, such as ethnographic and interview data. The following sections elaborate on other methods of investigation in order to understand how discourses on GD in “high-risk ethnic groups” are accomplished in the clinic and implicated in the formation of subjectivities.

2.2 Participant observation in the GD clinic

The second method of data generation involved participant observation in the GD clinic. From April 2012 to January 2013, I observed clinical encounters between health care practitioners and women attending the GD clinic in two diabetes education centres at The X Hospital: Y and Z Campus. Participant observation at these two clinical settings offered comparative ethnographic analysis to better understand the following research question: How is gestational diabetes in “high-risk ethnic groups” accomplished locally in the clinical setting? Informed consent was obtained by all practitioners at both sites (see Appendix H).
Ethnographic observation involves the researcher participating in people’s lives for an extended period of time, watching what happens, listening to what is said and/or asking questions to throw light on the issues that are the focus of inquiry (Hammersley and Atkinson, 2007: 3). Participant observation in the GD clinic aims to investigate the ways in which practitioners interact with subjects of race-based risk discourses, as well as how practitioners and women attending the GD clinic make sense of the situations they face, how they regard one another, and also how they see themselves. While the researcher begins with a foreshadowed problem in mind, Hammersley and Atkinson (2007) emphasize that the orientation of the researcher is an exploratory one. Meaning, the researcher’s initial interests and questions that motivated the research are continually reworked, refined, and transformed over the course of the research. With more time in the field, my inquiry became progressively focused on the strategies of intervention that were employed to accomplish GD in “high-risk ethnic populations.”

Gaining access is a continual process of negotiation and renegotiation with gatekeepers and participants in the field (Hammersley & Atkinson, 2007: 5). The authors state that this is true even when ethnographers are studying settings in which they work or once worked. Negotiating access in ethnographic fieldwork involves “a wide-ranging and subtle process of manoeuvring oneself into a position from which the necessary data can be collected” (Hammersley and Atkinson, 2007: 4). The authors recommend finding some role in the field being studied through implicit and explicit negotiation. With this in mind, I took on the role of an observer-as-participant. In this role, Morse and Field (1995) state that the majority of the researcher’s time is spent observing and asking questions with less emphasis on participation. Although I engaged mostly in observation and asking questions at appropriate times, there were many moments when I found myself participating in clinical operations, such as getting supplies or delivering charts, in an attempt to be unobtrusive or respectful of the routines and rituals of the clinic (Bogdewic, 1999). When participation outweighed observation, I reflected on and clarified what sorts of tasks were appropriate for the researcher to take on. Repeatedly reminding myself of my role as a researcher rather than a diabetes educator, it occurred to me that I had to make this explicit to clinicians and decline any requests that extended beyond the capacity of a researcher.

Negotiating access also involves ethical considerations with regard to whose permission ought to be asked, particularly in relation to those who are vulnerable or those who occupy
subordinate positions within the settings investigated (Hammersley & Atkinson, 2007: 42). Careful attention was directed towards what people were told about the research in the process of negotiating access, including its purpose, what it would involve for them, and the possible consequences that may arise from the publication of findings. Although I obtained informed consent for participant observations from clinicians, it was not be feasible to do the same for every patient that visited the GD clinic. Therefore, I sought verbal consent with patients and their families by explaining briefly about the study and providing them with a study notice (see Appendix I). I made every effort to engage in on-going process consent, reminding them of their rights to not participate in the observation or to temporarily stop the observation in situations whereby clinicians deemed it inappropriate in the context of patient care. I found this process of negotiating access was much more complicated than initially conceived, requiring a balance between patience and diplomacy along with ethical and strategic considerations.

During participant observations of clinical encounters, I was particularly preoccupied with any anxieties experienced by clinicians who may perceive their practice being evaluated and/or discomfort from patients who may feel monitored for their adherence to treatment. Despite attempts at making it clear to both clinicians and patients that this was not my intention, my presence understandably created tensions especially at the initial phase of participant observation. Although clinicians did not verbally express their uneasiness, it did manifest in subtle and indirect ways. For instance, one clinician would repeatedly inquire whether I obtained consent for participant observations from other members of the diabetes team. Another clinician stated that she had to review, and possibly revise, her lesson plan to ensure that she was delivering “accurate information” to patients in the class. However over time, clinicians became acclimatized to my presence and were less concerned with being observed. In some occasions, clinicians solicited feedback about their performance in class or clinical encounters with patients. Although I informed them I was not in a position to do so, it occurred to me that clinicians were seeking reassurance from being observed.

Given that the orientation of the ethnographer is an exploratory one, Hammersley and Atkinson (2007: 4) mention that it may not always be clear where, within a setting, observation ought to take place, which participants need to be shadowed, and so on. The authors recommend writing descriptive fieldnotes to think through many of the decisions and strategies related to
research relations. Moreover, writing fieldnotes was a productive way to make careful reflections and refined analyses of the object of inquiry, particularly in clinical instances when encounters between clinicians and patients were affectively charged and punitive. Hammersley and Atkinson (ibid) reassuringly remind us that ethnographic observation is not far removed from the way we all make sense of our everyday surroundings, of other people’s actions, and even of what we do ourselves. However, it involves a more deliberate and systematic approach to the ways in which data is specifically sought in order to illuminate research questions. Furthermore, it is a process of analysis that draws on previous studies that illustrate similar phenomena, and entails intense reflection and critical assessment of competing interpretations. As Hammersley and Atkinson (2007: 4) so aptly put it, ethnographic observations involve “the significant development of the ordinary modes of making sense of the social world that we all use in our mundane lives in a manner that is attuned to the specific purposes of producing research knowledge.”

Considering my history of working as a diabetes educator in the research setting, one of the challenges as a researcher taking up the role of observer-as-participant was to approach the field as “anthropologically strange,” in the words of Hammersley and Atkinson (2007: 9). By this, the authors point out the importance of making explicit the presuppositions that have been taken for granted, particularly as a former staff member of this clinical setting and culture. As a strategy to render the field strange, the authors suggest turning the culture itself as an object available for study. Reflecting on my status as an insider and outsider, I found myself in a liminal position. However, this liminality made it possible to construct an account of the phenomenon under investigation. In other words, straddling my subject position as a researcher who has rendered strange the topic of GD in “high-risk ethnic groups” through academic inquiry and as a former clinician who has familiarity with the clinic and clinicians, I was in a unique position to offer insights from within while examining the object of study as external to me. The process of writing reflexive journals was a useful strategy to articulate my liminality over the various phases of research. I elaborate more on this below under reflexivity and positionality.

With regards to the pragmatics of writing fieldnotes, I eventually found an approach that worked well for me. During participant observation, I would discretely scribble down words on a pocket-sized notebook or excuse myself to go to the bathroom to take more elaborate notes.
These notes guided me to write fieldnotes when I arrived home. On a few occasions earlier on in my fieldwork, I used a digital recorder to talk through my observations on the drive home from the clinic. However, I found this strategy unhelpful as it deterred me from writing detailed fieldnotes once I arrived home. I also found myself unable to conjure up specific accounts of clinical interactions. A similar experience happened when I talked to someone (friend or family members) about my fieldwork before writing up my fieldnotes. After reading a chapter entitled *Field (and Other) Methods* from Luker’s (2008) book, I realized why this was. Luker (2008: 165) writes, “once you’ve told [someone] what happened in the field today, you’ve created a fixed narrative... the observing part of the brain thinks that its job is over, and it will obstinately refuse to serve up fresh data, memories, ideas and theories.” From this realization onward, I made it a point to stop using the digital recorder and wrote my fieldnotes as soon as I arrived home before talking to another human being about my day in the field.

In addition to negotiating access and writing fieldnotes, O’Toole and Were (2008) highlight the importance of analyzing the place and material objects that contribute to the interactions and *in situ* behaviour of the participants in ethnographic research. Although both are often overlooked, the authors assert that analysis of places and objects can facilitate an understanding of social and structural relationships in qualitative research, adding insights or raising dilemmas and queries about power and identity as well as gaining new perspective of the social world. O’Toole and Were (2008) also emphasize that places and objects, like voices, have local and multiple meanings for participants. I found the authors’ insight helpful during ethnographic observations of the clinical setting, reminding me to be attuned to the interactions between the physical environment and the participants as well as the ways in which participants interact with objects in the clinical setting. By attending to place and material objects (i.e., glucometer, logsheets, food records and food replicas/models), I gained insight on how they shaped human behaviour and conduct. Moreover, observations of activities, places, and objects in the GD clinic offered ways to analyze how discourses on GD, race/ethnicity, and risk constitute practices and relations between participants and contributed to a better understanding of how they are involved in modes of subjectification.

Considering that this ethnographically-informed project is guided by a poststructuralist theoretical framework, I made a concerted effort to be mindful of capturing the heterogeneity of
meanings of disease, race, and risk. Here, meanings are not stable nor are they properties of individuals, but rather they reflect the shifting constitutive role of language (Barns et al, 1999: 3). The main purpose of ethnographic observations of clinical encounters was to shed light on how race-based discourses are accomplished in the clinic, and how they structure practices and shape relations between practitioners and patients. More specifically, participant observation contributed to better understand how regimes of truth are established in the clinical context and constituted through the exercise of power and resistance which served as a point of departure to elucidate how race-based risk discourses and practices shape women’s subjectivities.

2.3 Interviews with study participants

The third method of data collection involved conducting three time sequenced, semi-structured interviews with women of colour who were diagnosed with GD. The main objective for conducting interviews is two-fold: 1) to gain a better sense of the subjective meanings and interpretations that people give to their experiences; and 2) to throw light on aspects of social life, such as social processes and negotiated interactions, that cannot be studied in any other way (Liamputtong & Ezzy, 2005: 71). Interviews with participants addressed the last two research questions: How do women respond to, engage with, and resist race-based risk discourses and practices pertaining to GD? And how do such discourses and practices shape women’s subjectivities from diagnosis to post-partum? Informed consent was obtained from all interview participants (see Appendix J).

A total of twelve women were recruited and interviewed for this study from June 2012 to February 2013 (see Appendix K). With the exception of one participant, each woman was interviewed three times: once after diagnosis of GD, second before delivery, and the third (6 to 10 weeks) postpartum. For the first interview, questions were framed to elicit the multifaceted impact of the diagnosis and self-care practices related to the diabetes regimen. The questions for the second interview elicited descriptions of women’s experience of managing GD from the diagnostic phase to the final weeks of pregnancy. The third interview focused on women’s reflections about their experiences of diabetes during pregnancy and how living a diabetic pregnancy shaped their subjectivities (see Appendix L for interview guide).
The majority of interviews were conducted in the clinic either before or after women’s appointment with the endocrinologist. However, seven interviews were conducted over the phone as women were not able to arrive early or stay after their appointment. Although there are limitations to phone interviews such as not being able to read facial cues or subtle nuances of bodily gestures, phone interviews offered auditory access into women’s homes. I was struck by the busyness of background noise, the constant intrusions from family members, and in some cases, a lack of privacy. I considered this as valuable data along with the interview itself.

With women’s permission, all three interviews were recorded with a digital recorder. My reasons for this were pragmatic: to keep a detailed record of our verbal interaction and to actively listen to and interact with the interviewee instead of spending the majority of time with my head-down writing. Immediately after the interview, I made detailed fieldnotes of the events, circumstances, and interpersonal dynamics that occurred before, during, and after the interview. All interviews were transcribed verbatim on a Word document. During this process, I actively reflected on the conversation while also paying close attention to missed cues or the ways in which questions could have been asked differently in order to modify subsequent interviews.

Although participants are able to produce accounts of themselves and their worlds, Hammersley and Atkinson (2007: 120) assert that “the accounts produced by people during interviews must neither be treated as ‘valid in their own terms,’ and thus beyond assessment and explanation, nor simply dismissed as epiphenomena or ideological distortions.” Rather, they can be used both as a source of information about events, and as revealing the perspectives and discursive practices of those who produced them. In other words, all accounts must be examined as social phenomena occurring in, and shaped by, particular contexts. While “people’s accounts count” (Orbuch, 1997), my goals were interpretive (what do women’s accounts mean?) and political (what do women’s accounts help accomplish?). Before moving onto a discussion about data analysis, the following sections describe the research setting and design.

3 Research setting and design

The dissertation study was reviewed and approved by the University of Toronto and Hospital Research Ethics Board (see Appendix D). The X Hospital is a community hospital in an urban part of Southern Ontario. According to the hospital website, it is “situated in one of the
most ethnically diverse communities in the world.” The hospital is comprised of two campuses: the Y and Z sites, along with six community satellite sites. The two campuses amalgamated to form The X Hospital in 1998 as a proposal to the Health Services Restructuring Commission. Despite the amalgamation, each campus has retained their respective diabetes education centre (DEC) to service the surrounding community. For the past decade, the outpatient DEC at Campus Y had been “temporarily” housed in a portable that is situated west of the main building and north of the parking garage across from the newly-built emergency department. However, the DEC was relocated off the hospital grounds, as of June 2011, to a medical centre two buildings west of the hospital.

The X Hospital’s Z Campus is situated 10 kilometers northwest of the Y Campus. Formerly known as The Salvation Army X Hospital, the hospital’s historic affiliation with The Salvation Army ended in October 2006 following a decision to cease its role in the administration of the hospital and redirect its focus on spiritual care in the community. A new name was selected by the hospital staff and members of the public and was officially announced in July of 2009. The DEC is located on the third level of the hospital where the GD class and weekly GD clinic appointments are regularly conducted. However, there are plans in the near future to relocate the DEC into the community to free up hospital space for an acute care unit.

The recent emphasis on disease prevention and chronic disease management over the last decade has given rise to cost-containment initiatives set forth by the provincial government through the Local Health Integrated Networks. Consequently, the majority of outpatient clinics have been moved from hospital grounds into the community. This shift has resulted in ongoing debates amongst administrators and clinicians at Hospital X as to whether the DECs should be amalgamated and relocated to a health centre in the community. Resistance from staff endocrinologists who depend on the services of diabetes educators (nurse, dietitians and pharmacists) have also contributed to the liminality of the DEC at both sites.

Rather than a site or location per se, the GD clinic at both campuses refers to a program. In other words, it is just one of the programs offered by the DECs. In addition to the GD clinic, the DEC runs a number of other programs, including a joint type 1 and 2 diabetes adult clinic, individual assessment and counselling sessions, as well as a number of classes such as the Living
Well with Diabetes class, the insulin initiation class, and the Heart Health class. In 2010, there were approximately 450 women who were referred to the GD clinic at the Y Campus (Hospital administrator, e-mail communication, 20/04/2011). The receptionist from each site registers five to eight patients on average for the GD class held every Thursday/Friday morning (see Appendix M for GD clinic and class schedule). The majority of the women who attend the GD clinic are new to Canada from China as well as South Asian countries such as Sri Lanka, India, Bangladesh, Pakistan, and Afghanistan.

3.1 Sampling

Purposive sampling methods were used to recruit participants for the interviews from Campus Y. Recruitment was originally planned for both sites; however, a multi-site survey study on GD was already underway at Campus Z. Discouraged from “double-dipping” by clinicians who were involved in the study, recruitment was restricted to Campus Y. The interview participants were purposefully chosen to include pregnant women recently diagnosed with GD, self-identified as Asian, South Asian, Hispanic, Aboriginal or African descent, and able to converse in English.

During recruitment and throughout the research process, I was cognizant that interview participants are in a vulnerable position. I approached recruitment with the possibility that women newly diagnosed with GD might feel anxious, distressed, and worried about their pregnancy and their baby’s health. Depending on their historical and sociocultural background, women may feel ashamed, responsible, and/or guilty, and may even blame themselves for having elevated blood glucose during pregnancy. Considering that women in the study may be newcomers to Canada, they may be considered to be more vulnerable due to difficulties with language or perceived power differentials (Cutliffe & Ramcharan, 2002). With these possibilities in mind, I approached participants in an open, non-judgmental manner in order to establish a sense of trust and create a safe rapport.

With regard to the sample size or number of participants required to reach saturation, Kvale (1996), in *InterViews: An Introduction to Qualitative Research Interviewing*, suggests that most interview-based projects recruit between ten and fifteen subjects. Morse (2000) contends that sample size in qualitative research is dependent on a number of factors, including the quality
of data, the scope of the study, the nature of the topic, the amount of useful information obtained from each participant, the number of interviews per participant, and the qualitative method and study design. Having considered each of these factors, I concluded that a sample size of twelve is appropriate for this dissertation study given that the scope of research and the nature of the topic are narrow and that each participant would be interviewed for approximately thirty minutes on three separate occasions.

3.2 Recruitment

The recruitment strategies for the interview portion of the study initially involved sending letters of invitation (see Appendix N) to a clinician coordinator at Campus Y and asking her to give a letter to all eligible women during the initial GD education class. The clinician coordinator introduced the study to women attending the GD class (see Appendix O for script). When women returned for their follow-up clinic appointment in the subsequent week, the clinician coordinator individually approached each eligible woman and inquired whether she would be interested in participating in the study. If the potential participant agreed to participate, then she would be given verbal and written information about the study and the informed consent process (Appendix J). The participant would be approached by the study researcher and/or the participant would receive a telephone call from the study researcher to make arrangements for the first interview.

During the initial phone call, I followed a script (see Appendix P) and, in a respectful manner, began by asking questions to verify whether the participant fulfilled the eligibility criteria to participate in the study. Once eligibility was confirmed, I offered a brief overview of the study, explaining the aim of the study, followed by a description of the first meeting and subsequent interviews. I informed the participant that the first meeting involved reviewing the consent form in detail, addressing any questions she might have, informing the participant that she has a right to withdraw from the study at any time, obtaining informed consent including permission to record the interview with a digital recorder, and conducting the interview. The initial phone conversation concluded by presenting her with the option of taking a few more days to think about participating in the study or setting up an appointment time and location that is most convenient and comfortable for her. I provided the participant with my contact information
and conveyed my appreciation for taking time to consider participating in the study. Appointments for subsequent interviews were arranged after the first and second interviews.

These recruitment strategies were modified over time as the clinician coordinator and I became more familiar with the recruitment process and figured out what worked best for women. For instance, women preferred to be interviewed at the clinic either before or after the appointment with the endocrinologist rather than arranging a time and place for the interview in the community. Women were reluctant to be interviewed in their homes, partly because there was not enough time to establish rapport or comfort level to invite the study researcher into their home and/or they lived with members of their extended family. I was initially disappointed that interviews were not going to take place in the home setting and thought I would miss out on women’s lived realities of GD in the home context. I was also concerned that the clinical setting might constrain dialogue. However, it occurred to me over the course of conducting interviews at the clinic that women’s narratives were replete with stories about home life. Also, I realized from phone interviews that women may not have a space of privacy in their home. Not only was the background noise quite loud, family members frequently interrupted our phone conversations. On more than a few occasions, women cancelled the scheduled interviews because they were not able to arrive early or remain after their appointment at the GD clinic due to another appointment at the hospital (i.e. non-stress test, ultrasound) or they had to go straight to work or return home to care for their young children, having left them with friends or family members. Rather than rescheduling the interview at the clinic, women opted for a telephone interview later that afternoon or evening.

3.3 Data management

With regard to data management, I followed the University of Toronto’s Ethics Review Board guidelines on data security standards for personally identifiable and confidential data in research in addition to The X Hospital Confidentiality and Non-disclosure Agreement. All confidential information, including electronic data and hard copy of interview transcripts and observational fieldnotes, were stored in a locked filing cabinet at the Lawrence S. Bloomberg Faculty of Nursing, in an area that is protected by electronic key access (FOB). “Confidential information” included any patient identifiers, personal, institutional or other information obtained from the hospital. Participant identifiers were removed from transcripts and replaced
with pseudonyms. A master list of study participants and their study pseudonyms were kept on file and stored in a secure computer file on a computer that is password protected. Digital recordings of interviews were also kept in a locked filing cabinet. Once interviews were transcribed and analyzed, they were destroyed as per REB guidelines. Fieldnotes and reflexive journal notes were fully transcribed from handwritten format into an electronic format for data management. All remaining data will be destroyed after seven years as per the University of Toronto’s Ethics Review Board standards.

4 Analytic strategies

4.1 Discourse analysis of authoritative texts

I discursively analyzed the three authoritative texts by employing James Paul Gee’s (2011) approach to discourse analysis (DA). Gee offers a “toolkit” which provides an accessible way to examine language-in-use that is congruent and compatible with the poststructuralist/Foucauldian understanding of discourse. For Gee, the “tools” for DA refer to specific questions to ask of the text. Examining the language-in-use yields insight into the “saying (informing)-doing (action)-being (subjectivity) of discourses which gains its meaning from the practice it is part of and enacts” (Gee, 2011: 11). Gee’s approach to DA also aligns well with Fairclough’s (2003: 26) triadic model of how discourse figures in social practice: discourses (ways of representing), genres (ways of [inter]acting), and style (ways of being/identities). Rather than prescribing a rigid rule-based or linear algorithmic process, Gee offers “thinking devices” that can be flexibly adapted to think through and alongside specific issues, theory, and contexts of the study. His approach is instructive in going beyond description, illuminating how discourse has meaning only in and through social practices and effects.

I began discursively analyzing each of the authoritative texts employing Gee’s (2011: 17) seven building tasks to gain a better understand the language-in-use. The seven building tasks include the following: 1) Significance: how is this piece of language being used to make certain things significant or not and in what ways?; 2) Practices: what practice(s) is this piece of language being used to enact?; 3) Identities: what identities is this piece of language being used to enact?; 4) Relationships: what sort of relationship(s) is this piece of language seeking to enact with others?; 5) Politics: what is being communicated as to what is taken to be “normal,” “right,”
“appropriate,” “the way things are,” “the way things ought to be,” and so forth; 6) Connections: how does this piece of language connect or disconnect things or make things relevant and others irrelevant to one another?; 7) Knowledge: how does this piece of language privilege or exclude/marginalize different ways of knowing or claims to knowledge? Each of the seven building tasks and respective questions were brought to bear on the analysis of authoritative texts in order to think through the significance, practices, identities, relationships, politics, connections and knowledge generated within the texts.

Following the seven building tasks, I moved onto analyzing the language-in-use in specific instances of the selected authoritative texts by applying Gee’s (2011) toolkit of twenty-seven questions (see Appendix Q). The process of thinking through the questions (in no particular order) facilitated a closer examination of language in relation to what the text means, intends, and seeks to do or accomplish. Unspoken assumptions and implicit discourses were interrogated to open up space for alternate knowledge and competing discursive frames to be exposed; thus, creating possibilities for other discourses to emerge. Of the twenty-seven tools or questions, I choose the tools that had the most relevance for addressing the first two research questions and shoring up the intention, meaning and function of race/ethnicity, risk, and disease in order to generate insights into what the text accomplishes to do in the context of clinical practice.

4.2 Thematic analysis of ethnographic fieldnotes

The ultimate goal of thematic analysis of ethnographic field notes is to produce a coherent and focused analysis of some aspect of social life that has been observed and recorded in a manner that is comprehensible to readers who are not directly acquainted with the social world at issue (Emerson, Fretz and Shaw, 1995: 142). Emerson and colleagues (1995) offer a useful and pragmatic approach to thematic analysis of fieldnotes which involves three phases: close reading, open and focused coding, and writing integrative memos. The authors emphasize that these phases are not rigidly confined to one procedure at a time in the order laid out above; but rather, analysis moves from general reading to a close coding to writing intensive analyses and then back again. In this way, analysis is at once an inductive and deductive process (Emerson et al, 1995: 144).
Emerson and colleagues (1995: 142) contend that the very act of writing fieldnotes gives way to reading them. Through the process of close textual reading and re-reading of fieldnotes, the researcher takes in the record of field experience as it has evolved over time. Earlier hunches and insights were elaborated and refined by subjecting the broader collection of fieldnotes to close, intensive reflection of analysis. Inchoate ideas that were recorded earlier in my fieldnotes were traced and linked with later insights in order to address how discourses pertaining to GD in “high-risk ethnic groups” are accomplished locally in the clinic.

Close reading of fieldnotes in turn gave way to analytically coding (Emerson et al, 1995: 146). Similar to the process of coding interview transcripts, ethnographic coding of fieldnotes proceeded in two different phases. First, I approached open coding by reading fieldnotes to identify and formulate any and all ideas, themes, or issues no matter how varied or disparate they initially seemed to be. Second, like discourse analysis, Emerson and colleagues (1995) suggest asking questions of specific pieces of fieldnote data (see Appendix R). By asking questions of fieldnotes, the authors emphasize that they give priority to processes in order to develop analytical themes rather than focusing on causal explanations or internal psychological “motives” (Emerson et al, 1995: 147). Furthermore, I found that asking questions of fieldnotes stimulated sensitivity to practical concerns, conditions, and constraints that participants encountered in transactions. Rather than looking primarily at the exceptionalc  action or event in fieldnotes, I was increasingly drawn to attending to the mundane, ordinary, and taken-for-granted ways in which risk-based risk discourses were mobilized and enacted in the clinic. Close reading and rereading while asking questions of the fieldnotes led to the generation of codes which moved the analysis to the second phase.

Focused coding entailed the process of subjecting fieldnotes to a fine-grained, line-by-line analysis of identified analytic themes or topics that had resonant value (Emerson et al, 1995: 160). More specifically, this involved building up and elaborating upon analytical themes by connecting common data sets together and delineating subthemes that distinguished differences and variation within the broader analytic theme. Through this process, I was able to identify a refined set of promising ideas that formed the basis of the overarching themes and contributed to structuring the final ethnography.
During the process of re-reading and coding fieldnotes, emergent insights and connections were documented in integrative memos. In writing such memos, Emerson and colleagues (1995: 162) point out that the relationships between themes can be explored further to develop theoretical connections with fieldnote excerpts. Here, I reflexively and dialectically thought through and between theory and data in order to generate a theoretically-informed interpretation of how discourses pertaining to GD in “high-risk groups” are accomplished in the clinic. Moreover, integrative memos created space to explicate contextual and background information that a reader unfamiliar with the setting would need to know in order to follow key ideas and claims in a cohesive way that organized each section of the final ethnography.

4.3 Thematic analysis of interview transcripts

The main objective of qualitative analysis of interview transcripts is two-fold: interpreting meaning and revealing complexity (Hsiung & Raddon, 2002: 100). More specifically, qualitative analysis can be understood as a process of interpretation that surfaces meanings and shows how they are linked and layered on one another so that recurrent themes, subtle patterns, and contradictions can emerge in all its complexity (ibid). Similar to Emerson and colleagues’ approach to analysis of fieldnotes, Hsiung and Raddon (2002: 100) explain that the process involved with qualitative analysis of interviews includes a non-linear and simultaneous approach of “careful reading and re-reading, line-by-line open coding, successive rounds of focused coding, writing analytical memos, asking questions of the data, consulting literature and drafting the paper, re-writing and revising it.” But more importantly, this process involves following one’s curiosity and feelings in order to sustain interest throughout challenging projects.

Following Hsiung and Raddon’s (2002: 104) suggestions on open coding, I approached the data with the following questions: What does the respondent really want to say? How is it said? What does it mean? In staying close to the transcripts, I coded the data line-by-line and generated as many codes as possible without thinking too much about how they would be ultimately put together. Rather than trying to reconcile divergent interpretations, I attempted to capture the complexity of the informant’s accounts in order to generate diverse thematic possibilities. By treating these codes as building blocks of analysis, I then moved onto focused coding whereby specific thematic issues were further examined. My intentions with data analysis
were to identify recurrent patterns and multiple and contradictory layers of meaning that addressed how women engaged with, responded to, and resisted discourses and practices pertaining to GD in “high-risk ethnic groups” as well as how such discourses and practices contributed to the production of subjectivities.

With regard to the process of coding interview data and data management, I coded data by hand rather than using computer assisted qualitative program. The rationale behind this had to do with the latter involving a steep learning curve and my aversion to anything technological. Moreover, the thought of relating to data through a monitor made me feel farther away from the data and I preferred the idea of engaging with the data by coding on hard copy. This is not to say that I did not use the computer to organize my data. Once I coded the interview transcripts line-by-line, I created Word documents for each of the major codes that kept coming up over and over again, and I cut and pasted coded excerpts that fell under the same major code. I printed off the documents and then cut apart each coded excerpts, sorting and laying them out on the living room floor and further clustering them into similar sub-codes. I then re-organized them in a separate folder in a Word document and created an outline-organized set of codes and sub-codes which served as building blocks for further analysis and writing whereby specific thematic issues were examined dialectically with theoretical ideas and extant literature.

## 5 Methodological considerations

### 5.1 Reflexivity

In qualitative research, the researcher is characterized as the primary instrument in all phases of the research process (Findlay, 2002; Guillemin & Gillam, 2004). The researcher is also an active participant in determining the quality and trustworthiness of the findings. Self-reflexivity plays a central role in evaluating subjective responses, intersubjective dynamics, and the research process itself for the co-construction of knowledge (Findlay, 2002; Guillemin & Gillam, 2004). In the following sections, I adopted Doucet’s (2008) recommendations of reflexively accounting for my positionality and research relations. Before elaborating on positionality, I will expand upon the meaning of reflexivity in relation to different stages of research and address the relationship between reflexivity and ethics.
Reflexivity, as Finlay (2012) points out, is an active, continuous, and emergent process that saturates every stage of research. It involves critical reflection of how the researcher constructs knowledge and how the researcher’s role influences the research process. As a researcher who is involved in the process of co-producing knowledge through interactions with participants, I engaged in self-reflexivity during and after participant observation and interviews by writing reflexive journals to think through the nuances of interpersonal dynamics. For instance, I actively reflected upon the ways in which my verbal and non-verbal behaviours were received by participants. Also, in the process of writing reflexive journals, I became more mindful of the choice of terminology used during interviews so as not to reinforce the power relations that I have set out to critique. On many occasions during interviews with women, I asked the participant to clarify the meaning and uses of specific terms (i.e., risk) rather than rely on my assumptions of what they might mean for the interviewee (Starks & Brown Trinidad, 2007). During data analysis, I was mindful not to situate participants as passive subjects of discourse as this might overlook how participants take up, negotiate or resist forms of subjectivities that are privileged by biomedical discourse. Although reflexivity from a poststructuralist perspective is challenging as I am located within and shaped by the discourses that I aim to interrogate, I made active attempts at being attuned to the dominant discourses that emerged during interviews and analysis.

Given that ethical dilemmas permeate the research process and influence the creation of knowledge, Guillemin and Gillam (2004) encourage qualitative researchers to engage in an ongoing process of reflexivity by placing themselves and their research practice under scrutiny. For instance, in order to mitigate potential risk and harm implicated in observations and interviews with vulnerable participants who may be emotionally distraught from the diagnosis and management of GD, I thought deeply about how I would respond to any unanticipated events in an ethical, respectful and sensitive manner (Morse, Niehaus, Varnhagen, Austin & McIntosh., 2008). As a researcher, I was cognizant of formal ethical responsibilities such as the rights of the participant to be informed of the process of observation and content of the interview along with the rights to refuse participation, opt out of observation, or stop the interview. Moreover, I made a concerted effort to be mindful of the power relations during observations and interviews as well as relational and ethical responsibilities with sensitivity, respect and authenticity (Morse et al., 2008; Aléx & Hammarström, 2008; Fleming, 2006).
My background as a crisis counsellor and familiarity with GD as a diabetes nurse educator prepared me to some extent to anticipate and navigate the emotional terrain. I actively monitored the participant’s changing emotional responses and bodily gestures particularly during fieldwork and interviews (Morse et al., 2008). Although I found myself relatively adept at responding to emotional manifestations, I foregrounded the importance of maintaining appropriate boundaries between research and therapy (Dickson-Swift, James, Kippen & Kiamputtong, 2006). In the event that the participant expressed heightened distress or requested further counselling, I was equipped with a list of resources, including a referral to the DEC social worker, community counselling services, and information of local support groups. On one occasion during an interview when a participant was expressing distress due to a lack of social support, I provided her with information about community resources and relayed this to the nurse clinician who sought out a referral to a social worker for supportive counselling. In circumstances whereby the participant raised medical concerns regarding GD, I directed her to speak to the DEC endocrinologist and staff. Although I did not encounter any acute medical crisis during the interview, I was prepared to direct her and family members to the hospital emergency department where her obstetrician (or an obstetrician on-call) could be reached.

Additional issues that require ethical reflexivity involves the researcher’s responsibility to protect the participant’s anonymity and confidentiality by providing a pseudonym in addition to being mindful of balancing accuracy and tact with regards to the identification and representation of participants (Morse et al., 2008). To ensure full disclosure during the consent process, I clearly explained the aim of participant observation and interviews, I outlined the risks and benefits involved with participation, and I reminded them that they could stop or withdraw from the study at any point without having to provide an explanation. During the interviews, I established on-going consent by asking questions such as “if it’s okay with you, can you tell me more about…” and “are you okay to continue?” In doing so, participants were involved in the process of determining whether or not to continue with the participation in the study (Polit & Beck, 2008).

5.2 Positionality

I approached the research project as a former clinician at the research sites, a PhD nursing student, and a novice qualitative researcher who has not had first-hand experience with GD or
motherhood. Despite my lack of experience with GD personally, I have a history of working closely with women diagnosed with GD as a diabetes nurse educator. During fieldwork, I realized that there is a productive value to occupying the hybrid position of insider and outsider. As an insider, I was able to gain entry into clinical spaces with relative ease and familiarity, sidestep the initial process of garnering trust of clinicians and learning cultural norms and clinical routines. Being an outsider had its own usefulness, such as being able to hang-out in the waiting corridor with women rather than attending to clinical operations, following women into clinical consultations, and sitting in on the GD class and asking questions alongside women.

However, there were also challenges with inhabiting this hybrid position; namely, the possibilities of overlooking things that an outside observer would consider strange and the blurred the distinction of a clinician and researcher. While my former role sometimes subconsciously swayed me to assume the position of a counsellor/educator, engaging in reflexivity during the interview and writing fieldnotes after participant observations and interviews helped me to negotiate tenuous moments when I felt inclined to act as a clinician which served as a useful reminder of my role as a researcher. In light of this, I have a renewed appreciation for Findlay’s (2002) explanation of reflexivity as a “movement back and forth in a kind of dialectic between experience and awareness,” and Hertz’s (1996) statement about reflexivity as “an on-going conversation about the experience while simultaneously living in the moment.”

I also approach the research project as a first generation Japanese-Canadian who was born in Tokyo and immigrated to Vancouver with my parents as a newborn. Conducting participant observations in the clinic and interviews with women who identified themselves as new immigrants, I often reflected on my parents’ experience of isolation when they were new to Canada and more specifically, my mother’s encounters with health care professionals when she attended the emergency department after repeated miscarriages in her second trimester. While my social, historical, and cultural position as well as my Western mannerisms might have put me at some distance from my participants, I found this distance beneficial in the sense that it prompted me to be more open and curious about women’s experience of GD and pregnancy. Participants were also highly curious about my interest in GD and inquired about my own experiences of pregnancy or motherhood. I found that they were more open about themselves
when I disclosed that I did not have children. However, participants who were aware of my former role as a diabetes nurse demonstrated subtle hesitation with initial interview questions that focused on the diabetic regimen, perhaps worried that I might judge them or report them to clinicians.

Additionally, I approached the observations and interviews with my own historically and culturally-situated preconceptions around notions of gender, race, class, risk, diabetes, guidelines, compliance, health and illness, biomedical authority, patriarchy, pregnancy, and motherhood. As I reflected upon my entry back into the field as a researcher, I came to realize that I encountered and revisited many of the vexing issues and unsettling feelings that I had experienced as a diabetes nurse educator. Having rendered the substantive topic of my research strange through gaining more insight into the controversy surrounding GD and the history of race science, I experienced uneasiness and dissonance during participant observations and interviews. Through the process of writing a reflexive journal starting at the research proposal phase and throughout the data collection and analysis phase, I continually questioned my “conceptual baggage” in order to be more open to go beyond the familiar and explore the unfamiliar experiences (Hsiung & Raddon, 2002).

I had not dwelled deeply about my positionality as a Japanese-Canadian until I had audited a course in my third year of doctoral studies, entitled *Theorizing Asian Canada*. I found this course particularly instructive in developing a vocabulary to articulate visceral tensions I had experienced throughout my life and observations I had made during fieldwork. The course also offered a way of situating my topic within the historical, socio-cultural, economic and political context that shapes our knowledge about race relations in Canada. Not only did I begin to consider my liminal status as an insider-outsider in relation to the clinical setting, I found myself questioning my identity as an Asian-Canadian for the first time. I had not considered that my subjectivity is shaped by its historical and political context of racism in Canada. Roy Miki (1998: 208) contends, “The ‘asian’ inside ‘canadian’ has a long and painful history, marked as it is by the spectral evidence of voices gone awry, of intentions distorted, of subjects maligned and excluded. The colonial legacy manifested as the ‘non-white’ body as a sign of the monstrous ‘asiatic,’ then later as a deviancy to be assimilated, and more recently as a variance that is scripted as the ‘multicultural’.” Citing Roy Kiyooka, Miki (2011: 13) echoes the experiences of
many Asian-Canadians: “growing up in this country and being beholden to the white culture, its institutions, I have nonetheless grown up athwarted’. Being ‘athwarted,’ [Kiyooka] explained, means that ‘You are of it, and you are not, and you know that very clearly.” This notion of being ‘athwarted’ resonated, prompting me to attend to visceral moments of inclusion and exclusion and reflecting more deeply on the hybrid constitutive positions of insider-outsider: Japanese-Canadian, clinician-researcher. Having been educated and socialized in Canada, I found myself wondering about my complicity in replicating dominant ideology regarding race and practices of racialization. Thinking about my positionality in relation to knowledge production, I found writing in my reflective journals instrumental in foregrounding the feelings and subject positions in a productive manner that sharpened my theoretical understanding of subjectification. From a Foucaudian perspective, the practice of writing in this reflexive hupomnêmata contributed to my own active self-constitution. The fieldnotes and journals were just as much about my own processes of subjectification as they were an analytic record about participants and their dynamic and situated negotiation of self-identification and interpellation by others.

5.3 Researcher-researched relations

Researchers taking a poststructuralist Foucauldian perspective are encouraged to engage in ongoing ethical reflexivity as power relations are always present in participant observations and interview transactions between interviewer and interviewee (Aléx & Hammarström, 2008; Fleming, 2006). Engaging in ethical reflexivity minimizes the risk of participants becoming an object for the researcher and maximizes awareness of the complexity of how knowledge is created (Fleming, 2006). As mentioned above, rather than making ethnic groups as its primary object of study, “it concerns a different range of objects (problematization, apparatuses, and assemblages) and entails a mode that puts the self, in its relationship to itself, to others, and to things, in motion as well as in question” (Rabinow 2003: 77). Looking at non-dominant groups, as Dyer (1988: 44) cautions, has serious drawbacks of “reproducing the sense of the oddness, differentness, exceptionality of these groups, the feeling that they are departures from the norm. Meanwhile the norm has carried on as if it is the natural, inevitable, ordinary way of being human.” As an analytic tool that attends to power relations, Vitus (2008) suggests reflexively embedding interview situations into the ethnographic context so that the researcher can examine the ways in which the context limits positions and creates conditions for the participant. By
shifting the focus from method to context, I positioned myself in the context of logics, agendas and identities. In doing so, I was mindful of the ways in which research could take part in reproducing structure of power and the ways in which this may shape the empirical material (Vitus, 2008).

With these points in mind, I took into account power relations during participant observations and interviews to prevent replicating the rhetorical function of the discourse being studied and reproducing panoptic practices. I took caution not to frame questions that might cast me in the role of disciplinarian as it would unsettle participants’ sense of self, incite unnecessary anxiety, and disempower their practices (Watts, 2006). I also strategically positioned myself in the clinical setting that distanced me from clinicians and the operations of the clinic by hanging out in the corridor waiting area or sitting amongst women in the classroom, engaging in casual conversations with women and interacting with their children and family members. My weekly presence in areas that are typically characterized as spaces inhabited by patients fostered a sense of intimacy that carried over into interviews.

In what follows, I elaborate on the researcher-researched relationship by offering an account of how my relations in the field with participants subsequently shaped my interviews with them. The reason for focusing on this here has to do with addressing the context surrounding data generation and its significance for analysis and interpretation. During a meeting with my supervisor at a stage in my dissertation when I was analyzing interview data, she made the following comment: “there is a strange intimacy in your interviews with women.” By this, my supervisor meant that there was an unspoken sense of familiarity that she noticed in the interview transcripts which she attributed to my prolonged presence in the field conducting participant observation at the gestational diabetes clinic. I found her comment incredibly insightful because it signposted an important aspect of my research that had fallen from view during immersion in the field. Namely, I needed to account for my role as a researcher and self-as-instrument for data generation and analysis and how my presence in the field had a bearing on fieldnotes and interviews with women who attended the clinic.

My transactions with women at the clinic were very much shaped by the physical layout of the setting and its temporal organization. While the diabetes clinic at campus Z is structured
and contained in terms of time and space, I would characterize the GD clinic at campus Y as chaotic and frenetic because there are two gestational clinics that run back-to-back: one from 8:30-9:30 am with one endocrinologist and his team composed of a diabetes nurse and dietitian; the other from 9:30-10:30 am with another endocrinologist and his team. There are roughly 25 to 30 patients registered for each of the gestational diabetic clinics. Due to the temporal constraints, the patients are seen very quickly by the endocrinologist, roughly equating to 2 minutes per patient. It is literally assembly-line care. There are also spatial constraints: the clinic operates in very cramped quarters. Once women register at the reception desk, they are asked to line up and wait along a narrow corridor that has limited seating. As soon as the clinic begins, this corridor becomes packed with pregnant women dressed in cultural or casual attire and sometimes they are accompanied by family members (i.e. husbands, small children, and babies in strollers). Women who are lined along the corridor may or may not have a seat to sit, and if they have a stroller, it tends to block traffic. The consultation/examination rooms for the endocrinologist, nurse and dietitian are also very small. Given the size of the room, the stroller is parked outside the rooms or just left unaccompanied along the corridor. The physical constraints of the rooms did not lend well for participant observation of the consultation. I often found myself getting in the way of clinicians and patients, and so I tended to gravitate to occupying a corner, but still felt as though I was literally breathing down the clinician’s neck. At times, I had to exit the room to accommodate husbands who wanted to be present during the consultation with their wives.

While the conditions of the clinic forced physical proximity, it also fostered intimacy. Because it would often get hot and claustrophobic inside the consultation rooms, I would hang-out along the crowded corridor, chatting with women as they waited to be called in. What surprised me was that women enjoyed my presence along the corridor because they had someone to talk to as they waited. Whenever I would engage in conversation with a woman, others would join in. At times, our collective conversations would become very lively and we would occasionally be asked to “keep it down” by the clinicians. Our topic of conversation varied from their blood sugar readings to cultural foods, and even personal matters. Women would share their trials and tribulations of high sugars, often blaming themselves for eating way too much particularly at parties which many women could relate to and laugh in agreement. I would also ask women how things were going at home, how many kids they had, whether they lived with family/in-laws, what they did on a daily basis, where they worked, and how they commuted to
work and their appointments at the hospital. And they, in turn, would ask me questions like how things were going with my research and what I did for the weekend. With follow-up appointments every week and repeated encounters with women over time, my relationship with women at the clinic developed into something more familiar and intimate which in turn shaped the GD clinic at Campus Y as a highly feminized space that was not evident at the other site. It was precisely this familiarity and intimacy carried over from fieldwork and shaped the very process, context, and content of the interview.

6 Reflections on research rigor

This dissertation study established research rigor in three ways: attending to research practice, demonstrating analytical and theoretical rigor, and practicing procedural rigor. By research practice as rigor, I refer to being reflexive in the descriptive and analytic sense (Brewer, 2000: 130). Descriptive reflexivity involves meditating on the impact that various contingencies have on the outcome of the research (i.e. the research setting, my preconceptions, power relations in the field and the nature of the interactions between researcher and participants). Whereas, analytic reflexivity deals with epistemological matters and knowledge claims, requiring an explication of the processes by which interpretations were reached (Brewer, 2000: 131).

As a part of good research practice, I followed Brewer’s recommendation of being reflexive in both descriptive and analytical senses, critically assessing the data as well as my integrity as a researcher in all stages of this research study. I explicitly reflected upon the grounds on which knowledge claims were being justified, including the length in fieldwork, ongoing negotiation and access in the field, discussion of the extent of trust and rapport developed with participants, and my background and experiences in the setting and topic. In critically assessing the data, I examined problems encountered in all stages of the research, outlined the ways of organizing data and the processes of interpreting data, and discussed power relations within research in order to think through the effects of race-based discourse of GD on the practice and writing up of research. Rather than seeking a simple fit between the social world and the ethnographic representation of it, I grappled with the complexity of the data by stressing the contextual nature of participants’ accounts and showing the multiple and contradictory
descriptions proffered by the participants themselves. In doing so, the aim was to add credibility to my knowledge claims and facilitate the reader to assess the credibility of those claims.

By analytical and theoretical rigor, I refer to generalizing from a particular empirical instance to a theoretical one and vice versa. In other words, the dialectical process of analysis and interpretation of data provided theorectico-empirical insights that would be generalizable or transferable to other contexts (i.e., racial disparities in other chronic illnesses, racialization in other pedagogical settings, reconfiguration of risk as disease). I made every effort to analyze data through a rigorous understanding of theoretical conceptualizations in order to provide, as Geertz (1973) calls it, “thick description” necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility. As Lincoln and Guba (1985: 316) contend, “it is not the [ethnographer’s] task to provide an index of transferability; it is his or her responsibility to provide the data base that makes transferability judgments possible on the part of potential appliers.”

By procedural rigor, I refer to the ways or strategies of establishing “trustworthiness” of findings, in Lincoln and Guba’s (1985) sense of the word. Here, trustworthiness speaks to the ways in which “an inquirer persuades the audience (including self) that the findings of an inquiry are worth paying attention to or taking account of” (Lincoln & Guba, 1985: 290). I demonstrated procedural rigor by being transparent on the grounds on which the data were interpreted, clearly identifying whether findings are an indigenous one used by participants themselves (i.e., food discipline, see Chapter seven), or analyst-constructed one (i.e., racial carbopolitics, see Chapter six) and on how the analysis was justified (Brewer, 2000: 132). Also, I substantiated my analysis through offering sufficient data extracts in the text to allow readers to evaluate the inferences drawn from them and the interpretations made of them. In following Lincoln and Guba (1985: 323), I established dependability by ensuring that findings can be traced back, via audit trail, to the raw data upon which they were based such as interview transcripts, fieldnotes, and reflexive journal. The confirmability of my findings, or extent to which data, interpretations, and findings are rooted in the data was enhanced in two ways. First, I “overlapped methods” which refers to a kind of triangulation of multiple data sources including interview transcripts, fieldnotes, reflexive journal entries, and textual materials. And second, I shared my analysis with my
supervisor and committee members who served as multiple reviewers of the analysis, interpretation, and representation of the data.

7 Conclusion

In summary, the intention of this chapter was to describe the methodology and methods of data generation and analysis for investigating the social effects of GD in “high-risk ethnic groups.” Beginning with Rabinow’s meditation on “problematization,” I discussed the methodological starting points that formed the basis of the research questions guiding this dissertation study. I offered a rationale for situating this dissertation as an ethnographically-informed project and described the following strategies of data generation: discourse analysis of authoritative texts, participant observations, and interviews. Following a discussion of the research setting and design, I explained how I analyzed the authoritative texts, fieldnotes and interview transcripts. This chapter concluded with a discussion on methodological considerations including reflexivity, positionality, and researcher-researched relations as well as the ways in which I established research rigor. In the following chapter, I will share my findings from the analysis of authoritative texts, participant observations, and interviews.
Chapter Five
Regimes of Truths

To recapitulate key points from the reflective review of the literature, GD is an enigmatic entity in medico-scientific literature. There is considerable ambiguity, variability, and contradiction in how GD is defined, screened, diagnosed, managed and treated. The elusive nature of GD is partly due to the blurred distinction between normality and abnormality in blood sugar levels. In this literature, the term “high-risk ethnic populations” is ritualistically used without elaborating the link between risk and race/ethnicity. Considering the contestations surrounding GD in “high-risk ethnic groups” within medico-scientific literature, the aim of this chapter is to better understand how GD, risk, and race are constructed in authoritative texts that inform clinical practice.

In this chapter, I analyze the following three texts that relate to expert discourses on GD in “high-risk ethnic groups:” 1) the 2008 Canadian Diabetes Association Clinical Practice Guidelines (http://www.diabeteseducation.ca/images/CPG%202008.pdf), 2) the 2009 International Diabetes Federation Global Guidelines on Pregnancy and Diabetes (http://www.idf.org/guidelines/pregnancy-and-diabetes), and 3) the 2009 International Diabetes Federation Kathmandu Declaration: Life Circle Approach to Prevention and Care of Diabetes (http://www.idf.org/sites/default/files/attachments/Kathmandu-Declaration-poster.pdf). I consider these documents to be representative of authoritative texts in the sense that they derive and accrue authority by virtue of their scientific medical origins. These three documents were selected specifically because they hold significance in guiding the current state of knowledge production and clinical practice, or as Foucault (1983: 221) puts it, “structure the possible field of action of others.” By analyzing the regime of truths that regulate the rules and conditions of possibility in the field, we can better understand how race, risk, and disease are refracted in, through and beyond biomedicine.

A critical discourse analysis of these authoritative texts elucidates the first two research questions: What kinds of discourses are employed to constitute knowledge about GD, risk, and race/ethnicity? And what types of subjects are constructed through discourses on GD in “high-risk ethnic groups?” An analysis of discourses constituting these three authoritative texts will
serve as a point of departure to examine the ways in which regimes of truths are accomplished locally in the clinic.

The intention of this chapter is to draw out latent assumptions on race, risk, and disease that underwrite the above authoritative texts and how they cross-articulate to constitute discourses on GD in “high-risk ethnic populations.” It will be argued that the cross-articulation of race, risk, and disease reveals a productive yet equally problematic discourse that paradoxically dis-articulates and renders invisible the social forces and power relations involved in shaping the conditions that produce GD in “high-risk ethnic groups.”

1 Troubling the categorization of “high-risk ethnic populations”

In this section, I begin with a brief explanation of the Canadian Diabetes Association (CDA) Clinical Practice Guidelines (CPG) in terms of its significance and content. Following this, I proceed with a general overview about the rise of CPG as a new technology of governance. I then turn to the 2008 CDA CPG, focusing specifically on one of the chapters entitled “Type 2 diabetes in high-risk ethnic populations” in order to illustrate how race/ethnicity is constructed through suturing together discourses of increasing immigration and ethnic disparities in diabetes prevalence. Although the CDA Expert Committee calls attention to the need to address social determinants of health, the subsequent section on primary prevention and management interventions belies structural considerations by returning back to a micro-politics of individual lifestyle modification.

The CDA CPG is a set of evidence-based recommendations that provide a reference tool to help health care professionals translate the best available evidence into practice. The guidelines are revised every five years to reflect the “rapidly changing field” of diabetes and published in The Canadian Journal of Diabetes. The most recent guidelines, published in April 2013, have expanded into a 212 page document. It is available in print and accessible on the CDA website for clinicians to reference and guide clinical practice. The CDA CPG is developed by several committees that form the Clinical & Scientific Section of the CDA, including the Executive Committee, Steering Committee, Expert Committee, Independent Methods
Committee, Cost Consideration Working Group, and External Reviewers with broad expertise and geographic representation.

In terms of content, the CDA CPG begins with an Introduction and Methods section, followed by chapters dedicated to the Definition, Screening, and Risk Prevention of diabetes. The guidelines are then divided into four broad areas: Management, Macrovascular and Microvascular complications, Diabetes in Children, and Diabetes in Special Populations. Subsumed under each area, there are multiple chapters that focus on particular topics encountered in clinical practice. For example, under Special Populations, chapters include Diabetes in Pregnancy, Diabetes in the Elderly, Diabetes in Aboriginals, and High-Risk Ethnic Populations. In order to serve as a useful reference tool, the chapters are organized in a particular manner, beginning with “Key Messages” which lists the salient points of the chapter and ending with a list of “Recommendations” that are assigned a grade based on the strength of the evidence. The last section of the CPG is the Appendix section which provides practitioners with samples of forms, checklists, and reference tools to facilitate clinical practice. These include care flow sheets, insulin initiation and titration regimens, self-monitoring of blood glucose recommendation tool, cost reference list for antihyperglycemic agents, and A1C conversion chart, to name a few. The CDA CPG occupies a place of special significance for clinicians both materially in the sense that it readily available in the clinical setting and symbolically in that it represents an attempt to standardize clinical practice across Canada.

1.1 Clinical practice guidelines: the rise of a new technology

The birth of the 1998 Canadian Diabetes Association (CDA) Clinical Practice Guidelines (CPG) occurred during a decade of scientific, academic, and political transformation and tension. During the 1990’s, the publication of two landmark and much celebrated randomized control trials (RCT) contributed to the rise of the first CPG. The Diabetes Control and Complication Trials (DCCT) and the United Kingdom Prospective Diabetes Study (UKPDS) both found that complications would be delayed or averted altogether via tight glycemic control. Additionally, it was during this time that Humalog, a new insulin analogue developed by a leading pharmaceutical company (Eli Lilly), hit the Canadian market. According to Rock (2005: 245), the findings from the DCCT, UKPDS, and other RCT helped bring diabetes squarely into the realm of evidence-based medicine (EBM) which was gaining attention throughout the 1990’s.
Rock (2005: 245) also points out that Canada’s first set of CPG was published in the same year that academic physicians at McMaster University announced EBM as a novel “paradigm for medical practice” (Mykhalovskiy & Weir, 2004: 1059). Furthermore, the rise of CPG took place at a time when political debates across Canada often centered on health care. Severe cutbacks to health care resulted in hospital closures, reorganization of health care delivery, intense monitoring of efficiency and cost-effectiveness, and removal of drugs and services from provincial health care plans in order to “free up” funds for health care (Rock, 2005: 246). Given the historical context from which the CPG emerged, it is not surprising that the 1998 CPG were initially greeted with ambivalence and suspicion by general practitioners, health administrators, and patients across Canada (Rock, 2005: 246).

The CDA CPG is a compilation of the latest epidemiological and clinical research findings translated into concrete recommendations for the screening, diagnosis, prevention, and management of various forms of diabetes and its complications. As mentioned above, the guidelines are revised every five years by an Expert Committee composed of health care professionals – mostly physicians – with broad expertise and geographical representation. The intention of the CPG is to publish “comprehensive, evidence-based recommendations for health care professionals to consider in the management of their patients living with diabetes.” Evidence from previous versions of the CPG recommendations are reviewed, revised, and enhanced by volunteers from the CPG Expert Committee. For the 2008 CPG, the Expert Committee was expanded to include 76 volunteers, representing a variety of health care professionals from diverse practice settings across Canada such as multiple specialists, family physicians, nurses, dietitians, pharmacists, and other health care professionals.

The Expert Committee members evaluate the relevant literature, formulate recommendations, and subsequently assign a grade from A through D based on the level of evidence. The draft is reviewed nationally and internationally by experts in the field, and their input is considered by the Executive and Steering Committee before formal revisions are made. Amongst the numerous changes reflected in the 2008 CPG, the most notable revision is the insertion of a new chapter that specifically addresses and provides recommendations for dealing with diabetes in “high risk ethnic populations.” However, in the latest 2013 CPG, this chapter has been phased out and is conspicuous by its absence. This observation aside, the main function
of the CPG is to aid the decision-making of primary care physicians and other health care practitioners who care for people with diabetes or those at risk of type 2 diabetes. The ultimate hope is that the guidelines will “lead to improved quality of care, reduced morbidity and mortality from diabetes and its complications, and a better quality of life for people with this chronic disease” (CDA, 2008: S1).

As an apparatus of power/knowledge, the CPG can be conceived as a technology of governance that employs epidemiological and economic data as a rationale for, and consequence of, practitioners’ adherence to its recommendations. In other words, by coupling epidemiological findings with the economic impact of diabetes, the document incites a sense of urgency that necessitates close adherence to evidence-based recommendations in order to prevent its growing prevalence and reduce the economic burden to the already strained health care system. To illustrate the operations of this power/knowledge apparatus as a biopolitical tool, the reader needs only to review the introductory chapter. The CPG supports its assertion that diabetes is a “serious and growing disease” through marshalling epidemiological evidence concerning the current and projected prevalence of diabetes in Canada. Drawing on the National Diabetes Fact Sheet, the CPG states that 1.8 million adult Canadians – roughly 5.5% of the population – had been diagnosed with diabetes in 2005 (a 70% increase from the 1998 CPG), and projects an increase to 2.4 million by the year 2016 in light of Canada’s demographic trend of an aging population, increasing immigration, and growing Aboriginal population (Ohinmaa et al., 2004). Immediately following these epidemiological findings, the CPG refers to the economic cost of diabetes in Canada and indicates that the federal, provincial, and territorial government spent an estimated $5.6 billion to treat people with diabetes and its complications in 2005 (Ohinmaa et al., 2004). Soon after presenting these facts, the CPG makes a blunt claim: “Because of poor compliance to evidence-based recommended management regimens, diabetes and its complications significantly contributes to the cost of primary healthcare, and add to waiting times for treatment in emergency departments and surgeries” (Canadian Diabetes Association, 2008: S2). Implicit in this burden-laden statement is the unsettling notion that health care professionals who do not act in accordance to the CPG are indirectly contributing to the escalating cost related to diabetes.
The recommendations listed in the CPG do not necessarily imply a consensus; in fact, there are many conflicting views about various guidelines. It is not surprising that the majority of the recommendations pertaining to GD are subsumed under level D (the lowest grade reflective of weaker evidence and greater possibility that the recommendations will change with more evidence generated in the future). Nevertheless, the key point here is that the discourse clearly adopts certain language styles, terminologies, assumptions and a rationale free of ambiguity for articulating issues, particularly pertaining to “special populations” who are members of a “high risk ethnic population.”

1.2 The use of “high-risk ethnic populations”

Throughout the CPG, the phrase “high-risk ethnic populations” or “member of a high-risk group” is routinely employed in a very vague and elusive manner. No definition is provided following the use of this phrase and no explanation is offered that might elucidate the link between risk and race/ethnicity. In different sections of the CPG, the phrase is either subsumed under the heading “risk factors” and/or ritualistically followed by a parentheses housing multiple sub-populations: “(i.e. people of Aboriginal, Hispanic, South Asian, Asian, or African descent).” This is presented as though the phrase “high-risk ethnic populations” is self-evident or sufficient enough to explain disparities in health, rather than a phenomenon that needs to be explained.

In the absence of an explicit definition or explanation, the Expert Committee fails to address what constitutes such groups as “high-risk.” In doing so, they engage in something similar to the use of biological race in biomedicine. That is, racialized categories overemphasize homogeneity within groups as though individuals within them are genetically and culturally homogeneous even though such categories are heterogeneous in relation to culture, religion, migration, histories, and geographical and socio-economic locations. Moreover, racialized categories oversimplify the complex ways in which individuals assign themselves into groups. Here, ethnicity confounds the association between race, class, poverty, and lifestyle and conflates divisions based on nationality, language, skin colour, physiognomy, country of origin, ancestry, and descent. Not only do racialized categorizations lack conceptual coherence and specificity, they fail to capture the multiple and incommensurable dimensions of difference. As pointed out by Buescher, Gizlice and Jones-Vessey (2005: 397), “racial group is at best a crude marker for particular health problems, and certainly not a risk factor or cause.”
The ongoing contestation over the meaning and utility of race has led scholars to examine whether “ethnicity” might be a preferable term. Ethnicity has been distinguished from race by its fluid and predominantly social attributes rather than the fixed biological and/or genetic attributes traditionally associated with the notion of race. Thus, the concept of ethnicity has been substituted for race in scientific research because it generously encompasses the cultural, socioeconomic, religious, and political qualities of human groups, including language, diet, dress, customs, kinship systems, and historical or territorial identity (Montoya, 2011; Whitmarsh, 2008). In contrast to race, ethnicity has been conceptualized as socially articulated, reflecting common political interests and perspectives of individuals. However, the use of ethnicity in health research and clinical guidelines often belies this distinction. Although racial and ethnic categories can be conceptualized very differently, the two terms often overlap especially when they refer to the same social groups or classified using the same phenotype, sociocultural, and geographic characteristics. Ethnicity, as well as “culture,” has often been used as a surrogate or proxy to stand in for biological difference in race. Despite being a hotly contested topic, race/ethnicity is used ritualistically, defying explanation in both scientific research and clinical practice.

Ethnic population labels, if at all informative, reference the biological effects of a specific population’s social history (Lock, 1993). Montoya (2011: 35) offers an astute observation: “that ethnicity [or by extension, ‘high-risk ethnic groups’] appears natural, is the degree to which the fallacy that humans can be biologically separated into racial groups is accepted. Researchers and clinicians compound this fallacy when they are unable to deeply question the assumptions about ethnic risk factors of disease and thus use data derived from ethnic groups as a freestanding independent variable.”

In the following section, it will be shown that the CPG employs a vocabulary, adopts certain assumptions, and endorses a rationale to advance a framework for understanding diabetes in “high-risk ethnic populations.” In such a framework, codified concepts such as “high-risk ethnic populations” or “members of a high-risk ethnic group” are used to substitute for non-white immigrants, particularly people from South Asian countries. The loose linkage between immigrants, diabetes, and economic burden to the national health care system become tightly bound together through a seemingly coherent and codified discourse of “high-risk ethnic
populations.” This creates a narrative that non-white immigrants irrespective of their place of birth, legal citizenship status, and duration of residence are inherently diseased and culturally problematic. Implicit in this codified language is the notion that the recent Third-World type of non-white immigrants bring with them different values and behaviours that are incompatible with those in traditional Canada.

1.3 “High-risk ethnic populations” as non-white immigrants

Turning to a chapter in the 2008 CPG entitled “Type 2 in High-risk Ethnic Populations” (see Appendix E), one is immediately struck by the assumption that “high-risk ethnic populations” refers specifically to non-white immigrants. The first sentence of the introduction begins with the following statement: “The increase in immigration to Canada over the last 50 years has created a very ethnically diverse population” (CDA, 2008: S191). Citing the 2006 census enumeration, it states “over 6 million foreign-born people in Canada account for 19.8% of the total population – the highest proportion in 75 years” (CDA, 2008: S191). In the next sentence, ethnicity elides into language, listing “the mother tongue of foreign-born populations other than French or English” followed by the percentage in parentheses. These include “Chinese language (18.6%), followed by Italian (6.6%), Punjabi (5.9%), Spanish (5.8%), German (5.4%), Tagalog (4.8%), and Arabic (4.7%).” In order to side-step the inclusion of Italians and Germans in the category of “high-risk ethnic populations,” the expert committee diverts the reader’s attention by pointing out that “[r]ecent immigrants born in Asia (including the Middle East) comprise the largest proportion of newcomers to Canada.” What is clear in the introduction is that “high-risk ethnic populations” are non-white people who speak languages other than the official bilingual languages of Canada.

Following the discourse on the rising trend of immigration, the text turns to the topic of ethnic disparities in diabetes prevalence by making categorical comparisons. For instance, the text makes reference to racial disparities in diabetes and related chronic conditions “compared to the general population” which have been “well-documented” in the United Kingdom and the United States. Without elaborating on “well-documented” or “general population” nor offering a rationale behind making such categorical comparisons, the text immediately goes on to identify sub-populations by “ancestry” along with a host of chronic conditions and diabetes throughout the life span. “Individuals of South Asian, Chinese, African and Latin ancestry have higher rates
of metabolic syndrome, impaired glucose tolerance (IGT), abdominal (central) obesity, insulin resistance, type 2 diabetes in childhood, gestational diabetes mellitus, and diagnosed and undiagnosed type 2 diabetes with onset at a younger age.” Although unnamed in the previous paragraph, it is at this point South Asians are invoked as “Canada’s fastest-growing immigrant populations.” The salience of South Asians at this juncture becomes more apparent with the next sentence: “Of all expatriate ethnic groups, they have the highest rates of morbidity and mortality from diabetes-related cardiovascular disease (CVD), with 40% higher age-standardized mortality from coronary artery disease than Caucasians.” Here, South Asian immigrants are singled out as problematic ethnic sub-populations that are not only the sickest, but underwriting this claim is that they are the most expensive to the Canadian health care system.

Etiological explanations or “factors for ethnic disparities” are offered in the following paragraph. These include “genetic susceptibility, insulin resistance, inadequate socioeconomic resources, self-care capacity challenges, degree of acculturation, health literacy, psychosocial stressors, differences in treatment response, and barriers to accessing healthcare.” What is notable here is the emphasis on biology/genetics, class, and individual behaviours are framed in a politically-correct way which side steps any acknowledgement about the social conditions that produce ethnic disparities. Factors such as degree of acculturation, health literacy, and self-care capacity challenges are problematic assumptions that insinuate non-white immigrants are ignorant and incapable of assimilation and self-care. Such assumptions are simultaneously congruent with cultural caricatures of the ‘Other’ and incongruent with dominant cultural norms of the bilingual/bicultural or “general” population of Canada. Furthermore, in relation to the previous paragraph, it is as though such factors do not apply to “Caucasians” and pertain solely to ethnic groups.

Almost in a brief moment of lucidity, the next sentence offers a race-conscious corrective to cultural difference and demonstrates some reflexivity about the broader social forces that shape health. “Traditional diabetes care systems designed for mainstream populations are often of limited relevance to culturally diverse populations, as these systems emphasize the reduction of behavioural risk factors and benefits of self-care behaviours, but ignore the social, cultural, economic and physical environments in which lifestyle practices are shaped and often constrained.” Although this statement comes close to revealing racism and calling attention to
the normativity of whiteness, it forecloses anti-racist discourse by diverting attention to the noble concerns of respecting cultural diversity and ensuring cultural competence. In doing so, power relations remain hidden from view and dominant cultural norms are kept in place. Moreover, even the call for prevention and management strategies that target the social determinants of health ultimately redounds to a micro-politics of targeted interventions directed at the level of the individual with regards to diet and lifestyles.

In addition to its central preoccupation with immigrants, this chapter mirrors broader conversations and anxieties about national identity and belonging. By framing “high-risk ethnic populations” as a problem in non-white groups, inclusion and exclusion are marked by a binary logic of positioning outsiders/“foreign-born” as diametrically opposed to insiders/“mainstream/general populations,” particularly in the way the nation is circumscribed by bilingualism/biculturalism (i.e. French and English). However, there is one sub-population that troubles this categorical binary of ‘them’ versus ‘us.’ Aboriginal populations are included in the category of “high-risk ethnic populations” yet excluded from it. They appear nowhere in this chapter. In order to circumvent this contradiction of the internal Other, there is a separate chapter subsumed under “Special Populations” entitled “Type 2 Diabetes in Aboriginal Peoples.” The way in which indigenous populations are included yet excluded in the category of “high-risk ethnic populations” and conceptualized as distinct in relation to non-white immigrants mirror historical tensions of colonialism and racial politics in Canada.

What is particularly interesting with the use of “high-risk ethnic populations” is that it conceals a sub-population who is present only by its absence. “Caucasians” are treated either as non-racialized or the norm against which other populations are thereby compared. It is as though Caucasians are not at risk of diabetes or unaffected by the conditions that contribute to the development of diabetes. Homogenizing the categories of race/ethnicity not only erases other axes of difference, such as class, gender, sexuality, and ability, it has the effect of concealing the complexities of an intersectional analysis that contribute to the conditions that produce disease. Scholars have taken issue with uncritically associating individuals according to racialized categories with incidence or prevalence of disease and then comparing them with the white/Caucasian population (Lee et al, 2001). Lee and colleagues (2011) note that the comparison of different ethnic groups to an implicit category of ‘whiteness’ is left largely
undefined. Not only is the relationship between racialized identity and disease left unexplained, the ritualistic use of racial categories in biomedicine makes the assumption that people of colour themselves, whether biological or behavioral, are in some way causal determinants to the disease disparities. This places people of colour affected with disease in a double bind of being blamed for the behaviour that caused the condition and being deprived of agency (Montoya, 2011: 28). In short, by failing to identify specific factors that contribute to group differences, authoritative texts implicitly reinforce racial stereotypes and divert investigation away from broader social factors that account for differences in disease variation.

Not only does the meta-category of “high-risk ethnic populations” reinforce risk as skin-based racial difference and designate people of colour as de facto immigrants, it also erases their individual histories and suppresses knowledge about the unsettling history of racism in Canada. In the national imaginary, immigrants have historically been made responsible for importing “their” backward cultural practices into the country along with contagious diseases such as Ebola, West Nile, and Avian Flu (Adeyanju, 2010). Moreover, the category “immigrant” draws upon the historical status of “non-preferred races” as outsiders (Thobani, 2007: 157). In the new liberalized era, those who were previously regarded as “non-preferred races” are now reconfigured as culturally different communities. The constitution of discrete ethnic and cultural communities as homogeneous not only draws upon historical narratives of race, it erases the indices and intersections of difference among them.

The notion of “high-risk ethnic populations” has become a meaningful biomedical concept insofar as it provides a simplistic yet convenient explanation to justify further surveillance through medicalization. Although discussion of skin colour or race is central, the language is codified as “high-risk ethnic population” and as such, concerns over economic and social complications are presented as noble and not racist. Li (2001) argues that a coded language is used to cover up a blatant discussion of skin colour. This discourse reifies race by recognizing the legitimacy of evaluating superficial physical differences of people and by casting non-white immigrants and Canadians as opposites based on socially constructed immutable differences. Over time, such discourse makes it socially acceptable to consider immigrants on racial grounds. In turn, physical and cultural characteristics of non-white immigrants become
socially significant in clinical settings because they represent convenient markers by which they can be distinguished and problematized.

The above analysis of the CPG offers insights into the latent assumptions underwriting the category of “high-risk ethnic populations.” The CDA CPG does not however operate in a vacuum or exist in solitude. Rather, the CDA CPG is in conversation with international organizations (i.e. American Diabetes Association, International Diabetes Federation, and World Health Organization) and reflects and reproduces racial ideology in the broader social context. Thus, the CDA CPG represents one node in the web of knowledge production and dissemination. National guidelines are informed and shaped by another set of guidelines on a global scale to which we will now turn.

2 Expanded rubric of “risk”

The International Diabetes Federation (IDF) is the global advocate for the over 250 million people with diabetes worldwide, representing over 200 diabetes associations in more than 160 countries. According to its website, its mission is “to promote diabetes care, prevention and a cure worldwide.” The International Diabetes Federation is an NGO in official relations with the World Health Organization and an associated NGO with the United Nations Department of Public Information. With its headquarters in Brussels, the IDF has been leading the global diabetes community since 1950. The IDF’s national diabetes associations are divided into the following seven regions: Africa, Europe, Middle East and North Africa, North America and Caribbean, South and Central America, South East Asia, and Western Pacific. The aim of the IDF is to strengthen the work of national diabetes associations and enhance the collaboration between them. The IDF’s working bodies bring together stakeholders from the global diabetes community, including people with diabetes and their families, professionals involved in diabetes healthcare and related fields, diabetes representative organizations, and partners from commercial organizations with concerns which align with the mission of the Federation.

The IDF is most known for leading the World Diabetes Day campaign. The UN recognition of World Diabetes Day followed the passing of Resolution 61/225, the World Diabetes Day Resolution, in December 2006. The landmark resolution was the first goal of an ambitious campaign led by the IDF which recognizes diabetes as a chronic, debilitating and
costly disease associated with major complications that pose severe risks for families and
countries throughout the world. The UN has thrown its support behind World Diabetes Day and
encourages countries to promote diabetes care, prevention, and cure. To mark this special event,
individuals are encouraged to wear the Unite for Diabetes pin, which incorporates a blue circle –
the global symbol for diabetes.

The 2009 *International Diabetes Federation (IDF) Global Guideline (GG) on Pregnancy
and Diabetes* is an extension of the 2005 *International Diabetes Federation Global Guideline for
Type 2 Diabetes* (see Appendix F). It was created primarily to address “wider issues surrounding
gestational diabetes mellitus (GDM) and prevention of diabetes” in attempts to “present some of
the evidence bearing on areas of controversy” (IDF, 2009: 4). This rationale for creating global
guidelines already reveals what it tries to conceal: the controversy surrounding this enigmatic
disease and its elusive relationship with diabetes. This critique aside, the intention of this
document is to bring together the latest evidence-based research and guidelines (from 2005
onwards) on diabetes in pregnancy published in the United Kingdom and Canada as well as
findings from the Hyperglycemic and Adverse Pregnancy Outcome (HAPO) Study (Metzger et
al, 2008). In March of 2009, a non-formal evidence review was circulated and discussed by the
Writing Group, consisting of five international experts – all of whom are physician researchers,
and then redrafted before circulation to an Expert Review Committee of ten international experts
– some of whom are also members of an Expert Committee for the Canadian and American
Diabetes Association. The revised draft was then referred to the IDF member organization for
comments prior to the publication of the final draft. The aim of the 2009 IDF GG on Pregnancy
and Diabetes was to create a set of recommendations for “Standard Care” illustrative of what
constitutes current best practice.

What is of particular interest here is how the definition of GD has been reconfigured
through an expanded meaning of “risk.” According to the IDF GG, “any definition of GDM has
to take into account 3 elements of risk: (1) of perinatal morbidity and mortality in the current
pregnancy, (2) of mother developing type 2 diabetes, and (3) of intra-uterine programming of the
developing fetus with subsequent expression of disorders in later life.” With the exception of the
last element, the first two elements of risk are substantiated by systematic reviews, meta-
analysis, and large international trials such as HAPO (the international Hyperglycemia and
Adverse Pregnancy Outcome Study), ACHOIS (the Australian Carbohydrate Intolerance Study), and MFMU (Maternal-Fetal Medicine Unit Network Study from the US). To a large extent, this expanded rubric of risk has been facilitated by the proliferation of scientific and epidemiological research, particularly in the field of fetal programming.

While the first two elements of risk underpin the original intent of treating diabetes in pregnancy, the third element of risk has been added to account for the research generated on intra-uterine programming. “Intra-uterine programming” or “metabolic imprinting,” according to the expert committee means that fetal exposure to maternal hyperglycemia in utero has an epigenetic effect resulting in metabolic abnormalities and cellular defects in pancreatic angiogenesis and innervations. Although the exact mechanism underlying this programming are unknown, it has been postulated that a diabetogenic intra-uterine milieu create a cascading effect of future risks: fetal exposure to maternal hyperglycemia increases the risk of neonatal adiposity which increases the risk of childhood obesity, then pre-diabetes in adolescence and subsequently type 2 diabetes and related co-morbidities in early adulthood leading to myriad complications throughout life. Assuming that the offspring is female, there is a concern that the vicious “life cycle of diabetes” will perpetuate, leaving an amplifying effect on future generations of diabetics. This third element of risk not only situates the source of risk as the womb, but by focusing on the future of the fetus and subsequent generations, it simultaneously erases the mother’s body discursively, rendering her absent from view.

2.1 Re-conceptualizing risk and the discursive erasure of the mother

Rather than offering counterpoints to scientific regimes of truth in their own terms, a more productive way to analyze this curious extension of risk is by examining how risk operates as a technology of governance. In discourses of health promotion, risk is a key concept in policies focused on disease prevention and occupies a central position in discourses related to individual health. The concept of risk has been approached by various scholars, most notably those drawing on Foucault’s conceptualization of governmentality. These scholars have illustrated the ways in which risk reflects and constructs distinct rationalities and approaches to the government of populations and individuals. As Robertson (2000: 229) contends, “risk has become a common construct around which health in Western society is described, organized, and
practiced – both professionally and personally.” In the 2009 IDF GG on Pregnancy and Diabetes, the expansion of risk in the service of re-defining GD is a productive strategy of producing ‘truths’ on risk which then become the basis for action of managing populations and intervening in the lives of individuals.

The discursive power of risk is most evident in the ways in which biomedical interventions no longer depend on the presence of disease; all that is required is an individual’s risk of developing a disease (Schwartz, 2008). Or, as Castel (1991: 287) puts is: “To be suspected, it is no longer necessary to manifest symptoms… it is enough to display whatever characteristics the specialists responsible for the definition of preventive policy have constituted as risk.” In Armstrong’s (1995) work on the rise of Surveillance Medicine, he asserts that risk has dissolved the distinction between health and illness, bringing everyone within its network of visibility. Armstrong argues that signs and symptoms are only important insofar as they can be read as risk factors, opening up space of future illness potential. Through the abstract notion of risk, screening and public health campaigns attempt to transform the future by changing health attitudes and behaviours of the present, thereby extending the benevolent gaze of biomedicine through the medicalization of everyday life.

Lupton (1999: 84) makes an important point that we only come to *know* ‘risk’ through the ways in which discourses, strategies, practices and institutions serve to bring it into *being*. Not only do they produce ‘truths’ on risk that are then the basis for action to address governmental concerns, they are a means of ordering the social and material worlds through methods of rationalization and calculation in attempts to make uncertainty more controllable. Adopting Foucault’s conceptualization of governmentality, Lupton (1999: 87) argues that risk can be understood as a calculative rationality, involving a governmental strategy of regulatory power to monitor and manage populations and individuals in alignment with neo-liberal objectives. As a result, those individuals who are deemed ‘at risk’ are expected to take control to prevent risk through their own actions rather than rely on social insurance apparatuses. Through the unrelenting efforts of a heterogeneous network of actors, institutions, knowledges and practices, information about risk is problematized, rendered calculable and governable.
Often described as “the conduct of conduct,” governmentality is an approach to social regulation and control in the maximization of wealth, welfare, and productivity (Lupton, 1999: 85; Higgs, 1998: 185). Broadly speaking, the notion of government refers to “any activity aiming to shape, guide or affect the conduct of some person or persons” (Gordon, 1991: 2). Aligned with neo-liberal political rationality in the contemporary era, governmentality can be conceived as a strategy and rationale which champions individual freedom and rights against the excessive intervention of the state (Lupton, 1999: 86). It is heavily reliant on systems of expert knowledge which constitute and define the objects of their knowledge. Knowledge gained through mass surveillance, monitoring, observation, and measurement is crucial to disciplinary power which uses such knowledge to regulate individuals. Through risk discourses and strategies of normalization, individuals are discursively positioned and fabricated within a network of instruments and techniques of power.

Conceptualizing risk as a governmental strategy sheds light onto the redefinition of GD through the expanded rubric of risk in the 2009 IDF GG on Pregnancy and Diabetes. By expanding the rubric of risk to include fetal programming, risk as a form of governance has cast a wider net of surveillance, extending the biomedical gaze beyond the perinatal period into the future of the fetus and successive generations. In doing so, diabetes then becomes a perpetual state of becoming. The key feature here is the forward vision of these strategies: “to reshape the vital future by action in the vital present” (Rose, 2007: 18). Interventions listed in the IDF GG on Pregnancy and Diabetes are not intended to treat GD per se, but rather they attend to the “infinitely expandable and malleable empire of risk” (Rose, 2007: 87). As Rose aptly asserts, the “treatment of risks” has come to be central to the politics of life itself in the 21st century.

In short, the above analysis illustrates how this expanded rubric of risk has broadened the scope of regulatory mechanisms and possibilities for disciplinary interventions to govern the reproductive lives of women and their future female progeny. Regulatory mechanisms of GD screening practices and risk profiling are closely intertwined with disciplinary interventions which subsequently direct the trajectory of those deemed “high-risk” in the present towards a more desirable and less diseased future. By expanding the definition of risk, the IDF GG on Pregnancy and Diabetes served as a catalyst in bringing the following “landmark declaration” into being.
3 Loop of logic: “Life Circle” Approach

To mark World Diabetes Day, the South-East Asia Region (SEAR) of the IDF announced the development of a landmark declaration in Colombo, Sri Lanka on November 14th, 2008. The Kathmandu Declaration (KD) is referred to as “an action plan,” providing guidelines and a framework for the prevention and care of diabetes through the pioneering concept of the “Life Circle,” which is in keeping with the blue circle from the IDF Unite for Diabetes logo (see Appendix G). The “Life Circle” approach concentrates on the prevention of type 2 diabetes from preconception to adulthood, highlighting the risk factors and prevention strategies at each stage in life through behavioral and environmental changes. The KD recognizes the interaction of all causative factors namely genetics, fetal origins, lifestyle, and stress with special emphasis on behavior and environment. It specifically identifies the need for increased education with respect to correct nutrition, adequate physical exercise, and reduction of psychosocial stress from conception to adulthood.

The KD was formulated at a workshop and accepted unanimously by all participants at the inaugural meeting of the Diabetes In Asia Study Group in Nepal on October 17th, 2008. The main intention of the meeting was to specifically address and implement the United Nations Resolution on the prevention and care of diabetes. The SEAR spearheaded this project as their region has the highest prevalence of diabetes globally with over 40 million people affected, which is projected to double by 2025. Of the countries within the SEAR, India has the greatest population of people with diabetes, reinforcing the trope “India is the diabetes capital of the world” (Goswani Mahkata et al, 2014). At the invitation of the SEAR, representatives of the Western Pacific and Middle East and North Africa of the IDF met in Kathmandu to formulate this collaborative declaration. Consensus statements on aetiology and prevention from previous meetings in Colombo and Lisbon were integrated to formulate and inaugurate the “Life Circle” approach as a new model of care for the prevention and care of diabetes worldwide. A few months after SEAR announced this landmark declaration, it was published in early 2009. A year later, Wijesuriya, Williams and Yajnik (2010) published the report in Diabetes Research and Clinical Practice. The KD aims to help support all seven regions of the IDF to effectively implement the UNR to manage the rising “diabetes pandemic.”
The Life Circle model offers a multitude of interventions beginning from preconception, pregnancy, infancy and childhood to adult life in attempts to “halt the [diabetes] pandemic.” The document states “entering the circle at any point is beneficial and never too early nor late.” Each phase lists a number of preventive strategies and normative prescriptions, pointed particularly at women. In addition to the usual rhetoric of appropriate nutrition, increased physical activity, and stress reduction, the KD offers wide-reaching recommendations directed at the individual, institutional and societal levels. These range from educating “young females/potential mothers” that “pregnancy is a risk factor,” reducing the incidence of infections/inflammation through improved sanitation, screening for diabetes in schools as well as risk factors in the potential mother “in light of the increased incidence of early onset of Type 2 diabetes in the young,” promoting breastfeeding for the first six months, creating a safe and culturally-sensitive school and community environment, as well as supporting the provision of information to employers and employees to encourage optimal working environments. Peripheral to the primary prevention model, the secondary prevention focuses primarily on increased awareness by impressing upon individuals, families, health professionals, and policy makers that the “cost of complications exceeds the cost of prevention.” In addition to increased awareness of the economic burden associated with complications, secondary prevention recommendations include supporting a multi-factorial, multi-disciplinary, and multi-sectoral approach to diabetes care and formulating action plans through providing governmental and non-governmental organizations with relevant guidelines, best practice experiences, and ethnic, cultural, and religious issues.

A sense of urgency is particularly palpable in the introductory comments. “DM being a chronic, debilitating and costly disease, the United Nations adopted Resolution 61/225 (UNR) in 2006, urging all countries to take immediate action to halt the pandemic.” Clearly, one strategy to arrest the vicious cycle of diabetes is to target women across the lifespan. However, special emphasis is placed on “young women/potential mothers” and pregnant women because the model is premised on fetal programming hypothesis. Under section 3.1 Fetal Programming – 3.1.1 Maternal nutrition, Hales and Barker are acknowledged for their thrifty phenotype hypothesis which suggests that “development of beta cell mass is affected by nutrition in utero.” It goes on to explain that fetal exposure to “programming agents such as hormones, growth factors and cytokines in a sub-optimal environment of inadequate nutrition” leads to the “alteration of the metabolic and immune systems and predisposes the fetus to increased insulin
resistance and Type 2 DM in later life.” Although this description is subsumed under “maternal nutrition,” mother is interestingly absent. Other “programming agents” that contribute to a “sub-optimal environment” and results in insulin resistance in the offspring include a spectrum of specific and elusive factors ranging from low vitamin B12 and low folate to exposure to prenatal stress. Yet, factors that extend beyond the womb such as the broader socio-political and economic conditions that contribute to the “sub-optimal environment” are absent in this discussion. Here, the fetal programming hypothesis is constructed as a legitimate, unambiguous and objective ‘truth’ free of contestation, providing justification and credibility for the Life Circle approach.

3.1 Problematizing the fetal programming hypothesis

Underwriting the KD’s Life Circle approach is the problematic view that the intrauterine environment is site where ‘diabetes begets diabetes’: diabetic mothers will give birth to female offspring who will develop diabetes in adulthood and go on to give birth to future diabetics and so on. Simply put, the womb is portrayed as both the source of diabetes and the cause of the diabetes pandemic. According to the logic of the Life Circle model, the only way to reduce the incidence of diabetes and improve the lives and life expectancy of future generations is to halt this cycle by intervening throughout a woman’s reproductive life before she conceives, while she is pregnant, and in the years after she has given birth. The KD discursively positions women as producing ill health in their offspring and subsequent generations, inciting the need for multiple levels of intervention and surveillance. Secondary prevention strategies that address the economic burden associated with complications operate not only as a justification for education, research and governmental action, they also function as a call for urgency for adhering to primary prevention guidelines that emphasize earlier intervention into women’s lives.

The KD Life Circle approach is far from being neutral or objective in its effects. Not only does it encourage new and disturbing opportunities for the surveillance, regulation, and disciplining of female bodies, it perpetuates a number of taken-for-granted assumptions. Emphasis on increased awareness through education and surveillance implies and potentially reinforces the notion that women are ignorant and in need of knowledge about nutrition and exercise. Also, repeated gestures toward “culturally-sensitive” approaches lack specificity, yet gestures toward women of colour as the greatest risk, justifying life-long intervention and
surveillance practices that target them as well as their female offspring. Those who do not discipline themselves in prescribed ways or do so unsuccessfully suggest a lack of self-control and of personal and civic irresponsibility for contributing to rising health care costs. In the context of pregnancy and obesity, McNaughton (2011) is also critical of the fetal origins hypothesis that situates the source of obesity in the womb and is equally suspicious of interventions that seek to interrupt the vicious cycle by intervening throughout a woman’s reproductive life. There is little consideration the harms that arise from targeting particular populations let alone the structural and contextual factors such as poverty, racism and sexism that create risks to health in the first place. While the intrauterine environment is problematized, the ‘environment’ beyond the womb (i.e. social, political and economic conditions) is paradoxically unproblematic. The Life Circle approach affirms moral and neo-liberal ideas and values while at the same time rendering invisible the political economy that produce ill health.

What is most disturbing about discourses centered on fetal programming is the invocation of metaphors and scientific logics that make problematic parallels. By casting the womb as the source of diabetes and foregrounding discursive tropes such as “intrauterine environment,” “maternal hyperglycemia,” or “aberrant milieu,” the mother’s body instantly vanishes from analytical view. This preoccupation with the intra-uterine environment is unsettling because the mother is strangely absent yet present. While diabetes is framed as a “global” pandemic, the focus has paradoxically become much more local centered on the intra-uterine environment as a world unto its own. The problematic analogy of the womb as an “aberrant” maternal ecosystem deflects attention away from broader social, political, economic, and environmental forces that shape this “global health crisis.” Moreover, portraying the womb as a toxic environment conjures up catastrophic images of global warming, disasters, or environmental pollution, having devastating effects on living organisms. Even the phrase “Life Circle” invokes and aligns well with long-standing scientific logics about the life cycle of various insects and organisms (i.e. malaria, lice, fruit fly). Such parallels depict the womb as a figurative and literal space of abjection, further alienating the mother from her fetus. Yet simultaneously, as Foucault might say, this new site is becoming the stage whose proceedings are of immediate interest to the welfare state and body politic. The epistemic shift of situating the womb as the site of governance has potential iatrogenic effects of reshaping social understandings and experiences of the pregnant body. Rendering the mother discursively invisible also erases any reflexivity or
sensitivity about how such discourses might profoundly shape clinical encounters, social relations and subjectivities of women.

### 3.2 The social organization of disease in Life Circle Approach

The KD Life Circle Approach is a perfect example of how disease is brought into being in biomedicine. In an article entitled “What is disease?” medical historian Charles E. Rosenberg (2003) questions the context and legitimacy of disease today, providing useful insights into thinking about GD and our social relations with it. Rosenberg contends that “western notions of disease specificity seem to most of us somehow right and inevitable, so heuristically useful, so productive of insights into the body in health and disease, but they are, of course, artifacts of a particular moment in time and of particular institutional and intellectual developments.” In other words, he argues that diseases are socially constructed, like everything else in our culture – even if they have led incrementally to more circumstantial understandings of particular biopathological mechanisms and more efficacious clinical practices.

KD Life Circle Approach illustrates how a disease comes into being beyond biopathophysiology. Rosenberg (2003) describes the ways in which disease functions as elements in a communication system, or as he puts it, “as units of intelligibility which lies at the heart of medicine as a functioning social institution.” Communication implies a mutually comprehensible (or seemingly comprehensible) vocabulary and shared logic. Disease categories and related notions of etiology and pathology, including fetal programming hypothesis, are an important part of that vocabulary, allowing scientists, practitioners and patients to share a measure of understanding. In this way, Rosenberg (2003) suggests that individual disease concepts exist as social entities through communication and social practices in ways that are not always directly related to the underlying biopathological mechanism. That’s not to say that disease as a social entity or as socially constructed has no biological basis or that it is “unreal” because social expectations and institutional practices are very real in terms of an individual’s distress over the diagnosis and the collective social and institutional responses to that diagnosis and distress.

Disease categories as well as approaches to addressing disease are always presented in coherent and organized ways partly because they are reified in the form of diagnostic,
therapeutic, and bureaucratic practices (Rosenberg, 2003). Medico-scientific debates on the subject of GD are never centered on questions of epistemology and ontology but rather on the contested legitimacy of GD – and the practices that validate or fail to validate them. Just as GD is continually being redefined through the expanded rhetoric of risk, Rosenberg (2003) points out that the controversy over disease definitions is generally a political problem rather than a philosophical one. It is political in the sense that medico-scientific debates center on the existence of an ultimate biopathological basis of disease rather than the social determinants of disease.

The concept of disease has extraordinary utility in crystallizing its relationship to the administration and management of health care. As Rosenberg (2003) rightly points out, unless the disease is diagnosable, it remains largely invisible and unreadable to the world of clinical medicine. As we see with the KD Life Circle Approach, the fetal programming hypothesis at once initiates and legitimates a multiplicity of interventions, behaviours, and decisions. In this sense, disease categories serve as integrating mechanisms, facilitating countless decisions about interventions and thus linking different parts of the health care system in a way that seems both necessary and proper. As noted in the reflexive review of the GD literature, even clinicians who are sceptical of the ontological status of GD have found it necessary to employ them.

On a related note, the KD Life Cicle Approach illustrates what Rosenberg (2003) calls the “bureaucratization of disease” in that disease categories are constituted by protocols and algorithms arising from evidence-based medicine which then translate into clinical practice. This reflects a general trend in centrally managed uniformity as manifested in the form of standards of care or documents such as Clinical Practice Guidelines or Global Guidelines as well as in the provision of diagnostic and therapeutic services. Thus, they not only utilize specific disease entities, but come to constitute those entities. Rosenberg argues that in some ways, all diseases as conceived, managed, and experienced, are iatrogenenerated. In relation to the KD Life Circle Approach, the bureaucratization of disease is most evident in the ways in which interventions are tied to medical interactions and health care systems such as diagnostic procedures, standardized treatments, and agreed-upon clinical trajectories. Such institutional responses not only shape both professional and patient lives, but also give rise to organizational adaptations such as the development of diabetes education centres and diabetes advocacy groups.
In summary, despite the controversy over GD as a disease and the elusive link between risk and race, the above authoritative texts employ a vocabulary and codified language of race, risk, and disease that cross-articulate and coalesce to construct a particular narrative about GD in “high-risk ethnic populations.” In this narrative, the figure of the pregnant woman of colour (or more specifically, her womb) looms large in the foreground against a backdrop of the diabetes pandemic. Moreover, this narrative is further strengthened by a multiplicity of interventions that seem both proper and necessary. We thus come to know GD in “high-risk ethnic groups” through the ways in which discourses, interventions, and institutions come together to bring it into being. From a Foucauldian perspective, GD in “high-risk populations” operates as an apparatus of power/knowledge, or phrased another way, a technology of governance to regulate the conduct and compliance of clinicians. The object of authoritative texts is the health care practitioners, interpellating them to take up the guidelines as a solution to reduce the epidemic by intervening or ‘fixing’ problematic pregnant bodies of colour.

Despite their commitment to objectivity, all three documents are productive yet equally problematic as they are based upon questionable scientific evidence, contentious hypotheses and guidelines which invite racist and moralistic interpretations. All three texts draw upon a neoliberal notion of individualism that positions clinicians as responsible for changing the diet and lifestyles of ethnic ‘Others’ so that they are more aligned with the governmental agenda of producing morally fit and responsible citizens who are not an economic burden to the nation state. Taken together, the concern here is that race, risk, and disease cross-articulate in ways that have potentially dangerous consequences. Not only do the authoritative texts accept the idea that discrete, definable ethnicities exist, the categorization of GD in “high-risk ethnic population” is an apolitical and ahistorical construct that can be separated from institutions and possessed by particular individuals. Such representations of race, risk, and disease paradoxically dis-articulate and render invisible the social forces and power relations involved in shaping the conditions that produce GD in “high-risk ethnic groups.”

The following chapters examine how discourses pertaining to GD in “high-risk ethnic groups” operate as a technology of governance in the clinic and how women of colour respond to, engage with and/or resist such race-based risk discourses. The way in which race/ethnicity is
represented and the kinds of knowledge that are privileged in authoritative texts have profound implications of constituting clinical practice and shaping the subjectivities of women.
Chapter Six
Strategies of Intervention

The main intention for this chapter is to describe and demonstrate how discourses pertaining to GD in “high-risk ethnic groups” are accomplished in the clinic. I aim to explore what occurs when contested categories of disease, risk, and race come together in the clinical setting. More specifically, this chapter examines how medico-scientific discourses that constitute authoritative texts are enacted and translated in the GD clinic through practices pertaining to women of colour who are categorized as “high-risk.”

In the previous chapter, a critical analysis of authoritative texts illustrate that medico-scientific discourses are not neutral but infused with racial and moral assumptions. Employing a vocabulary and codified language of race, the 2008 CDA CPG constructs members of a “high-risk ethnic population” as non-white immigrants who are genetically and culturally problematic. Expanding the rubric of “risk,” the 2009 IDF GG on Pregnancy and Diabetes casts the intrauterine environment as a site of fetal programming and the source of the diabetes “pandemic.” In order to arrest this vicious cycle, the 2009 IDF KD’s Life Circle Approach offers an “action plan” of wide-reaching interventions that target different stages of a woman’s life. Taken together, categories of race, risk, and disease cross-articulate, painting a particular portrait of pregnant women of colour whose bodies and cultural behaviours require various interventions to arrest the escalating global problem of diabetes. This chapter seeks to gain a better understanding of how race-based risk discourses operate in the classroom and clinic setting as a technology of governance.

To recapitulate, the findings for this chapter are derived from participant observation conducted in two outpatient diabetes education centres in a community hospital in Southern Ontario from April 2012 to January 2013. Ethnographic fieldnotes were recorded both during and after fieldwork and subsequently analyzed theoretically. The following sections present a theoretical analysis of ethnographic fieldnotes in order to describe the ‘how’ of contemporary projects of governance.
This chapter addresses the third research question: “How are race-based risk discourses accomplished locally in the clinical setting?” I identify three strategies that are operating in the clinic: 1) dividing practices and disciplinary techniques, 2) etiological explanations, and 3) racial carbopolitics as biopedagogy. Through empirical examples, I aim to demonstrate the ways in which such strategies are mobilized to discipline, regulate, and govern pregnant bodies of colour. In doing so, I will illustrate what Troy Duster (2005:1050) refers to as “the complex feedback loop and the interaction effect between phenotype and social practices related to phenotype.” It will be argued that practices and discourses directed at women from “high-risk ethnic groups” run the risk of (re)producing moralistic judgements and racialized interpretations. Moreover, I describe how race-based risk discourses and ensuing practices potentially produce iatrogenic anxiety and perpetuate racial logics as they render power relations invisible and leave assumptions about dominant cultural norms unexamined.

### 1 Dividing practices and disciplinary techniques

Foucault’s primary interest involved understanding how “humans are made subjects” (Foucault, 1983: 208), asserting that “[w]e should try to discover how it is that subjects are gradually, progressively, really, and materially constituted through a multiplicity of organisms, forces, energies, materials, desires, thoughts etc” (Foucault, 1980: 97). He details three modes of objectification which transforms human beings into subjects. Rabinow’s (1984) introduction in *The Foucault Reader* is helpful in laying out these three modes: dividing practices, scientific classification, and subjectification through security and disciplinary apparatuses. The following section will focus on the first and third mode, reserving the second mode to be discussed later in the chapter under etiological explanations of GD.

#### 1.1 Dividing practices: exclusion through inclusion

The first mode of objectification of the subject is, what Foucault (1983: 208) calls, “dividing practices.” He argues that the “dividing practices” of objectifying science are crucial in creating subjects. Foucault writes, “The subject is either divided inside himself or divided from others. This process objectivizes him.” He provides examples to illustrate such practices, including “the mad and the sane, the sick and the healthy, the criminals and the ‘good boys.’” In his work, Foucault seeks to study “the way a human being turns him- or herself into a subject” or
more precisely, how individuals “learn to recognize themselves as subjects”. Rabinow (1984: 8) offers added clarification, explaining that dividing practices are essentially “modes of manipulation that combine the mediation of a science and the practice of exclusion – usually in a spatial sense, but always in a social one.”

This section attempts to articulate the kind of dividing practices that exercise exclusion through inclusion by way of categorization and spatialization. The practice of screening for GD based on ethnicity as a risk factor constitutes a dividing practice that results in spatial distribution of women of colour through a referral to the GD clinic. Screening can be conceived as a security apparatus that applies on a population level, involving the processes and practices of identifying women who are members of a “high-risk ethnic group” and referring them (with or without a diagnosis) to the diabetes education program. As dividing practices, screening and referral processes ensure that women categorized as such are “partitioned and organized in a physical and analytical space” (Foucault, 1977: 143). Employing race/ethnicity as a risk factor not only reinforces skin-based racial difference, but conflates risk with race/ethnicity. As the following description illustrates, through their inclusion into the meta-category of “high-risk ethnic group,” women of colour are excluded from a “healthy” pregnancy as they undergo further medicalization.

According to universal screening practices, all women in Canada are screened for GD during the 24th to 28th week of pregnancy (CDA, 2013). When women visit their obstetricians for their routine check-up at this point in time, they are handed a lab requisition for a 50 gram Glucose Challenge Test (GCT). Given that women do not have to fast for this test, they are encouraged to go to the nearest laboratory to get it done straight away. Women who have multiple risk factors for GD such as age ≥ 35, previous GD, pre-diabetes, members of a high-risk population (Aboriginal, Hispanic, South Asian, Asian, African), and/or BMI ≥30 kg/m² to name a few are screened earlier and if negative, rescreened again between the 24-28th week.

As mentioned in the reflexive review, there is controversy both locally and globally amongst the medical community about the utility of screening for GD given the absence of threshold glucose levels above which the risk for neonatal and maternal outcomes increase, as well as enduring debates about the distinction between screening and diagnosis. Currently, there
is considerable contestation whether the 2-step approach (50-g GCT followed by 75 or 100-g OGTT) can replace the 1-step approach (75 or 100-g OGTT). Proponents of the 1-step approach argue that it is more economical to health care resources, more convenient for practitioners, and less burdensome for women. Given that this controversy remains, the 2013 CDA CPG has offered two approaches. The first is the preferred approach which is no different from the 2008 CDA CPG: sequential screening with 50-g GCT followed by a 75-g OGTT using the same thresholds and making the diagnosis of GD if ≥ 1 value is abnormal (fasting ≥ 5.3 mmol/L, 1 hour ≥ 10.6 mmol/L, 2 hours ≥ 9.0 mmol/L). However, the International Association of Diabetes and Pregnancy Study Groups (IADPSG) consensus group recently adopted a new criterion for diagnosis using lower thresholds. Therefore, the 2013 CDA CPG offers second and so-called alternative approach which is a 1-step 75 g OGTT, making the diagnosis of GD if ≥1 value is abnormal (fasting ≥ 5.1 mmol/L, 1 hour ≥ 10.0 mmol/L, 2 hours ≥ 8.5 mmol/L).

The above controversy contributes to the variability and heterogeneity observed locally in clinical practice. This variability in screening and diagnostic practices are reflected in the lab results that are faxed to the diabetes education centre (DEC) along with the referral. While some obstetricians follow the preferred 2-step approach, faxing the lab results for the 50-g GCT and 75-g (or 100-g) OGTT, others do a partial-preferred approach of only conducting and faxing the results for the 50-g GCT. During fieldwork, clinicians remarked that some obstetricians have a tendency to refer women classified as “high-risk” by virtue of their ethnicity even though they may not be diagnostic for GD. In other words, race/ethnicity sometimes supersedes screening/diagnostic results. When I inquired why some obstetricians do this, clinicians responded by saying that obstetricians rationalize their referral as a “learning opportunity” or pedagogical moment for women who are from “high-risk ethnic groups” to acquire knowledge on lifestyle modification in order to prevent the onset of GD in the third trimester and/or type 2 diabetes later on in life (Fieldnotes, GD class: Campus Y, 21/06/12, pp. 70).

Dividing practices of screening and referral based on race/ethnicity results in a clinic that is populated predominantly by women of colour. This observation does not go unnoticed by women who attend the GD class and weekly clinics. As one woman points out, “we’re all ASIANs here!” (Fieldnotes, GD class: Campus Y, 07/05/12, pp. 9) Clinicians are not oblivious to this observation either. The rare presence of a Caucasian woman in the clinic raises curiosity
amongst clinicians. Unless the woman is notably older in age or marked by corpulence, clinicians remark under their breaths “what is she doing here?” (Fieldnotes, GD class: Campus Y, 05/07/12, pp. 84) The fact that clinicians notice the arrival of a white body in the sea of non-white bodies suggests something about white bodies as a somatic norm within institutional spaces. The appearance of bodies of colour not only re-confirms the non-whiteness of the space but also renders whiteness as the unmarked norm against which ‘Others’ are compared.

Although dividing practices result in racialized spaces that often resemble those of Immigrant Health Clinics, they also generate geographies of public intimacy that go beyond race. By this, I refer to “a spatial process of tense and tender ties” that emerge in public spaces through encounters and shared experiences amongst pregnant women (Slocum, 2008: 223). In the cramped quarters of the corridor waiting area, intimacy is cultivated through spatial and embodied interactions that are seemingly mundane and ordinary. But there is something extraordinary and critically important about the mutual acts of waiting, watching, listening, anticipating, and worrying that generate an affirming kind of relational possibilities such as solidarity, connectivity, and support. As Ann Stoler (2006: 14) usefully reminds us, the “strangely familiar ‘uncanny’ intimacies...may leave room for relations that promise something else, that activates desires and imaginaries less easily named.” Stoler’s point is that intimacy provides a view into both structures of power and the promise of ‘something else’ that is productive of other, non-racialized ways of living and embodying race.

Dividing practices do not end with screening and referral, but continue with treatment protocols. During subsequent follow-up appointments at the GD clinic, women are further divided into two groups: ‘diet-only’ and ‘on-insulin.’ Women in the former category have convincingly demonstrated through their logsheet and glucometer readings that they can manage their blood sugars on diet alone. Women in the latter category have been prescribed and classified as ‘on-insulin’ because they have consistently yielded high blood sugars, or as one endocrinologist puts it, “failed on diet.” This derogatory phrase speaks to the moral valence that gets attached to these two categories of women: those who are successful on ‘diet only’ and those who fail on diet thus put ‘on-insulin.’ The practice of differentiating women on ‘diet-only’ from those ‘on-insulin’ does not go unnoticed by women who are lined up in the corridor waiting to see the endocrinologist. Women who walk out of their appointment looking dejected,
distressed, or teary are typically the ones who have been prescribed on insulin. Oftentimes, this generates a collective sympathetic groan from women waiting in the corridor. Women who quickly leave the appointment with a relieved grin on their face and a bounce in their step signal to other women that she is managing fine on ‘diet-only.’ As women wait to see the endocrinologist, they talk amongst themselves and declare to one another what category they fall under; and in so doing, they come to define and know themselves in relation to those categories. For instance, a typical conversation along the waiting corridor goes something like this: “Me, I’m ‘diet-only,’ what are you?...Oh yeah, you’re ‘on-insulin.’ I hate needles.” (Fieldnotes, GD clinic: Campus Y, 14/05/12, pp. 26) While women ‘on-insulin’ envy those who are ‘diet-only,’ women who are ‘diet-only’ pray they do not have to go ‘on-insulin.’ Such dividing practices and categorization play a constitutive role in the processes of subjectification.

Another kind of dividing practice occurs discursively in clinical encounters when women are positioned in diametric opposition to their fetus. During follow-up appointments with the endocrinologist, the woman is rendered secondary or even regarded as harmful to the future health of the fetus. For instance, when the endocrinologist prescribes insulin and is met with resistance from the patient, the endocrinologist forecloses any discussion by stating “it’s not about you, it’s about the baby” (Fieldnotes, GD clinic: Campus Y, 07/05/12, pp. 8). From the standpoint of the endocrinologist, the focus here is not on how the mother feels about injecting insulin, rather the focus is on protecting the fetus from the mother’s sugar. Although the mother is concerned about the inconvenience and pain of injecting insulin multiple times a day, the focus is more on the side of how insulin might harm the baby. The endocrinologist’s remark discursively divides the mother and fetus – a practice that creates a relational rupture, further alienating herself from the fetus and even accusing her of placing her interests before the baby.

The above accounts of dividing practices that ensue from race-based risk discourses relates to Ian Hacking’s (2002) insights on the ways in which classification of people open up, or close down, possibilities for human action and formation of subjectivities. That is, he asks how the classification of people affects the people classified and how we change by virtue of being classified. Moreover, he questions the ways in which we are classified have a feedback effect on the systems of classifications themselves. Hacking (2002, p. 106) argues that “a kind of person” comes into being at the same time as the “kind of being itself” is invented. He insists that
individuals do not simply embody the disease label that they are given by medical experts. Rather, labeling and classification, or the very act of “making up” people is much more complex. Hacking points out that people subject to classification are moving targets because, by being assigned to a class or labeled (i.e. diabetic, “high-risk,” immigrant, ‘diet-only,’ or ‘on-insulin’), individuals are transformed and do not experience themselves as the same kind of person they were prior to the classification. He refers to this process as the “looping effect,” or the manner in which science and bureaucracies “create kinds of people that in a certain sense did not exist before.” It is not the classification that is problematic, but the use of classification as a system of power that has effects, both individually and collectively (Hall, 1996). As Bowker and Star (1999: 319) put it, classifications have consequences: “perceived as real, it has real effect[s].” In this sense, classifications are powerful technologies, particularly in the processes of racialization and subjectification.

1.2 Disciplinary strategies of producing diabeticized subjects

Rabinow (1984: 11) considers Foucault’s third mode of objectification as his most original contribution. Foucault (1983: 208) refers to this as “the way a human being turns him- or herself into a subject.” Rabinow (1984: 11) calls this “subjectification” which refers to the dialectical process of self-making and being made. While the first two modes are techniques of domination applied to those who are defined as marginal and locates the individual (either in space or as a case in a dossier) in a passive, constrained position, the third mode characterizes the person as active in the processes of self-formation. These include practices we have used to form ourselves into meaning-giving selves.

In *Discipline and Punish: The Birth of the Prison*, Foucault (1977) first elaborates on the process by which various institutions (i.e. prisons, factories, hospitals) create subject positions (i.e. the prisoner, factory worker, patient) through various modes of disciplinary practices. Discipline is a form of training that involves making useful individuals. A key feature of discipline is that it operates to maximize productivity. Foucault (1977: 170) asserts that “discipline ‘makes’ individuals,” producing “subjected and practiced bodies” which he refers to as “docile bodies” (Foucault, 1977: 138). A docile body is one that can be subjected to analysis and manipulation, and thus, transformed and improved (Foucault, 1977: 136). All projects of docility involve subtle, uninterrupted, and calculated methods of control that entail microscopic
and meticulous attention to detail in order to obtain the effects of utility and obedience (Foucault, 1977: 137). Lupton (1999, p. 89) notes that pregnant women are particularly susceptible and malleable to docilisation techniques as they are held responsible for ensuring the health and well-being of their “precious cargo.” Although disciplinary power may seem relatively benign and cloaked in good intentions, they are profoundly pervasive, and blur the distinction between consent and coercion (Foucault, 1977: 139). The following sections offer a descriptive account of how various disciplinary strategies are employed to docilize pregnant women.

1.3 Temporal regulation: habituating the body to the diabetic regimen

Temporal regulation is one tactic used to render women docile. In the GD clinic, disciplinary time manifests in the form of an intensive diabetes regimen which enforces adherence to an algorithm of sequentially-timed activities throughout the day. It is, as one woman pointed out, “a full-time job.” By habituating the body to an “anatomo-chronological” time-table, it becomes an embodied effect of power (Foucault, 1977: 152). The intention here is to train women to follow the diabetic regimen with precision and regularity as “fundamental virtues of disciplinary time.” In the field of diabetes education, the logsheet is a textually-mediated technology employed in self-management but also serves as a means of communication during clinical encounters between practitioners and patients. The following description offers a pedagogical account of the ways in which temporal regulation is enforced through reconfiguring and reinforcing normative meal times, blood sugar testing times, insulin administration schedules and even appropriate moments to engage in physical activity.

During the GD class, the nurse educator directs women’s attention to the logsheet which lists how many times they have to test per day and when. She prefaces her discussion by saying “What I’m about to tell you is really important,” followed by “you need to test your sugars 4 times a day: before breakfast, 2 hours after breakfast, 2 hours after lunch and 2 hours after dinner. Is that clear?” In order to gauge whether women have understood the testing times, she tries to contextualize the time table by offering a hypothetical example. “So, let’s say you wake up at 7 am, what do you do right away?” Some women in the class respond “test my blood sugar.” The nurse validates this followed by “and then what?” Women usually say “eat my breakfast” and the nurse asks “and then what?” Women respond “test my blood sugar 2 hours after.” This is met with a “very good, and then you eat your snack.” After reviewing this routine for every meal, she offers a rationale for recording the blood sugars on the logsheet: “This lets us know how you’re managing your sugars, so it’s very important that you fill this out and bring it to every appointment here at the Monday morning clinic.” She emphasizes the importance of bringing the logsheet because endocrinologists have been observed to get upset, admonishing women who
have forgotten to bring their logsheets or filled it out incorrectly with comments like: “Why are you here, then? How am I supposed to know how your sugars are without your numbers?”
(Fieldnotes, GD class: Campus Y, 10/05/12, pp. 19)

While this account demonstrates how disciplinary power renders women docile through temporal regulation, it also illustrates how this technique of power is sustained by palpable undercurrents of paternalism and moralism, thus making it highly effective. In other words, temporal regulation does not operate alone but relies upon the pedagogical approach of soliciting women’s compliance with the diabetic regimen through a curious combination of infantilism and admonition.

1.4 Body-object articulation: docilizing the body to diabetic devices

Self-blood glucose monitoring or insulin administration are activities that require a “meticulous meshing” of body-object articulation. As Foucault (1977: 153) puts it, techniques of docilisation involve an “instrumental coding of the body” in which acts are broken down into its syntactic components. In these activities, specific body parts are correlated with particular parts of the object it manipulates, and then intricately connected with a series of small obligatory and prescribed movements. The docile body is trained repeatedly until it can reproduce the manoeuvre seamlessly.

During the third component of the GD class entitled “metering,” the diabetes nurse educator offers detailed and systematic biopedagogical instruction on how to monitor one’s blood sugars using a glucometer. This device serves as a valuable metric of control in relation to diabetes self-management and treatment. As mentioned above, the glucometer – along with the logsheet – functions as a mediating device between practitioner and patients during clinical encounters. Thus, training women how to use the meter correctly not only inaugurates women into diabetes self-care practices, it educates women about proper conduct during clinic appointments. The following descriptive account from fieldnotes illustrates the biopedagogy of body-object articulation and women’s responses and engagements with the glucometer.

The nurse informs the class that she will simultaneously demonstrate and explain how to use the lancing device and glucometer, and advises women to watch her demonstration and not to get ahead of her. She informs women that they will all get a chance to test their blood sugar at the
end of the class. The nurse is very explicit about this otherwise the class can erupt into complete chaos of blood, sweat, and tears should they do it all at once.

Given that most women are highly anxious about pricking their finger for the blood sample, the nurse begins with the lancing device, encouraging women to pick it up and inspect it. After explaining all the features of the lancing device, the nurse proceeds to show women how it works. She instructs women to insert the lancet/needle into the device and demonstrates how to prime it. The nurse reiterates that she does not want women to prick their finger until the end of class and asks them to put the lancing device down in order to focus their attention on her as she goes through each step in great detail. “You see this dial with the numbers 1 to 4 on the side? This tells you how deep the needle will penetrate the skin. 1 is for a baby with diabetes and 4 is for a construction worker with thick skin. I want you to set it at 2 for now. If you get too much blood, then go down one, and if you don’t get enough blood then go higher.” Explaining that there are many nerve endings on the fatty pads of the fingers and therefore more sensitive, she advises women to choose the sides of finger tips.

Pressing the tip of the lancing device firmly on the side of her finger, the nurse says “now, take a deep breath and press the button on the side of the lancing device.” Anticipating the painful poke of the needle, some women move their finger away from the lancing device just as they press the button that releases the needle. Aware of this response, the nurse says: “if you prefer, you can rest your finger on the edge of the table and press the lancing device firmly onto the finger – that way your finger has nowhere to escape.” The nurse demonstrates this for the class. At this moment, the device releases the needle that is cocked back, letting out an abrupt sound. Women soon learn to associate this sound with pain and cringe in anticipation. Because the nurse’s lancing device does not contain a needle, there is an absence of blood, but she quickly picks up a red pen and draws a dot on the side of her finger. She goes around the classroom from woman to woman showing them the red dot on her finger and telling them “that’s all you need, that’s the size of the blood drop.” Even though the women are aware that the red dot is not the nurse’s blood, they still recoil and grimace.

The nurse returns to the front of the classroom and proceeds to demonstrate how to apply the drop of blood onto the strip of the glucometer. She instructs women to pick up the testing strip and to insert the end with the metal prongs into the glucometer. The meter turns on immediately and an image of a blood drop flashes on the screen. “See, it’s asking for a drop of blood” the nurse remarks and goes around the classroom demonstrating how to correctly apply the drop of blood onto the strip. She uses the red dot that she drew on the side of her finger to demonstrate the technique. “Don’t smear the blood, no – the drop of blood has to be nice and round. Just touch the tip of the strip into the drop of blood and let the strip suck it up.” The nurse goes around the room twice, showing each woman up close how to do this. She is very particular and careful about demonstrating this because the testing strips are expensive (each strip costs roughly one dollar). If women were to incorrectly apply the drop of blood to the strip, then they would be wasting a strip and this would be equivalent to wasting a dollar. The nurse goes on to explain that once there is sufficient amount of blood on the strip, then the glucometer will sound a beep and within a few seconds the result will appear on the screen. For many women, the few seconds feels much longer as they stare at the screen with their eyes wide open and bated breath. Recognizing that women are anxious about doing their first test, the nurse informs the class that both her and the dietitian will circulate the class and approach each woman one at a time in order to offer individual coaching. She explicitly instructs women to wait for their turn and not to proceed on their own. “As you wait, you can watch your neighbours and learn from each other.”
For women who are fearful of needles, the act of holding the lancing device firmly against their finger makes the palms of their hands sweat profusely. As they position their finger on the button that will release the needle, their hand begins to shake. The nurse or dietitian advises women to take a deep breath and press the button. But this is easier said than done. One woman takes a deep inhale, but as she exhales the words “I can’t” escape from her lips. Being very aware that other women are watching her and waiting to test their sugars, she feels tremendous pressure which elevates her level of anxiety even further. Although the nurse and dietitian are sympathetic, they are determined to get every woman in the class to do a “return demo” (short for demonstration). Encouraging remarks like “that’s okay” and “you can do it!” are uttered by both clinicians and surrounding women. Only when women have successfully done a “return demo” are they permitted to go home. (Fieldnotes, GD class: Campus Y, 10/05/12, pp. 20-21)

The above account depicts how the biopedagogy of body-object articulation is not easy. Learning how to operate a glucometer is highly charged with anxiety and abjection. This disciplinary technique requires tremendous relational work which seems to escape Foucault. Although elsewhere he does make reference to power as relational, Foucault makes no mention of the affective dimensions of body-object articulation. The nurse and dietitian are acutely aware that anxiety and abjection are part and parcel of their biopedagogical lesson on ‘metering’; therefore, they actively engage in the intimate labour of containing affect that arises from this exercise through systematic delivery of ‘watch and learn’ followed by a ‘return demo,’ coaching women every step of the way with assuaging words and encouragement.

1.5 Means of correct testing

Disciplinary power achieves its success of training individuals as both “objects and as instruments of its exercise” through three pervasive mechanisms as outlined by Foucault (1977: 170): hierarchical observation, normalizing judgement, and examination. Foucault emphasizes that “discipline coerces by observation”; meaning that it is possible to visualize those whom coercion has been subjected and see the induced effects of power (Foucault, 1977: 171). In the clinical setting, hierarchical observation is evident during every follow-up appointment when women are requested to demonstrate the correct usage of the glucometer under the pretext of ensuring accuracy and adherence; however, Foucault would argue that the underlying function of observation is to maintain and sustain hierarchical power relations.

Normalizing judgement is a form of punishment – an “infra-penality” (Foucault, 1977: 178) – that enables individuals to be compared. The slightest departure from the norm or any deviation from recommended self-management practices is subject to judgement. Foucault
(1977: 179) emphatically asserts “non-conforming is punishable.” During clinical follow-up visits, any indication that the woman is unable to comply with the prescribed regimen is met with subtle undertones of culpability and irresponsibility. Those who are unsuccessful with diabetes self-management are re-educated through repetition of GD content and metering in conjunction with techniques of normalization which subject the body to comparison, differentiation, and exclusion in order to achieve homogeneity and sustain hierarchical relations (Foucault, 1977: 182-3). Normalizing judgement is particularly notable with regard to women who have a history of GD and are referred back to the GD clinic with subsequent pregnancies. At the start of one particular GD class composed mostly of women with a history of GD, a clinician pulled me aside to whisper “they’re all repeat offenders” (Fieldnotes, GD class: Campus Y, 10/05/12, pp. 17). This remark suggests that those who have failed to learn their lesson from having GD in their previous pregnancies need to be disciplined and punished yet again. Perhaps this illustrates what Foucault means when he argues that normalization is the “art of punishment” and one of the greatest instruments of power.

However, the ultimate power of discipline is demonstrated through the culmination and combination of hierarchical observation and normalizing judgment which Foucault calls examination. This third mechanism of disciplinary power establishes a normalizing gaze that imposes “subjection on those who are perceived as objects and objectification of those whom are subjected” (Foucault, 1977: 187) Examination not only increases visibility, assuring that power is exercised over all subjects, it introduces individuality into the field of documentation and thus making each individual a ‘case’ to be described, judged, and compared with others (Foucault, 1977: 191). Ironically, the examination of pregnant women during follow-up appointments does not entail any physical exam; rather, it involves meticulous scrutinization of logsheets and dietary records. These textual materials become the primary objects of examination rather than the patient as the subject in communication. Foucault (1977: 190) invokes the importance of “the whole apparatus of writing” that accompanies examination, constituting the individual as a “describable, analyzable object” which entails “arranging facts in columns and tables.” Such “documentary techniques make each individual a case” (Foucault, 1977: 191). The logsheet is a perfect example of such strategies. Even before it is interpreted, the textual data itself is subjected to an intense process of verification through the triangulation of records with the patient’s confession. The piercing clinical gaze and rigorous rhetorical inquisition not only
implies that women are untrustworthy, unreliable, and unable to curb her hedonistic tendencies, it further perpetuates power relations. Rather than operating solely as a technology of domination, the logsheet functions as a technology of the self, capturing what Foucault calls *hupomnêmata*. It serves as guide or aid for self-examination, self-regulation, and self-reflection, playing a crucial role in self-governance (Foucault, 1997: 221) as well as a tool for consultation and conversation.

1.6 Figures don’t lie

An empirical example that captures elements of hierarchical observation and normalizing judgement in Foucault’s concept of examination is the panoptic practice of scrolling through the memory function of the glucometer in order to verify the logsheet recordings. Given that glycemic figures stored in the memory of the glucometer don’t lie, women cannot falsify the figures that they record on the logsheet. However, rather than recording their high glycemic values that appears on the glucometer, some women falsify their recordings so that her sugars appear normal on paper in order to avoid being put ‘on-insulin.’ The following scenario from fieldnotes captures what happens when the endocrinologist discovers discrepancies between the recorded values on the logsheet and the values stored in the meter memory:

“How come the numbers don’t match?” the endo asks. The woman replies that her husband pricks her finger and he tells her the number to write down. The doc asks “but don’t you see the number and then write it down?” She responds with a muffled ‘no’ and a sheepish smile. The doc instructs her to do the monitoring herself and to record the correct values. Reviewing row upon row of inaccurately recorded numbers, the doc shakes her head in disapproval. “This is no good.” The doc turns to the woman and spells it out for her: “make sure you write down the number on the screen onto the logsheet, you get that? The number on the screen goes on the logsheet. [Looks straight in the woman’s eyes] The number on the screen [pauses] goes on the logsheet.” The woman nods her head. (Fieldnotes, GD clinic: Campus Z, 13/06/12, pp. 60)

There is something deeply unsettling and punitive about this panoptic practice of verifying the accuracy of women’s logsheet by cross-checking the recorded values with the figures stored in the meter memory (Reflexive journal, 13/06/12, pp. 60). Women who are caught lying about their blood sugars in order to avoid insulin are exposed as fraudulent or deliberately delinquent for covering up hyperglycemic evidence of hedonism at the expense of their baby’s health and development. However, the combination of hierarchical observation and
normalizing judgements that constitute the examination is highly effective in sustaining power relations because it relies upon the mobilization of powerful affects such as shame and guilt.

1.7 The glucometer: a portable panopticon

As depicted in the above scenario, panopticism plays an omnipotent and ubiquitous role in the docilisation of women with GD. Foucault refers to Jeremy Bentham’s Panopticon as a metaphor for surveillance of individuals and populations through the gaze of ‘experts.’ In clinical encounters, the glucometer is the quintessential portable panopticon (see Appendix S). This panoptic technology defies architectural enclosure as it is capable of transgressing the walls of the clinic, traversing the very threshold of the home, and transplanting itself into the intimacy of familial time and space. It becomes so embedded into the fabric of everyday existence that its presence alone induces a state of consciousness and subsequently alters behaviours and relations of women (Foucault, 1977: 201). There is truth in Foucault’s (1977: 200) ominous statement: “visibility is a trap.” Women cannot conceal their glycemic status because the glucometer captures their conduct numerically and stores it in memory only to be retrieved and verified by practitioners at weekly appointments. Although women may attempt to falsify their logsheet recordings, the glucometer serves to remind women that figures don’t lie. Therefore, this panoptic machine abolishes any ambiguity, operating as the ultimate arbiter of adherence.

Although weekly examinations and discursive injunctions perpetuate disciplinary power and docilize the diabetic pregnant body, the glucometer itself “automatizes and disindividualizes power” (Foucault, 1977: 202). Meaning, power is not exercised from the outside or above like a heavy constraint; rather, it acts from within in a subtle and modest manner. There is no need to use force or physical confrontation; all that is needed is the glucometer to inscribe the woman in power relations. Soon, she begins to play the role of the disciplinarian and the disciplined simultaneously. Furthermore, husbands, family members, and friends can also participate just by being in close proximity to the glucometer. The more numerous the observers surrounding her perimeter, the more aware she is of being observed and judged, and the greater her anxiety of properly adhering to the regimen. However, even in the absence of observers, the seemingly humble and innocuous presence of the glucometer can serve as a reminder to intervene at any moment, even before the offence of indulging in an extra bite of carbohydrate or a post-prandial
nap has been committed. Thus, the glucometer becomes a crucial (and at times, cruel) device in the government of gestational diabetes.

The glucometer is a material manifestation of the metric of control. In other words, glycemic values act as a regulating, disciplining and normalizing metric, making clear distinctions between normal/abnormal and bearing moral meanings and judgements about good and bad dietary and lifestyle choices. As such, the metric of control is highly effective because it hinges upon affects that accompany this panoptic practice and moral assumptions underwriting them. Women come to develop an affective relationship with the glucometer (see next chapter) such that blood sugar values that register on the screen are intimately tied to moral evaluations of their dietary conduct. In other words, women report feeling relieved, perplexed, or “stressed” from their glycemic values especially two hours after their meal. Such affects are closely linked to moral judgements about their carb-consumption practices and themselves as ‘good’ mothers/patients/citizens. As discussed below, strong affects such as fear, guilt, and shame that arise from women’s initial anxieties from being diagnosed with GD are further heightened during the GD class when the nurse lists a number of negative consequences from uncontrolled blood sugars.

1.8 Affects from scare tactics

In order to get women to take GD seriously, diabetes nurse clinicians (whether intentional or not) employ scare tactics when they educate women about “risks” to the baby and mother. The following description from fieldnotes illustrates how pedagogy relies on the combination of expert knowledges and affects that arise from the deployment of scare tactics.

During the GD class, the nurse educator begins by asking women the following question: “What could happen to the baby when blood sugars are consistently high?” While she waits for women to reply, the nurse turns to the chalkboard and writes “RISKS” in all caps. Under this heading, she proceeds to draw a table with Baby on the left side and Mom on the right. When a woman replies ‘big baby,’ she picks up the chalk and writes down ‘big baby’ under the heading Baby. “Do you think delivering a big baby is easy?” When women respond with a resounding ‘no,’ she writes down ‘difficult delivery/ C-section’ under the heading Mom. “What else could happen to the baby?” She reiterates and directs this question to other women in the class who have remained reticent. A woman in the class expresses her concern about “brain problems.” The nurse responds to the woman’s participation enthusiastically, “yes, very good! This falls under ‘malformations’ [and proceeds to write this on the blackboard]. And the baby might die – this is called ‘stillborn’ [writes this down] – but you’ll still have to deliver the baby anyway.” The words malformation and die had a reverberating effect as women collectively respond with audible gasps and quickly
cover up their mouths. This collective affect punctuates the classroom. At this point, women urgently pick up their pen and start scribbling notes.

What is particularly striking is how risks are conflated with complications as though they are sure to happen when women don’t ‘control’ their sugars. Here, horror blurs into guilt and fear from feeling an overwhelming sense of responsibility. The nurse invokes an analogy to help women in the class understand the effects of high sugar on the baby’s development. “Think of mom’s intrauterine environment like environmental toxin. You can imagine what’s going to happen to the development of an organism surrounded in toxic chemicals, right?!” Some women nod their heads while others look stunned. What is more shocking than her earlier conversation about malformation and death is the parallel she draws equating mother’s womb as a toxic ecosphere doing harm to her growing fetus.

The nurse asks the same question again: “What else could happen to the baby?” Women look around as if to say ‘What? There’s more?’ There is a pause. The nurse takes this as a cue and asks a question. “If baby gets used to all that sugar in the blood and when it comes time to delivering the baby and cutting the cord, what do you think will happen when baby doesn’t get that supply of sugar anymore?” No one answers, but the nurse takes the moment of silence as an answer. “That’s right! The baby’s blood sugar is going to drop really low; the baby will have a low blood sugar reaction. You might be wondering ‘well, the problem is with high sugar, so why does baby get low sugar?’ That’s because the baby’s pancreas is doing ALL that extra work of dealing with all that sugary blood and making LOTS of insulin. As soon as the cord is cut, then baby doesn’t get that sugary blood but it’s making all that insulin. And then, BOOM! The baby’s blood sugar falls down really fast.” The nurse brings her voice down and whispers “Do you know what it feels like to have a low blood reaction?” No one responds. “Well, it’s a terrible feeling. You feel shaky, sweaty, and confused. Do you want your baby’s first minutes of life to be like this?” Women shake their heads and whisper “no.”

After a moment of pause, the nurse asks the question for the fourth time: “What else could happen to the baby if the sugars are always high?” Women are stunned at this point and remain quiet. “Another thing that can happen is that baby could be born premature. And when the baby is born premature, he or she can have many health problems like breathing problems because the baby’s lungs aren’t fully mature. Or the baby could have jaundice (which she spells ‘jandice’ on the blackboard). Do you know what jaundice is? The baby is yellow because the liver is not mature and can’t break down bilirubin. Or if the baby is really premature, then the baby could have heart malformation and that’s a serious problem.” As she lists all the different health problems, the list under ‘risks to the baby’ seems to outnumber ‘risks to mom.’ This growing list of all the things that could happen to the baby begins to weigh heavily on women. The nurse asks the question a fourth time, more for herself to make sure she’s covered everything: “So, what else could happen?” Satisfied with covering all of the risks to baby, the nurse smiles and says “that’s enough, right?! No more.”

The nurse goes on to the other side of the column and asks “Now, what could happen to the mom if the sugars aren’t well-controlled, besides having a difficult delivery?” What’s interesting about the phrasing of this question is that the nurse doesn’t say “what could happen if you don’t control your sugars?” She circumvents any connotation of blame or moralism; but phrasing it in such a way is effective precisely because it’s implied. The room falls silent. The nurse jumps in: “Well, the mom could have pre-eclampsia which might lead to eclampsia. Do you know what that means? No? It means mom could have really high blood pressure and get into trouble during delivery.” What strikes me at this point is the strange mixture of vagueness and urgency to gloss over the list of complications. It’s as though the tone of the class almost demands it. “Okay,
moving right along, there’s another thing that’s really important and I want to end this list with this last comment. When you’re diagnosed with gestational diabetes, BOTH you AND your baby are at higher risk of developing type 2 diabetes later in life. Gestational diabetes is like a warning sign for future diabetes. It’s temporary but type 2 diabetes is the permanent kind that doesn’t go away. So make sure you go to your family doctor anytime between 6 weeks to 6 months after delivery and get a lab requisition for the 2 hour glucose tolerance test so you can make sure you don’t have type 2 diabetes. And get that test done every 2 years. Or what I encourage moms is continuing to check your sugars yourselves on an on-going basis, like once a week. Test first thing in the morning and your fasting sugar should be under 6.0. Okay, is that clear before we move along?” She looks around the room and the expressions on women’s faces are flat. They appear exhausted and overwhelmed not only from the information but also from the affect that arises from expert knowledge such as shock, horror, guilt, fear and worry. (Fieldnotes, GD class: Campus Z, 04/05/12, pp. 3-5)

Such scare tactics shift from worrisome to horrifying when there are challenges in communication and risks are reduced to simplified language. In her sensitive ethnography on the social impact of amniocentesis, Rayna Rapp (1999: 66) captures the complexity of communicating and interpreting risk in clinical situations with patients from diverse ethnoracial backgrounds. She illustrates how health education entails the use of lively and familiar metaphors, code switching, and simplification of epidemiological data and how the health care providers’ attempts to convey objective information to a lay audience are undermined by their subjective interpretations. Rapp (1999: 82) explains that “common sense, experiential explanations and scientific, abstract ones are in tension...a tug-of-war of words pitting the formal vocabulary of biomedicine against the informal lexicon of most women’s lives.” Interpretation of risk becomes even more elusive when the same language is not shared between patient and practitioner. Rapp (1999: 82) notes that the term “language barrier,” often relayed in clinical practice when there are challenges in communication, is impoverished in meaning as it eclipses a “complex imbrication through which transnational migration, racial prejudice, religious beliefs, gender practices and assumptions, and scientific worldviews may all be uneasily stitched together.” Her findings resonate in the way risk discourses are simplified with all the good intentions of increasing comprehension but they come across in antithetical ways.

Foucault’s theorization of disciplinary power palpably undergirds the above accounts of spatial distribution, temporal regulation, and body-object articulation. Such disciplinary techniques ‘make’ women into subjected and practiced bodies (Foucault, 1977: 170, 138). However, subjects are not only ‘made’ through the apparatus of power/knowledge or technologies governance, but also ‘become’ through engaging with the practices of ‘living’ with
GD and through affective relations with practitioners and diabetic devices. The processes of racialization through race-based risk discourses are manifested in the ways in which the security apparatus of screening for GD in “high-risk ethnic populations” divide and exclude women of colour through inclusion into a meta-category of risk and then subsequently partition women in a disciplinary and analytic space where they are trained and rendered docile diabeticized subjects. Disciplinary strategies are heavily reliant upon diabetic devices which offer a metric of control and incite powerful affects to govern the behaviours of pregnant women of colour. Despite inconclusive evidence regarding maternal and perinatal risk and the elusive link between risk and race/ethnicity, the following section describes how clinicians attempt to close the gap of uncertainty and substantiate the veracity of scare tactics through etiological explanations.

2 Etiological explanations for GD in “high-risk ethnic groups”

Another way in which race-based risk discourses are accomplished locally in the GD classroom and clinic is through etiological explanations that diabetes educators/clinicians offer in order to bridge the elusive link between race, risk, and disease. More specifically, diabetes educators draw on two discourses: namely, genetic and cultural explanations when addressing modifiable and non-modifiable risk factors for GD. Genetic explanations have the effect of removing blame and guilt from women diagnosed with GD. The nurse attributes GD to genetics not to be fatalistic but to convey to women that there are things that are beyond their control in order to lift the heavy weight of self-blame that women typically carry into the classroom. Women arrive to class voicing concerns like “I don’t know why my blood sugar is high” or “I thought I was careful about what I ate.” For women, the “why me?” question can easily elide into a self-interrogation of “what did I do wrong?” (Fieldnotes, GD class: Campus Y, 11/05/12, pp. 18) Hence, the nurse places emphasis on risk factors that are non-modifiable. But rather than fixating on fatalism or inevitability that biological explanations may provoke, the nurse makes a pivotal manoeuvre by turning the discussion to cultural explanations in order to incite women to direct their attention to diabetes self-management.

Before moving onto an empirical account of etiological explanations in the classroom, it is worthwhile to return to the above discussion regarding the modes of objectification which
transforms human beings into subjects. The second mode of objectification is what Rabinow (1984) calls “scientific classification.” Although this mode is related to dividing practices, it is independent from it. While the first mode (dividing practices) involves categorization, distribution, and manipulation, the second mode includes those through which we have come to understand ourselves scientifically. Rabinow (1984: 10) explains that the first mode of objectification positions the subject as a victim caught in the dynamic of constraint, whereas the relation to domination is more “oblique” in the second mode of objectification. Rabinow mentions that Foucault offers no further explanation of what he means by oblique or how these two modes might differ. However, the following empirical instance sheds light on what this might mean by illustrating how women come to understand themselves scientifically through pedagogical lessons on etiological/causal explanations for GD:

The diabetes nurse prefaces the discussion on risk factors by posing the question: ‘why me?’ or ‘why do I have gestational diabetes?’ She then attempts to answer such searing questions by listing non-modifiable risk factors and modifiable risk factors. Non-modifiable risk factors are framed by making partial causal attributions to heredity/biological basis for GD, explaining that “it’s genetic.” The nurse quickly lists off a number of non-modifiable risk factors that are straight out of the Canadian Diabetes Association Clinical Practice Guidelines, including age ≥ 35, previous GD, prediabetes, family history of diabetes, member of a high-risk group (Aboriginal, Hispanic, South Asian, Asian, African), corticosteroid use, polycystic ovary symptoms, and acanthosis nigricans (the last 3 are most likely omitted because they take too long to explain). “Can you change these things?” she asks the class. Women either shake their heads or shrug their shoulders. “No, you can’t go back in time and become younger, I wish we could!” This generates a few laughs. “And no, you can’t change the fact that your parents have diabetes, and no, you can’t change your ethnicity, can you?” The nurse adds “take me, for example, I’m Asian so I’m high-risk too! Ethnicity is something we can’t change.”

The nurse then makes the following motivational comment in order to switch gears from non-modifiable or ‘genetic’ explanations to modifiable ones. “Even though there are some things we can’t change, there are many things we can do, things that are within our control to manage our blood sugars during pregnancy in order to ensure ‘healthy mom, healthy baby’!” The nurse explains “modifiable risk factors are things such as ‘lifestyle’ or more broadly known as ‘environmental factors’.” The primary focus and intention of the diabetes education enterprise is to modify behaviours in order to encourage healthy lifestyles. The nurse enthusiastically reiterates “the thing we can change is our lifestyle, like the kinds of foods we eat, the amount, and of course, exercise!” When the subject of diet and lifestyles are presented to women who are members of a “high-risk ethnic group,” diabetes clinicians often invoke the convenient and all-encompassing phrase “it’s cultural” to explain greater prevalence of GD in ethnic groups. Although cultural construction of race generously yet opaquely encompasses several markers of difference, it simultaneously reduces ‘culture’ to diet and lifestyles of racialized bodies.

(Fieldnotes, GD class: Campus Y, 10/05/12, pp. 18)
From this above account, there are two distinct working parts to etiological explanations for GD in so-called “high-risk ethnic groups”: risk is framed as simultaneously genetic and cultural. They look like opposites but they become closely intertwined in clinical practice. These two undercurrent explanations constitute yet undermine racial disparities in GD because they work in concert to emphasize individualism and responsibilization. As a result, this dual causal explanation ends up emphasizing interventions that could be interpreted as intrusive, moralizing, and punitive while evading the social conditions of its production.

2.1 “It’s genetic”: race-based risk through the prism of heredity

Although there is an undeniable truth to the nurse’s statement: “you can’t change your ethnicity,” there is something elusive yet absolute about how she frames “high-risk ethnic groups,” as though race/ethnicity is fixed, somehow rooted in biology. Construction of risk as “genetic” or through a “prism of hereditability” as Duster (2003: 4) puts it, is common parlance in biomedical texts and the clinical setting and attributes the major explanatory power to biological inheritance. The simple reduction of race-based risk to genetic causes is taken-for-granted as an uncontested fact and routinely used in clinical practice despite the widespread understanding that complex diseases like diabetes are multifactorial: that is, where environmental and genetic factors interact to produce the disorder. However, framing of GD within the genetic prism of susceptibility or reducing multifactorial disorders to genes runs the risk of obscuring power relations and blinds us to the underlying social, political, economic, and historical context which produces health inequalities.

The explanatory power of linking risk to race through the prism of genetics/heredity is, as Troy Duster (2003: 4) contends, “very seductive” because it draws upon subtle and sometimes subterranean continuities between the past and present. He writes, “Even when the genetic explanation for some arena of human life has been discredited or fallen from favour, the appeal of such accounts somehow remain just beneath the surface.” While the ‘old debate’ focuses on biological underpinnings of race in terms of inferiority or lower intelligence of those at the bottom of the social order, Duster claims that the ‘new debate’ of race/ethnicity has taken on a more neutral formulation under the banner of new molecular technology (2003: 20). However, he points out “no matter how one slices it, just underneath the talk of a paradigmatic shift, we as
a society seem inexorably pulled back to the ancient concern for what could be called ‘trouble at
the bottom, virtue at the top’” (Duster, 2003: 133).

The connection of diabetes with ethnic peoples is as old as Neel’s famous 1962 thrifty
genotype hypothesis. James Neel postulated that in the early stages of evolution those people
who had a “quick insulin trigger” could rapidly convert sugar to fat in times of famine. As such,
people who have recently undergone a shift from hunter-gathering to a modern sedentary
lifestyle with concomitant energy dense food intake are at increased risk of diabetes because they
still carry genes that conferred this selective advantage. In other words, recently “primitive”
groups have undergone a “domestication of lifestyle” as they have moved from rural to urban
areas and lost their old way of life. According to this hypothesis, these populations have, over
time, evolved genetic traits that could metabolically compensate for periods of food scarcity, but
because this is no longer a problem, the phenotypic consequence of thrifty genes in combination
with the abundance of food and sedentary lifestyle typical of contemporary urban living make for
impaired metabolic regulation of glucose.

A closer reading of Neel’s thesis suggests that it predominantly reflects an environmental
hypothesis. In other words, it is the different evolutionary environments of certain groups that
confer present day risk. Revisiting his hypothesis twenty years later, Neel (1982: 284) reveals a
reflexive modesty, stating that “although incorrect in (physiological) detail [i.e. that there is a
quick insulin trigger], it may have been correct in (evolutionary) principle [i.e., that there are
discernable genetic differences among populations]”. Extending an invitation to his readers, Neel
(1982: 290) states that until the precise etiology of diabetes becomes known, “devising fanciful
hypotheses based on evolutionary principles offers an intellectual sweepstakes in which I invite
you all to join.” Furthermore, in a later publication, Neel (1999: S3) writes that there is “no
support to the notion that high frequency of diabetes in reservation Amerindians might be due
simply to an ethnic predisposition – rather, it must predominantly reflect lifestyle changes.”

In spite of Neel’s revision to his thrifty genotype hypothesis, many genetic
epidemiologists continue to argue that genetic differences explain rates of diabetes between
different populations. Here, genetic explanations for diabetes vie with conventional
epidemiological analyses that rely on the predictive capacity of social and environmental data.
Social epidemiologist Robyn McDermott (1998) critiques the thrifty genotype hypothesis, arguing that the conflation of genes and race elides the consideration of the social determinants of the disease. She argues that diabetes in Aboriginals is simply not a problem of ‘race’ and ‘genes’ in a changing environment. However in the genetic paradigm, race becomes a de facto biological entity and an independent risk factor, reified over and over again in repeated studies of diabetes which take no account of socioeconomic status, political and historical contexts or culture (McDermott, 1999: 1193).

In a post-colonial reading of diabetes and the hypothesized ‘thrifty genotype’ ascribed to Aboriginal peoples, Margery Fee (2006) demonstrates how scientific texts support the belief in biological ‘race.’ She offers a critique of how scientists employ race as a “crude proxy” for presumed genetic difference without any explanation. In doing so, they run the risk of misleading readers to assume that ethnic groups are more susceptible because of genetic differences, or worse, to assume that susceptibility is the result of their genetic inferiority. Fee (2006: 2990) points out, “What is most striking about ‘the thrifty genotype’ is how a rather unclear scientific hypothesis was transformed into a clearcut racializing account that is now a popular and free-floating ‘explanation’ for the high incidence of diabetes among Aboriginal peoples.” Even though Neel (1992: S3), decades later, concludes that there is no support to the notion that the high frequency of type 2 diabetes in reservation Amerindians is due to an ethnic predisposition, he continues to draw upon racial differences by invoking binaries, contrasting images of “modern civilized man” with “primitive hunter-gatherer.” Fee (2006: 2992) posits that while Neel “never asserts a genetic difference between Aboriginal peoples and ‘Caucasians,’ nor does he disavow it either.” Genetic explanations have popularity and an enduring quality because “geneticists want to find genetic causes for diseases that affect large populations that are easily distinguishable from others, and ordinary people expect to hear stories that connect genetics with ‘race’ in ways that confirm the longstanding belief in racial difference” (ibid).

Moreover, the thrifty gene hypothesis is appealing because it connects ideologies of racial difference with discourses on epidemics. Just as infectious diseases or communicable epidemics have been historically tied to racialized ‘Others,’ the contemporary discourse of the “diabetes epidemic” draws upon and strengthens the notion that racial difference is rooted in biology, reinforcing an ‘us’ versus ‘them’ divide which constructs ethnic groups as inherently
diseased and a deviant danger to society. Not only do genetic explanations rely upon the assumption of genetic homogeneity within subpopulations, they invoke binary classifications that presuppose an automatic distinction between white/non-white, normal/abnormal, healthy/unhealthy, and so on. The characteristics of the white population end up existing independently as the healthy and normal standard subject, while the characteristics of the non-white ‘Other’ are defined in opposition as unhealthy and deviant. This in turn blames identifiable ethnic groups for not taking responsibility for their health and posing an economic burden on the nation state.

Epidemic discourse continues on the old debate of their difference from the dominant Euro-descended population. The non-white immigrant or outsider has historically been suspected and made responsible for importing “their” backward ways along with their diseases such as West Nile Virus, N1H1, Asian Bird Flu and Ebola (Adyanu, 2010). Fee (2006: 2993) argues “whatever the facts, part of the symbolic work this sort of naming undertakes for the dominant group is to control fear of disease by representing it as afflicting someone else, a minority ‘Other’.” Classification systems are, as Jennifer Poudrier (2007: 252) remarks, “dependent upon the inter-related principles of reductionism and order” in the sense that “the need for reductionism reflected in categories condenses, quantifies and then re-defines categories and the people within them... that bear little resemblance to the lives of the peoples defined therein.”

With the rise of new genomics at the turn of the 21st century, a “halo of legitimacy” has accompanied the resurgence of race, refuelling the old debate on race and long standing issues and concerns (Duster, 2003). However, Dorothy Roberts (2011: xi) points out a curious paradox: “At the very moment that race consciousness is intensifying at the molecular level, it is fading at the social level” in terms of public policy. In other words, genomic science is reinforcing the concept of race as a biological category even as we ignore how race shapes society. Although her point is valid, one could make an argument that race is gaining visibility and power in the sense that race as a monolithic singularity is overriding and working against other social determinants of health, thereby concealing them. As such, an apolitical decontextualization of race reinforces the status quo and keeps social hierarchies in place, occluding interlocking dimensions of power and determinants of health.
Even though there are a number of assumptions that undermine the strength of genetic explanations, it does not lose any of its discursive power in clinical practice. Race/ethnicity as an independent risk factor for diabetes is seen to be beneficial in identifying and referring patients to biopedagogical settings where they are encouraged and motivated to engage in diabetes self-management. During the GD class, clinicians employ the trope “it’s genetic” to remove self-blame; however, in order to circumvent undertones of fatalism and complacency that genetic interpretations invoke, clinicians redirect the discussion to cultural explanations. In doing so, they compel women to take responsibility and moral obligation for self control. Paradoxically, while moralism recedes into the background in genetic explanations, it is resuscitated and brought back into the foreground through cultural interpretations.

2.2 “It’s cultural”: race-based risk through the prism of culture

The second aspect of race-based risk discourses employed in the GD clinic centers on risk as ‘cultural.’ When racial difference in risk and disease are viewed and constructed through the prism of culture, explanations and interpretations are imbued with causal reasoning that refers to ‘ethnic’ customs and ways of life. Janet Shim (2005: 415-16) offers several interpretations of the use of culture that contributes to its utility in research and clinical practice. First, Shim argues that cultural constructions of racial difference at the level of diet and lifestyles are politically acceptable ways to talk about differences among ‘ethnic’ groups without insinuating race in some biological way. That is, its discursive opposition to genetic explanations of racial difference makes cultural explanations less politically dangerous because it avoids any accusations of biological essentialism. Second, cultural readings of racial differences appear to be more “factual,” according to Shim, because they are descriptive of outwardly observable habits and dietary differences that are thought to pose a risk. Third, cultural constructions of race resonate especially well with health promotion ideologies in the sense that viewing race through the prism of culture provides a convenient entry point for targeting risky lifestyles and diets (namely, carbohydrates common to “high-risk ethnic groups”). And finally, the construction of race as cultural difference has significance because culture is seen as a fluid and malleable concept. These four ways of constructing race through the prism of culture underwrite the trope “it’s cultural.” This is invoked especially in instances when clinicians make sweeping remarks
about racialized ‘Others’ who do not conform to normative ideas/ideals of ‘Canadian Canadians’ (to use Eva Mackey’s (2002) term of white native-born Canadians).

In authoritative texts and biopedagogical settings, the culture concept is mobilized in bifurcated ways: culture is framed as both the problem and the solution. The discourse of “high-risk ethnic groups” as illustrated in the 2008 CDA CPG, invokes culture as a problem in the way causal explanations pivot on terms like “degree of acculturation,” “challenges in self-care capacities,” and “health literacy.” In this manifestation, Comeau (2005: 19) explains that “culture is seen to consist of the attitudes, values, beliefs and practices of a group of people that can be taken up or not, as through it were a matter of personal choice.” The second manifestation of culture is that of “traditional” or “authentic” culture. This is the form of culture that is ‘tolerated’ and even ‘celebrated’ (Comeau, 2005:18). It is this traditional notion of culture that is proposed as the solution to the problem of “high-risk ethnic groups.” Examples of this form of culture include commodified and essentialized appropriation of ethnic cuisine, yoga, and the medicine wheel. In the context of Canadian multiculturalism, Comeau (2005: 22) argues that “culture is regarded as the property of Others, while dominantly positioned people remain ‘Canadian Canadians’ or ‘just normal’.” The multicultural focus on cultural diversity and its encouragement of people to retain their traditional cultures not only commodifies and essentializes culture in some primitive or romantic formulation, but also does the political work of keeping ethnic Others “in their respective places of marginalized to the dominant, and invisible-because-normative, center” (Comeau, 2005: 22). The contemporary discourse of culture, as both the problem and the solution, performs the same function as historical discourses of race, maintaining old binaries and sustaining colonial and racist power relations by masking them.

Interpreting race-based risk through the prisms of genetics and culture occludes rather than opens up understandings of racial disparities in health. To the extent that both clinicians and women of colour engage in rigid binarism and categorical comparison of ‘us’ versus ‘them,’ they are participating in the reproduction of a dangerous fiction: good/healthy lifestyles and dietary practices are ascribed to ‘Canadians’ while opposing attributes are ascribed to the ‘Other.’ This dualism creates erasures and absences about the role of class, gender, and other indices of difference in determining health. In other words, when the monolithic singularity of race, codified under the term “high-risk ethnic group,” is employed uncritically as a self-evident
category in research and practice, then it erases social determinants of health and erodes how health is stratified along lines of class and gender, concealing how other interlocking dimensions of power are implicated in health disparities. That is, when race/ethnicity is foregrounded, other axes of difference are minimized “to emphasize the rule of the singular, consequently effacing contingencies, combinations and complexities” (Coloma, 2008: 16). In short, discourses of race-based risk neglect the role of race in organizing social relations of power and the effects of racial formation and structural racism on health, displacing structural understandings of race with individualistic ones (Shim, 2005: 427).

When GD in “high-risk ethnic populations” is interpreted through the prisms of genetics and culture, they also serve to strengthen and legitimize powerful forms of regulatory surveillance. Such explanations are based on the representation of “high-risk ethnic populations” as inherently diseased, deviant, and dependent. This in turn legitimates paternalistic and moralistic regulatory management of pregnant women of colour. Although dividing and disciplinary practices pertaining to GD in “high-risk ethnic groups” are fuelled by good intentions, they rely upon an ideology and acceptance that such populations are biologically inferior, culturally incompetent and thus, they are the source of their own problems. In other words, employing the dual tropes of ‘it’s genetics’ and ‘it’s cultural’ denies the significance of race and racism while leaving the responsibility for racial disparities in GD on the shoulders of pregnant non-white women who must learn how to make “appropriate” dietary choices to prevent short-term maternal and perinatal risks and long-term risk of intergenerational diabetes. Ultimately, this suggests that pregnant women of colour must learn how to make choices that do not result in developing type 2 diabetes, thus ‘bootstrapping’ themselves out of the potential for diabetes. At the clinic, this invites a pastoral ethic that ‘we’ need to help ‘them’ because they are incapable or unwilling to live well without education. Such pedagogical approaches to explain health disparities amongst “high-risk ethnic groups” ends up taking the form of “Education for the Other” (Kumashiro, 2000) which, in turn, legitimizes the loop of logic of race-based risk discourses including the regulatory and disciplinary practices that ensue from them.

Etiological explanations that simultaneously draw upon genetic and cultural construction of risk qua race strengthen and reinforce the ways clinicians think about the role of race in GD and influence the ways women of colour understand themselves scientifically and experientially.
By placing emphasis on the individual as genetically-determined and culturally-produced through habits, lifestyle and diet, such interpretations render invisible power relations and broader social forces that contribute to racial disparities in GD in “high-risk ethnic groups” such as poverty, poor living conditions, marginalization and a lack of sense of belonging (Marmot and Wilkinson, 2001, 2005). As Razak (1998: 21) points out, “when difference is thought to reside in the person rather than in the social world, we are able to ignore not only relations of power but our role in producing it.” In what follows, I demonstrate the ways in which ‘culture’ is problematized productively through dietary recommendations.

3 Racial carbopolitics as biopedagogy

The third way in which race-based risk discourses are accomplished locally in the clinic is in the way particular kinds of carbohydrates (herein carbs, for short) are employed as a proxy for race/ethnicity and then mobilized in biopedagogical practices to govern the food practices of racialized bodies. This section has three parts. First, I will elaborate on the notion of racial carbopolitics and biopedagogy. Second, through examining the types of carbs consumed by particular ethnic groups, I will elucidate the ways in which racial carbopolitics as a biopedagogical strategy plays out as a normalizing and regulating practice that enables the governing of bodies in the name of health and citizenship. It will be argued here that this strategy implicitly privileges carb-consumption of the white upper-middle class as normative and in turn constitutes the cultural practices and the non-white bodies of colour as ‘Other.’ And third, I will conclude by suggesting that such biopedagogical practices not only enforce norms of whiteness but run the risk of naturalizing and reinforcing the social order, making disparities seem inevitable and masking the conditions that produce them.

Increasingly it seems, the so-called ‘diabesity epidemic’ is becoming a problem of the ‘Other.’ Despite the unclear etiology of diabetes and obesity among people of colour, neocolonial practices of categorizing non-white populations as “members of a high-risk ethnic group” and representing minority cultures through diet and lifestyles paradoxically reinforce stereotypical views. The assumptions sustaining discourses about the risk, race, health and food warrant further scrutiny because they operate in the clinical setting in ways that are worrisome. While the intention here is not to discount the good intentions of diabetes clinicians for educating
patients on self-management practices, practitioners may unintentionally panopticize non-white bodies as visibly different, abnormal, unhealthy and lazy, leaving underlying assumptions of whiteness unexamined.

3.1 Terminological definitions: racial carbopolitics and biopedagogy

The concept of racial carbopolitics is inspired by Jonathan Xavier Inda’s (2006) notion of “racialized ethopolitics” and Arjun Appadurai’s (1981) concept “gastropolitics.” Extending Nikolas Rose’s concept of ethopolitics, Inda (2006: 60) asserts that “ethopolitics is very much a racialized politics.” That is, he argues that certain populations have received a disproportionate amount of attention and thus *hyper-embody* this sense of obligation to be healthy; yet, they are often deemed unethical (i.e. unable or unwilling to take care of their selves) precisely because their cultural attributes differentiate them from the dominant norms of the European American population. Turning to Appadurai (1981: 495), the concept of “gastropolitics” refers broadly to conflicts and controversies that emerge in social transactions around food. Food, as Appadurai (1981: 494) points out, “in its varied guises, contexts, and functions, can signal rank and rivalry, solidarity and community, identity or exclusion, and intimacy or distance.” In order to account for ethnographic findings in the diabetes clinic as well as add specificity to Appadurai’s gastropolitics, I conceived of the term *racial carbopolitics* to signpost how carbs are used in the clinical setting to “educate” people of colour about Canadian principles of “healthy eating” which in turn implicitly shape the subjectivities of people who are categorized as “members of a high-risk ethnic group.” In other words, these two concepts were hybridized to illustrate how carbs are employed as a proxy for race in the diabetes clinic as a biopedagogical practice in the production of (a particular kind of sound national) subjectivities.

The concept of biopedagogy is drawn from Jan Wright (2009: 1) who conjoins pedagogy with Foucault’s biopower to describe the normalizing and regulating practices that enable the governing of bodies in the name of health and life. Not only do biopedagogies locate individuals under constant surveillance, they also press them towards increasingly monitoring themselves, often through increasing their knowledge around ‘diabetes’ related risk and ‘instructing’ them on how to eat healthy and stay active. She argues that “biopedagogical practices occur in sites that have the power to teach, to engage ‘learners’ in meaning making practices that they use to
make sense of their worlds and their selves and thereby influence how they act on themselves and others” (Wright, 2009: 7). Through biopedagogical lessons on “appropriate” carb consumption practices, individuals are offered ways to understand themselves, change their way of being, and take action to change others and their environments. The diabetes education centre is a site *par excellence* where people, particularly people of colour who are labelled ‘high-risk,’” are urged to work on themselves and learn vital biopolitical lessons as responsible and governable citizens of the nation state (Ong, 1995). The diabetes clinic and ensuing biopedagogies operate within a broader governmental assemblage that sets out to prevent, or intervene in the prevailing ‘diabesity’ crisis.

Biopedagogical practices in diabetes education are particularly powerful because they employ and rely on the combination of two techniques: the translation of expert knowledges and the mobilization of affects. Although expert knowledges significantly inform the deployment of biopedagogical strategies, they do not operate on their own (Leahy, 2007: 174). In other words, biopedagogical work is more than knowledge alone but a social relationship involved in the processes of subjectification. Here, powerful affects, like shame, guilt, pride and disgust, are recruited by diabetes educators and deployed as a pedagogical device designed to permeate and penetrate into the patient’s ways of thinking and being. The mobilization of affects is conjoined alongside expert knowledges to form an assemblage of biopedagogical practices, accomplishing goals that aligned with the governmental agenda of reducing the ‘diabesity epidemic.’ This affective dimension offers alternative ways of conceptualizing how race-based risk discourses and practices are accomplished locally in the GD clinic. Moreover, it offers another dimension to think empirically through the ‘how’ of (dietary) governmentality as well as the messiness and nuances that characterize contemporary projects of governance in the clinical setting.

Even though Foucault is not interested in diet per se nor does he explicitly link diet with governmentality, he invokes diet as a mode of managing one’s existence through careful regulation of food. For Foucault, dietary regulation is one of several practices of the self that constitute subjectivity. In *The History of Sexuality Volume II: The Use of Pleasure*, he writes “diet itself...was a fundamental category through which behavior could be conceptualized. It characterized the ways in which one managed one’s existence, and it enabled a set of rules to be affixed to conduct; it was a mode of problematization of behavior that was indexed to a nature
which had to be preserved and to which it was right to conform” (Foucault, 1985: 101). Scholars have brought attention to the productive ways in which diet can be deployed in the ‘conduct of conduct.’ In a paper on white bread bio-politics, Bobrow-Strain (2008: 23) finds Foucault’s brief reflection on diet helpful in thinking of “diet as a way of forming oneself as a responsible, ethical subject in relation to a larger social formation.” In his work, Bobrow-Strain illustrates how the rise of the modern bread mirrored larger politics of purity, health and hygiene circulating through the early 20th century America. Also drawing on Foucault, Ristovski-Slijepcevic, Chapman and Beagan (2010: 468) explain that the association of eating behaviour with moral or ethical conduct reflects the way in which contemporary western food practices functions as a technique of government. Coining the term “dietary governmentality,” the authors characterize its key role in the provision of social standards for people’s behaviours. My intention is to extend this work by demonstrating the ‘how’ of dietary governmentality through offering empirical instances of how a carb becomes ethnic in the diabetes clinic.

3.2 How a carb becomes ethnic

Diabetes education centres are complex spaces, made up of a concatenation of people, practices, and biopedagogical tools. One biopedagogical tool employed by clinicians in diabetes education is the carbohydrate food models/replicas. These are highly effective tools precisely because they mediate expert knowledge and affect. Given that dietitians have the difficult task of trying to explain the complex concept of carbohydrates, they rely heavily on these biopedagogical tools that look strangely life-like. In fact, they look so real they are captivating, drawing participants close enough to inspect and touch them. Food replicas also incite a range of reactions and affects. Participants emphatically point out “they look so real!” and/or “it’s making me hungry!” (Fieldnotes, GD class: Campus Y, 28/05/12, pp. 35) Some go on to differentiate foods that they like and dislike. Aside from their uncanny materiality, these food replicas invoke potent affects because they are symbolical representations imbued with love, comfort, nourishment and pleasure as well as punishment, guilt and disgust. Such affects are deeply rooted in memories of childhood and homeland whether imagined or real. But from a clinical standpoint, these food models are pragmatic biopedagogical tools for two reasons: they help patients visualize carb-containing foods, and they put portion sizes into perspective. However,
something interesting happens during clinical encounters when carb food models are used to stand in for race and mobilized to govern the food practices of racialized bodies.

To illustrate how a carb becomes ethnic in the diabetes clinic, I would like to focus on two carb food models, namely rice and bread. The food replica of white rice is strangely contextualized (see Appendix T, Figure 1). The shape and design on the bowl containing the rice insinuates something undeniably Asian. The bowl is a sign C.S. Peirce (1998: 5) calls *indications* or indices in that it forces our attention by “show[ing] something about things, on account of their being physically connected to them,” in the way rice is connected to the bowl. In other words, the rice by itself asserts nothing and fails invoke anything cultural; it is the bowl that does the ideological work of representing rice as a cultural marker or indication of Asian ethnicity. In contrast to the bowl of rice, the food replica of the slice of bread stands alone without support of any accessorizing accoutrements (see Appendix T, Figure 2). Upon first glance, it just seems like an “ordinary” slice of whole wheat bread. Even though it is unmarked, it is defined by how it functions as “ordinary” in relation to other ethnically-marked carbs. However, out of all of the carb food models, the slice of bread is privileged in diabetes education because it represents the default reference point against which all other carbs are measured. The slice of bread serves as an unquestioned and unreflexive norm. Dietitians frequently invoke the slice of bread as the standard barometer, informing patients that “one slice of bread equivalent to 1/3 cup of cooked rice, ½ cup of noodles, ½ of one 6 inch chapatti” (Fieldnotes, GD class: Campus Z, 31/05/12, pp. 40). Although framed as equivalent, the portion sizes of ethnically marked carbs seem smaller in comparison, implicitly locating these carbs as nutritionally inferior, deficient, deviant or pathological from the norm, and therefore unhealthy.

Another related artifact that depicts carbs as a proxy for race/ethnicity is the 2013-2014 Spectrum Nasco Nutrition Food Catalogue, or “The Dietitian’s Favourite Catalogue,” featuring “realistic life/form food replicas” (see Appendix U). When we look inside, we see a diverse array of ethnically-specific food kits, such as the Native American Food Set, Latin American Food Replica Package, [African] American Foods of the South Set, South Asian Food Kit, East Asian Food Set and Mexican American Ethnic Food Set. Interestingly, the contents of these kits are almost identical with exception of one food group: carbohydrates. In almost all of the culturally specific kits, the food models of fruits, vegetables, meats, and dairy are exactly the same (with
the exception of “collard greens with salt pork” which is apparently unique to [African] American Foods of the South Set). However, it is the carb food model that stands out in stark contrast, defining and constituting the kit in ethnically-specific ways: Indian fry bread, tortilla, roti/chapatti, Chinese fried rice, and enchiladas. Unlike the previous example of the bowl of rice, these carbs are not accessorized with ethnically inflected accoutrements because language, or more specifically the name of the carb itself, locates it ethnically. But what is most striking about the catalogue is the absence of the slice of bread in any of the ethnic kits.

3.3 Examining ‘whiteness’

I raise the above two empirical instances because they mirror the ways in which the unmarked and yet dominant category of whiteness is often invisible but powerfully normative. In examining whiteness, I do not mean to suggest that “all white people are the same or that whiteness is a biologically significant category,” as Eva Mackey (2002: 21) puts it. Rather, whiteness, according to Ruth Frankenberg (1993: 1), is constitutive of three interlocking dimensions: first, whiteness is a location of “structural advantage, of race privilege;” second, it is a “standpoint” from which “white people look at [them]selves, at others, and at society,” and third, it refers to a “set of cultural practices that are usually unmarked and unnamed.” Precisely because whiteness is often rendered invisible through the process of normalization (Dei, 2007: 57), it is difficult to pin down.

In reference to the representation of whiteness as an ethnic category, Dyer (1988: 44) notes that whiteness is difficult to render visible “partly because white power secures its dominance by seeming not to be anything in particular, but also because, when whiteness qua whiteness does come into focus, it is often revealed as emptiness, absence, denial or even a kind of death.” In other words, the strength of white representation is the apparent absence altogether. The power of whiteness is embodied in the way it becomes normative and in how it “colonises the definition of normal” (Dyer 1988: 45). Rather than being defined by any particular characteristics, it is defined by its difference from other marked ethnicities. The state of being absent or unmarked and therefore ‘normal’ or ‘ordinary’ is both constitutive of, and an effect of, structural advantage and power, and the cultural authority that power brings (Mackey, 2002: 21). That is, whiteness sustains its dominance by refusing categorization as other than just ‘normal’ or ‘human.’ But as Ian Hacking (1990:160) reminds us in The Taming of Chance, although the
word ‘normal’ has been invoked historically in many ways spreading to “the sphere of- almost everything,” housing multiple meanings (ranging from average to progress towards perfection), it continues to remind us like “a voice from the past…whispering in your ear that what is normal is also right.” Despite the indifferent, unenthusiastic, benign, and sterile-sounding word, Hacking (1990: 169) maintains that this is precisely the rich source of its hidden power allowing ‘normal’ to become “one of the most powerful ideological tools of the 20th century.”

3.4 Social effects of racial carbopolitics

As a biopedagogical tool, carb food models are far from being benign or neutral in their effects. At the diabetes clinic, when a slice of bread is presented as the norm or default reference point against which all ‘Other’ carbs are measured, then such carbs are framed in an evaluative way with moral undertones as being somehow ‘bad’ or pathological and insinuates some sense of causality that enters obliquely into narratives of patients. As Janet Shim (2005: 417) argues, representations of pathological cultural practices (in this case carb-consumption practices) linked to specific racial/ethnic groups have conceptual power to shape the interpretations that people of colour give to their experiences. For example, when I approached a woman during the class and asked her what causes GD, her immediate response is “it’s the rice!” (Fieldnotes, GD class: Campus Y, 03/07/12, pp. 78) In other words, carbs are often invoked when asked about causality. This frequent causal attribution to carb consumption reflects and aligns well with biomedical perspectives on dietary risk factors, thus reinforcing it.

Because carbs often carry connotations of ethnicity, culture, and other associations commonly perceived as related to race, biopedagogical discourses pertaining to diabetes risk and prevention often, almost tautologically, become racialized (Shim, 2005: 416). Such representations of race cycle back into research and clinical practice. Clinicians who think of race as culturally-mediated differences in risky behaviours treat risk factors as explanations for racial disparities in diabetes and vice versa in circuitous fashion. This adds legitimacy for cultural understandings of racial difference and the racialization of risk discourses, reinforcing the loop of logic through which race and certain racial groups become targeted, albeit in very subtle biopedagogical ways through carbs. That’s not to say that dietary practices commonly viewed as culturally rooted do not play a role in diabetes because they undoubtedly do. However, it is the way in which carbs are used uncritically as a proxy for race to pathologize the practices
of racialized ‘Others’ that is worrisome because it shapes what people of colour believe to be true about themselves.

Rather than offering a ‘correct’ or ‘culturally-relevant’ dieting approach for clinical practice, the intention here is to move towards asking what is being accomplished socially, politically, and discursively when carbs are used as a proxy for race as a biopedagogical strategy. In a democratic society like Canada that upholds principles of equality and non-discrimination as evidenced in the Canadian Charter of Rights and Freedom and the Multiculturalism Act, it is becoming increasingly uncomfortable and politically incorrect to talk explicitly about race/ethnicity. The tendency is to tolerate and at times promote a softer version that maintains racial distinction as natural and as immutable differences of people. This type of discourse is viewed as legitimate rather than rabidly racist, making the softer version more acceptable and even noble (Li, 2001: 91). At the diabetes education centre, the use of carbs as a proxy for race becomes a more palatable way for clinicians to express anxiety about the ‘diabesity epidemic’ particularly amongst “members of a high-risk ethnic group” who constitute a burden to the nation state.

In this way, carbs also function as a metaphor for one’s relationship to the nation and reflects one’s citizenship: “the right kinds of carbs in the right portions are the key to sound national subjectivities” (Chamberlain, 2001: 95 & 101). Or as Schwarz (1986: 37) succinctly points out, “No diet comes without a larger social agenda.” By this, she means “every diet program is both conservative and prophetic: conservative because its strategies and rationale are deeply embedded in the era in which it first appears; prophetic, because its agenda is invariably visionary” (Schwartz, 1986: 37). Historically, food been actively mobilized as a mechanism of assimilation of minorities to nationhood. Just as Americanization programs taught Mexican Americans to substitute white bread for tortillas, green lettuce for frijoles, and boiled meat for fried meat (Chamberlain, 2001: 101), diabetes education programs across Canada promote better health by ‘teaching’ people of colour to alter their carb-consumption practices by privileging and endorsing whole-wheat, high-fibre, whole-grain, low-glycemic carbs particularly fashionable among white middle class ‘Canadian Canadians.’
As such, biopedagogical strategies implicitly function as a neocolonial initiative to assimilate non-white bodies to whiteness (Azzarito, 2009: 185). Such strategies subtly work to discipline, regulate, and thus colonize non-white cultural practices to unmarked norms of whiteness, leaving underlying assumptions of whiteness unexamined and evading issues of power involved in health disparities (Jenks, 2010: 205). Without reflecting upon the relationship between the social construction of race-based risk discourses embedded in clinical practice and research on the ‘diabesity epidemic,’ inequality will continued to be blamed on those who differ from the norm, further naturalizing and reinforcing racial hierarchies.

Carbs are never ‘just carbs’ and its significance can never be purely nutritional. Not only are they tied to strong affect, carbs are intricately bound up with social relations, including those of power, of inclusion and exclusion, as well as cultural ideas about classification, the human body, and the meaning of health. While carbs are an important ingredient in the maintenance and propagation of ethnic identity (Vallianatos &Raine, 2008), they also function as a powerful tool in the processes of subjectification and national belonging. As Warwick Anderson (2003: 258) asserts, “ideas and categories from the medical community about the body continue to shape cultural aspiration, national character, immigration barriers and population policy.” The diabetes clinic is one microcosm in which racial carbopolitics as a biopedagogical strategy mirror broader conversations and anxieties about the increasing immigration rates, the management of ethnic populations and the creation of national identity (Mackey, 2002: 23), particularly tensions that tacitly arise in clinical encounters when neoliberalism meets multiculturalism.

Drawing on ethnographic fieldwork, I have illustrated three ways in which GD in “high-risk ethnic groups” are accomplished locally in the clinical setting. Through dividing practices of screening and a panoply of disciplinary techniques, etiological explanations of risk qua race, and biopedagogical strategy of racial carbopolitics, race-based discourses are brought into being. Such practices not only run the risk of inviting moralistic judgements and racialized interpretations, they also reproduce racism because they render invisible power relations and social conditions that contribute to GD in “high-risk ethnic groups.” The following chapter offers insights on how women take up, respond to and engage with race-based risk discourses and practices pertaining to GD in the context of their everyday lives.
Chapter Seven
Modes of Subjectification

This chapter aims to gain a better understanding of how race-based risk discourses and practices pertaining to GD are taken up by women of colour who are categorized as “members of a high-risk ethnic population.” I also examine how such discourses and ensuing discursive practices participate in the production of women’s subjectivities. The intention of this chapter is to take up Lupton’s (1999: 102) charge of paying greater attention to lay people’s everyday knowledge and rationalities and bringing empirical material to bear on the configuration of risk at a particular time, place, and for a particular set of people. In doing so, women’s account of GD can provide the basis for showing up the contested meanings of risk, race and disease. More specifically, by attending to the rationalities employed by women, we can recognize the complexities surrounding the social effects of GD in “high-risk ethnic groups.”

The findings of this chapter are derived from interviews conducted with 12 participants in a three time sequence: after diagnosis of GD, before delivery, and post-partum. With the exception of seven phone interviews, all interviews were conducted in the Diabetes Education Centre at Hospital X (Campus Y), a community hospital in Southern Ontario, from June 2012 to February 2013. The duration of each interview ranged from 20 to 40 minutes, depending on the time women could afford either before or after their follow-up appointments with clinicians. Fieldnotes were recorded shortly after each interview. Participants were given a pseudonym to secure their anonymity and protect confidentiality (refer to Appendix C for additional details of each participant). Interviews were digitally recorded and transcribed verbatim, and the transcripts were subjected to qualitative data analysis to elicit analytic themes.

In this chapter, I will address the fourth and fifth research question: How do women respond to, engage with, and resist race-based risk discourses and practices pertaining to GD? And how do such discourses and practices shape women’s subjectivities from diagnosis to post-partum? This chapter explores three analytic themes that arise from women’s accounts: food discipline, figures don’t lie but women figure, and making of the multicultural biocitizen. The first two sections illustrate how women respond to, engage with and resist race-based risk discourses and practices in dynamic ways that are both enabling and constraining yet meaningful
and relevant to their everyday lives. The third section elaborates on how such discourses and practices constitute an emergent type of racialized subject.

1 Food discipline

When women are first diagnosed with GD, their narratives are punctuated by intense anxiety and concerns about causality. Remarks such as “I was completely freaked out!” or “I was so scared” are followed by questions including “what did I do?”, “why?” or “how did that become?” Their narratives are fraught with causal speculations, trying to identify factors that contributed to developing GD. Although women make reference to a range of risk factors such as heredity, age, weight and stress, there is an undeniable impulse for women to pin down diet (or more specifically, carbs). This tendency to attribute causality to carbs is understandable given that diet is something that is ‘modifiable’ and thus controllable. The notion of ‘control’ is so powerful and pervasive in women’s narrative that other factors are secondary and seem to fall from view. More specifically, control is closely interconnected with responsibility that it is reflected in their immediate reaction: “what did I eat?!” Underwriting this question is the notion that if women had enough will power to control their carb intake, then they would not have been diagnosed with GD in the first place. Perhaps this is why food is foregrounded as something that needs to be disciplined.

“Food discipline” – a term coined by one participant – best captures how women respond to and engage with discourses and practices pertaining to GD in “high-risk ethnic groups.” This neologism encompasses how disciplinary practices and biopedagogical lessons related to the diabetic regimen have shaped women’s everyday lives, particularly during the first few weeks after diagnosis and attending the GD class. The following paragraphs elaborate on the meaning of “food discipline” by drawing on an initial interview conducted with Gayatri, the participant who introduced the term in her lexicon. The subsequent sections illustrate the ways in which women enact food discipline through restricting rice and colonizing their diet with whole wheat.

During my initial interview with Gayatri, I asked her what has changed the most since being diagnosed with GD and attending the class. She immediately responds by saying “food discipline.” She offers a brief definition and elaborates with an example:
It’s the disciplining of food habits – which is good! I learned *A LOT*! You see a difference, like when I get up in the morning and when I go to bed, I feel light. Like, I don’t feel overeaten. Because sometimes, before my pregnancy, I’d get hungry and eat, like, you know the *fake-hungry* around 10 o’clock [pm], you’d wake up and watch TV, and you get that *fake-hungry*. I’d just go eat junk food or I’d eat like a meal, like rice or pittu – which is kind of like a couscous type of thing. And I’d be like ‘oh my god, why did I eat it??’ So, I learned food discipline – which is really good and eating healthy food in a timeline. I know I should be eating before 6 o’clock [pm] which I do, but when you come home from work and I eat, and if I get hungry at 9:00 or 10:00, I eat again. I didn’t really care or think about it. I know it’ll put weight on me but it was like ‘what the hell, I’m walking’. It’s sorta like back in your mind, but now, I’m more prone to like vegetables and umm raw vegetables, like broccoli and carrots and stuff like that. (Gayatri, first interview, 21/06/12, pp. 5)

From this account, food discipline involves the “disciplining of food habits,” such as putting an end to unreflective late-night binges and eating “healthy” food such as broccoli and carrots according to a “timeline.”

Temporal regulation is evident in the way Gayatri describes “eating healthy food in a timeline.” The following excerpt illustrates how time looms large for Gayatri as she finds herself completely preoccupied with the clock and the passage of time until her next snack or meal:

I have to eat, like, 5 times with 2 hours of difference. That’s killing me! And then, if I’m hungry after lunch, I can’t even eat in between the 2 hours because I have to do the blood test...I’m like ‘oh my god!’ I’m looking at the clock and it’s not moving! It’s just sitting there!!!...so, those are the things that are just... hard! (Gayatri, first interview, 21/06/12, pp. 9)

Food discipline or “disciplining of food habits’ extends beyond resisting moments of “fake hungry,” but also encompasses having the will-power to resist junk food. Gayatri expands upon this with the following comment:

Like, I don’t go for junk food – like, I usually don’t drink pops. But if I have the chips at home, I will eat it! And if I have ice cream, I’ll eat it. But now, even though they’re there, like I get it for my son, just for his snack or something, but I don’t...it’s a lot of food discipline, I learned – which is a good thing. It’s a healthy life, right?! (Gayatri, first interview, 21/06/12, pp. 5)

Her quote speaks to temptation and having the will to resist the gravitational pull of junk food. In successfully doing so, she positions herself in a positive way, having reformed her habits in order to lead a “healthy life.”

Also, food discipline is enacted in the way she does not eat beyond her portion prescribed by the dietitian. Here, portion pertains specifically to one food group: namely, carbohydrates, or more specifically, rice.
Now, I’m eating with portions, and then... I know when my portion is done, so I know exactly the portion what they [dietitians] put on the list. Because, I guess, my body just got used to it, so I don’t feel hungry either. And I don’t want to eat a lot too. So, even if I put rice on my plate, I only put one spoon... that’s it! No. One spoon.. that’s enough! [I eat] vegetables and fish or meat, egg. So, I’ve broadened my mind. Like, mentally and physically, I’ve changed. I got used to the small portions 5 times [a day]. (Gayatri, first interview, 21/06/12, pp. 6)

By limiting herself to a spoonful of rice (much less than what the dietitian prescribed) and choosing foods (i.e. vegetables and protein) that do not elevate her blood sugar, Gayatri exalts herself as a subject who has “broadened her mind,” making her virtuous and enlightened.

Food discipline is positively reinforced by Gayatri’s husband who believes in the importance of ‘healthy eating.’ She describes him in the following way:

He’s not one of those people who eats fried, deep fried foods, like Indian cuisine and stuff like that. And even Chinese. Like sometimes my parents like take out, so he’ll eat for that time, but he won’t eat the overnight or left over stuff. He won’t eat it. So, I got into that habit too. (Gayatri, first interview, 21/06/12, pp. 6)

Here, particular kinds of ethnic foods and eating habits are identified and cast as ‘unhealthy.’ What’s more, to Gayatri’s chagrin, her husband was almost ecstatic that she was diagnosed with GD, leaving her no choice but to learn the principles of ‘healthy eating.’ When I asked Gayatri how her husband responded after she told him about being diagnosed with GD and having to go on insulin, she recalls the following:

He was like ‘I’m so happy you got this gestational diabetes!!! Well, it’s a good thing and a bad thing.’ And I’m like ‘what?! Excuse me?!’ And he’s like ‘Really, I’m happy you got it, because now you know how to eat!’ (Gayatri, first interview, 21/06/12, pp. 6)

Gayatri is utterly appalled yet slightly amused that her husband was “happy” about being diagnosed with GD and treated with insulin injections. However, she understands her husband’s point that this experience has been an instructive lesson, albeit painful and punitive, on the habits of ‘healthy eating’ which indirectly buttresses his own long-standing views and practices.

Gayatri also references her father with regards to his culturally-inflected ethos of food discipline, particularly how food habits can help or hinder health.

That’s what my dad says, like in our culture, in our language, there’s an old saying ‘if you eat good portion, it becomes a medicine, but if you eat too much, it becomes a poison’... we say it in Tamil differently. But it’s like ‘if you eat the proper portion of food, then it becomes your medicine. If you eat over or too much, then it becomes your poison.’ Even if it is a food – it
becomes a poison... If you eat too much of junk food, if you eat too much of that kind of food, it becomes like a poison to your body, so... I’m like ‘oh yeah, that’s true!’ (Gayatri, first interview, 21/06/12, pp. 6)

Here, food discipline dovetails with cultural euphemisms, further strengthening its validity and legitimacy. This has resonant value for Gayatri as something that rings true.

From the above comments, it’s apparent that Gayatri is not alone in ‘diabetes self-management.’ Several women in the study mentioned that significant others actively participate in carb-consciousness and surveillance of carb-consumption. For instance, Roxanne offers a recent account that illustrates the role of visibility in power relations:

I was over this weekend at my in-laws, my husband’s uncle has this great farm with strawberries and they were freshly-picked. And we went to my mother-in-law’s and everyone is watching me! My husband is watching me and he’s like ‘you can’t have any of those [strawberries]!’ And I’m like ‘yes I can!’ My husband keeps poking me and asks ‘how many did you have?’ And I’m like ‘go away!’ (Roxanne, first interview, 11/06/12, pp. 6)

When I mirror back how unsettling it must have been to be under the constant scrutiny of the family ‘food police,’ Roxanne reiterates in a tone of exasperation “yeah, especially my husband!” Here, Foucault’s notion of panopticism plays an important function in enacting and ensuring food discipline. However, food discipline goes beyond food and panopticism, encompassing an entire regimen that involves practices of the body and care of the self which constitute the modes of subjectification.

The above excerpts illustrate Foucault’s (1977: 170) oft-cited quote “discipline ‘makes’ individuals,” producing “subjected and practiced bodies” that can be transformed and improved (Foucault, 1977: 136). Food discipline makes Gayatri into a carb-conscious, diabeticized subject who eats according to a ‘time-line,’ resists feelings of ‘fake hungry,’ portions her rice to only one spoonful, monitors her sugar levels and injects insulin every night before bedtime. Moreover, acts of food discipline are encouraged by her husband and family members. Although Gayatri experiences food discipline as constraining in terms of temporal regulation and Roxanne finds her husband’s unsolicited advice annoying, they characterize the regimented practice as “really good.” Moreover, food discipline is productive in the sense that it enables a broader repertoire of possibilities, opening up capacities for reflection of a newly emerging self.
1.1 Rice restrictions: “I stopped eating rice”

Women’s narratives of food discipline are replete with remarks about rice as a ‘risky’ food that needs to be restricted or prohibited. On the topic of carbs specific to Siva’s culture and changes she has had to make in carb-consumption and preparation practices, she emphatically makes the following comment:

A LOT [of changes]! Yeah, like the quantity of rice! We, in our culture, we eat 2 to 3 cups of rice with lunch and stuff. So, that was totally cut down to 1. So, adjusting to the carbohydrates was a little tough, but, you know, you get used to it, I guess. (Siva, first interview, 18/06/12, pp. 4-5)

Like Siva, Kaya invokes rice as a salient cultural carbohydrate that is typically consumed unreflexively without any thoughts of restriction. Hence, the practice of getting out the measuring cup and learning to limit the portion of rice is not only strange and sad for Kaya, but a practice she has had to get used to.

We eat a LOT of rice, big portion of rice. Now, after the class, I measure the portion. I learn to measure the food...It was sad. But I’m getting used to it. Before what I used to do was, I’d put more rice and a little bit of curry. But now, I put less rice and more meat. So, I’m still like, full and less tired, but much less rice. (Kaya, first interview, 03/07/12, pp. 2)

Considering rice represents an iconic food item that carries connotations of ethnicity, culture, and other associations commonly perceived as related to race, the link between rice and cultural identity is often unquestioned and rendered common-sense. When I asked Jennie to elaborate on the kind of carbs that she eats in her culture, she instantly says “I mean, like RICE~!!!” She says this as though it is a self-evident fact, almost mocking me for posing this question in the first place. In attempts to impress upon me the significance of rice in her culture, Jennie repeats, “like, rice, it’s a main....plate, right?!” When I acknowledge her point by saying that in some countries the word for meal literally translates to rice, or that rice represents ‘comfort food’ or ‘a staple,’ Jennie exclaims “Exactly!!!” and sighs, almost relieved that I comprehend and appreciate the significance of rice. Given that rice is a “main plate” in Jennie’s culture, the thought of restricting the rice is unfathomable and equally frustrating particularly when her efforts to reduce the portion of rice do not equate to ‘good’ sugar readings. Jennie shares her observations on the effects of rice on her blood sugars:

I was concerned because two times after dinner, the blood sugar was 8, right?! [note: the target post-prandial blood sugar is below 6.7 mmol/L] So, I was really, really, really concerned. So,
actually... I practically cut off the rice!... The main plate at dinner is rice, right?! Even I don’t get a lot, just a little bit...It’s just like, sometimes you feel, even if you’ve cut some of the rice and it’s still high. So it’s been 2 days, I’m not eating any rice! [laughs] It was frustrating because you know you’ve been trying, right?! And it’s still like 8, at least 7 (laughs). (Jennie, first interview, 13/08/12, pp. 3)

Given that rice is synonymous to a meal in many cultures, the very meaning of a meal is thrown into question when rice is restricted. Gayatri also refers to rice as centerpiece of the meal that is ever-present and yet taken for granted until it is expunged entirely.

It’s like RICE, ummm, like rice is the main dish. Like every Sri Lankan house, lunch time, rice is there! Rice and curries, right?! So, no I have to... I don’t eat rice. (Gayatri, first interview, 21/06/12, pp. 5)

Gayatri is not the only one who restricts herself from rice. Mena also laments “I don’t eat rice anymore. I completely stopped eating rice!” Even though the dietitian discourages women from stopping carbs altogether, women learn through checking their blood sugars that that rice is something that must be restricted or even prohibited. When I asked Mena why she stopped eating rice, she offers an interesting insight:

If I start eating rice, ‘cuz when you eat rice, you always have to eat more because, like, rice, like one cup of rice doesn’t fill your stomach. Plus, you have to eat again after 1 hour or 2 hours... rice is something that, I don’t know, you start eating it and you want MORE! Until you’re satisfied and totally full, you’ll just keep eating! (Mena, first interview, 16/07/12, pp. 5)

When it comes to rice, there seems to be an all-or-none approach that parallels the logic behind the cessation of addictive substances: ‘going cold-turkey.’ Perhaps this rationale explains why so many women in the study ‘just stop rice’ altogether.

Rice is also intimately tied to familial bonds of solidarity and a sense of belonging. Jennie offers a thoughtful insight about the social effects of ‘stopping rice.’

Well...I don’t miss the rice, right?! But being with family members and this is what they eat every day, right?! So, I have to do my meal aside [laughs]. So, this is what’s bothering me. But, I don’t mind cutting the rice. Like, even though I can have it once a week, I don’t mind. Some people, like my father, he can have rice morning, evening, and dinner...And if he doesn’t have that, that’s not good for him. But, I’m not like that. But still, it’s having my meal done aside [laughs]. (Jennie, first interview, 13/08/12, pp. 4)

In response to her comment, I mirrored back to her that she must have felt sad from being excluded, especially when her meal is different from her family members. She echoes back “Excluded, yeah!” Given that meal time is often an inclusive moment to enjoy a meal with one’s
family, cutting out the rice is like missing out on the collective experience of sharing a meal. Jennie is raising a salient point: the significance of rice extends beyond nutrition and health. Rice has myriad embedded meanings, symbolizing sociality, collectivity, and inclusivity.

As this section illustrates, restricting rice from the repertoire of one’s meal takes enormous food discipline. As the ‘main dish’ or ‘main plate,’ the ubiquity of rice is not fully realized until it is removed altogether. Women sacrifice their habitual and embodied practice of eating rice in order to produce ‘good sugars.’ But rice restrictions or even its abrupt cessation has far-reaching social effects of unsettling women’s sense of cultural identity and belonging, leaving them with a profound sense of sadness, withdrawal, and exclusion. This then begs the question: if rice is restricted, what replaces it?

1.2 “Everything is whole wheat”

What is particularly striking is how some women, having followed the dietitian’s recommendation, have reconfigured their carb-consuming practices by substituting white rice for carbs containing whole wheat. For instance, Mena explains how her diet has changed since she attended GD class. The disappearance of rice is accompanied by the appearance of whole wheat:

I started eating more whole wheat grains...I make roti with whole wheat flour. Before we used to make it with white flour, but we started eating it whole wheat. Like bread and everything [is] whole wheat. (Mena, first interview, 16/07/12, pp. 9)

When Gayatri is asked about any changes to her diet since the class, she responds with an emphatic “OH YEAH!” followed by an explanation that reveals something about subjectivity:

I don’t usually eat, like, whole wheat throughout the day. Now, everything is whole wheat, and like eating fruits and salad. Like, everything I eat now, I’m watching the content of the food. That’s sorta NOT who I am, I LOVE food!... I eat, like only one whole wheat roti and a lot of curries. And then a fruit. And if I get a little too hungry, then I’ll have ummm... crackers, like whole wheat crackers, or like cookies with just whole wheat. More fibre content! It’s like, oh my god!... Yeah, for lunch, I’ll have roti or brown bread. Yeah, I stopped eating rice.... (Gayatri, first interview, 21/06/12, pp. 5)

From what Gayatri says, it’s apparent that she has followed the dietitian’s recommendation to integrate whole wheat into her diet. Instead of rice, whole wheat colonizes her meals and snacks. However, this is at odds with who she is. Lost in a moment of sadness, I inquire whether Gayatri misses rice and she makes the following remark:
I...I sometimes, I DO miss it. Like when I go home, my mom eats rice and I’m like ‘oh my god, I WANT it!’ Like, when you’re hungry, you’re so used to it, right?! Like I’m 33 [years old] and turning 34, so like, I’m sooo used to eating rice. And not to eat rice, it’s hard... but, it’s for 2 months, so you just kinda... but, it’s okay. But eating like whole wheat throughout the day, it’s kinda getting boring! (Gayatri, first interview, 21/06/12, pp. 5-6)

Changes in diet are not confined to women alone, but rather, the diabetic diet has altered carb-consuming practices of family members. Gayatri notes the following dietary changes:

My mom is good, she’s doing all the home cooking. We won’t deep fry anything so. She’s diabetic and [now] I got it, so I have to be careful, so she cooks careful too. So, her level, sugar level has also come down too because we’re eating a lot of whole wheat now. (Gayatri, first interview, 21/06/12, pp. 8)

Gayatri points out how her husband has also altered the way he eats for her sake:

He’s very supportive. He stopped eating rice too... whenever he makes pasta now, he makes brown pasta, like whole wheat pasta instead of white pasta, so... he’s somewhat helping me. (Gayatri, first interview, 21/06/12, pp. 5)

Here, biopedagogical lessons on choosing lower glycemic carbs such as whole wheat products over higher glycemic carbs like white rice have capillary-like effects, influencing the carb-consumption practices that extend beyond care of the self.

As mentioned previously, food discipline is not confined to the individual as “diabetes self-management” might suggest, but involves a collective effort, shaping family members’ food habits and social relations around food in supportive (albeit, in sometimes critical) ways. That is, collective carb-consciousness and surveillance are not entirely “negative” or punitive, but expressions of care and support. The above accounts also illustrate Ristovski-Slijepcevic and colleagues’ (2010) findings that dietary governmentality does not influence its power in unidirectional way, but functions in a network-like fashion extended to and through the family as a site for the promotion of ‘healthy eating.’ Pregnant women diagnosed with GD act as one of the nodes in this network through which power is distributed.

However, strategies of dietary governmentality also have constraining effects. As noted in the previous chapter under ‘racial carbopolitics as biopedagogy,’ particular kinds of foods such as whole-wheat, high-fiber, low-glycemic carbs that are fashionable among the white middle-class, are privileged and valorized on the hierarchy of carbs, while high-glycemic carbs like rice are inferior and unhealthy. This biopedagogical strategy implicitly operates as a
neocolonial initiative to assimilate non-white bodies and carb-consumption practices to dominant cultural norms of whiteness. Moreover, racial carbopolitics works in subtle ways to discipline, regulate, and thus colonize non-white cultural practices to unmarked norms of whiteness. But as the following section demonstrates, women in the study are not always ‘disciplined’ in the intended ways: as docile or governable patients.

2 Figures don’t lie, but women figure

While the figures on the glucometer don’t lie, some women in the study figure out clever strategies to produce ‘good sugars.’ Although clinicians may be ‘the experts’ on diabetes management strategies, their theoretical knowledge of managing blood sugars are overshadowed by women’s newly acquired expertise of living with GD. Perhaps even more than clinicians, women have refined their experiential knowledge of how to control their blood sugars through the daily acts of testing and figuring out how to yield ‘good sugars.’ Women then mobilize their subjugated knowledges to engage in agential acts of resistance.

By the second interview, women who falsified their logsheet with ‘good sugars’ soon find out that this strategy does not always work to fool clinicians. Having discovered that clinicians have a penchant for verifying their logsheet recordings by scrolling back into the meter memory, women have had to figure out other subtle strategies to yield ‘good sugars.’ Through the process of taking stock of their carb-consumption and monitoring their sugars 2 hours after their meal, women soon learn the ‘tricks of the trade.’ For instance, rather than strictly following the dietitian’s recommendation, women figure out that they can reconfigure the meal plan so that their sugars register as optimal on the glucometer. They do this by switching the meals with snacks, binging on carbs after their 2 hour post-meal test, skipping their next meal, and engaging in exercise to lower their blood sugars. In doing so, they achieve good glycemic targets while getting away with the occasional carb indulgence and even circumvent the possibility of being prescribed on insulin. This section exemplifies how women enact and resist expert knowledges related to diet and exercise in order to negotiate tensions around food discipline and desire for verboten carbs.

Both Penelope and Roxanne literally and figuratively mobilize lessons learned in class about the benefits of physical activity by “burning off” elevated sugars after indulging in
forbidden foods. They put the theory to the test by checking their blood sugar after walking and figure out that it is a good strategy for reducing sugars, especially after overeating or eating prohibited carbs. For instance, the evening after the GD class, Roxanne makes a confession:

My first night [after the class], I had Iced Cap [from Tim Horton’s] and a donut! But I walked it off! (Roxanne, second interview, 09/07/12, pp. 6)

When Roxanne tested her sugars 2 hours after, she proudly declares that her sugars were normal. This prompts Penelope, who was interviewed alongside Roxanne, to share a similar story of overindulgence.

On Friday... I was burning off a lot of energy [from doing physical work] and I started to shake ‘cuz I was starting to get really hungry... So I walked over and got some fried rice with sweet and sour chicken and veggies, and I asked for extra sweet and sour sauce! (laughs) I love it so much, and I was starving!... and 2 hours later, that’s why my sugar was 8.4 [target is under 6.7 mmol/L], but it was 9.8 just before 2 hours. I was like testing 15 to 20 minutes before the 2 hours was up. But like I said [to the nurse who asked her why it’s high], I walked from the station at [intersection] to [another intersection] and it dropped more than a point! And that’s in 10 minutes!... It went from 9.8 to 8.4! (Penelope, second interview, 09/07/12, pp. 6)

Here, the glucometer serves as a useful tool to affirm the benefits of activity, but it also offers insight on “what to eat” and “what I can get away with.”

Although the glucometer operates in panoptic ways to regulate and govern dietary conduct, it also generates curiosity which contributes to refining their subversive strategies. Penelope shares her experiential knowledge of glycemic effects of fruit versus vegetables.

I’m eating a lot of bags of the, small bags of the ...carrots. I bring those in to munch on at work, where I was bringing in a lot of fruit before. Now, I’m bringing in the veggies...’cuz with veggies, my sugars don’t go up. At least I find that when I eat a full plate of veggies, I’m fine, but I have like 5 slices of apples and it’s like [makes a whistle sound] it’s sky high!.... I do some tests, here and there. And it goes up almost immediately! Like within 10 to 15 minutes of eating it. And I can see the difference! And I’m like ‘holy smokes!’ (Penelope, second interview, 09/07/12, pp. 5)

Although clinicians do not enforce or even recommend testing blood sugars shortly after a snack or meal, women are highly curious and proceed to do so on their own even when it is not time to test.

Women in the study also mobilize their experiential knowledge to return the gaze of their partners. Even though their husbands’ radar is on high alert and they offer unsolicited advice that borders on accusatory, their comments have minimal effect. Penelope and Roxanne deploy
lessons derived from both expert and experiential knowledge in order to downplay their indulgence. The following is an excerpt of Penelope (P) and Roxanne (R) from the second interview:

P: My husband only starts bugging me when I go for the Iced Cap or the Iced coffee at McDonald’s. And I’ll get one of those, like maybe...maybe once a day, but that’s like in the mid-afternoon when we go for our break at work. And by then, my sugar levels are down anyway, so...He figures I’m going to do it anyways and he’s like ‘whatever.’ But as long as it seems okay, then he’s like ‘well, you’re controlling it, you know what’s going on, that’s fine.’ But if he saw that they were higher than they should be, then he’d freak out.

R: Yeah, same. If he sees the high sugars, then he’ll freak out, but I have reasons why. It’s [high] because we’ve been sitting in the car for so long, and I get tired and sleepy, especially in the hot day when you’re in the car all day...Yeah, my husband bugs me when we’re driving and I want to stop by McDonald’s or Tim Horton’s. And he goes ‘are you sure?’ And I’m like, ‘just go!’... He gets more of the Iced Cap than me...(whispers) and I’ll have the donut (laughs)

P: Yeah, that equals it out! (laughs)

(Penelope and Roxanne, second interview 09/07/12, pp 1-2)

By the second interview, women have figured out ways to outsmart clinicians. For example, on the days Mena is not required to test her sugars, she takes full advantage of indulging in carbs because she knows she does not have to test or record it on her logsheet for clinicians to question. When I ask Mena if she deliberately restricts her carb intake on the ‘sugar testing days’ to ensure that her sugars are within target, she openly admits to this:

Ohhhh yeah! I do! It’s instinctively like that. I know what to eat to make sure it’s good ‘cuz the doctor will look at that! Then, when the number is good, I treat myself... ummm, maybe have like an extra meal or dessert, or a little bit of sweet. (Mena, second interview, 04/09/12, pp. 5)

Mena is not the only one who has figured this out. From what women say, the ideal time to indulge in “an extra meal or dessert” is after their 2 hour test because the next testing time is 2 hours after the next meal which they often skip. By the next testing time, their sugars will have been metabolized and returned back to normal.

Through repeated experimentation with the quantity and quality of carbs, exercise, and monitoring their sugars, women figure out ways to bring about optimal blood sugars. Mena discloses what kinds of things she eats for breakfast to yield a ‘good number’:

I just have one slice of bread and egg, or bread and cream cheese with honey, that’s it... but I don’t take a lot of honey, just one teaspoon... I only take a bit and eat in moderation... At night,
mostly it’s our traditional bread [roti] with curry or something like that and salad...Our roti is equivalent to two slices of bread, so I measure it...the sugar comes in between 6, like 6.5 or 6.4. Sometimes, when I walk a lot after the meal, it even becomes 5.9... Like in the beginning, that’s what I was trying to do. I would experiment in the beginning. That’s how I worked it out. (Mena, second interview, 04/09/12, pp. 6)

Mandy also tries to generate good numbers by purposefully following the diet on the days that she’s required to test her sugars. She discloses “I just can’t eat [cream cakes] on the sugar testing day.” Although women on “diet-only” acquire great acumen with diabetes self-management, carbs-consciousness still persists to some degree. Mandy declares,

I still think about it. I try to eat healthy as much as I can. But, I kind of have... like, I think 2 extra snacks every day. And... if I really want cream cake or cheese cake, I can have one piece... Now, like okay I just watch it [laughs]. (Mandy, second interview, 10/09/12, pp. 4)

When I ask her whether she has learned from experience (i.e. experimenting with the quantity of carbs and testing her sugars), Mandy responds in the following way:

Yeah, I kind of like, try. The first day I try a little piece [of cake], and the second day, I was like 3.9 in the morning and I said ‘hmmm, I’m fine.’ And then the next day, I went a little bit bigger [laughs]... And then I think I can have like this much big piece [gestures the size of the piece]. Like if I can eat it, and try next test to see if it’ll be fine...I tried it one day and still tested like 2 hours after I ate it... I think it was a little bit up but not over the maximum point...I think it was 6.1...And then I say ‘okay’ and then next day, it was totally back to normal. The next day, I just don’t have the cream cake [because it’s a sugar testing day]. (Mandy, second interview, 10/09/12, pp. 4)

Other subversive strategies include reconfiguring carb intake in terms of portion sizes and pace of eating. For instance, in order to produce ‘good numbers,’ Minnie eats a small portion of her meal and then finishes it off two hours after testing her sugars:

I like to eat bread so before I used to eat one or two in the morning, but now, at least, I just get one or two bites of it. I have one or two bites of it and after 2 hours, I eat the rest of the bread. So, I just, you know, I slow down the pace. (Minnie, second interview, 05/11/12, pp. 4)

By “experimenting” with carbs and subsequently monitoring their sugars, women figure out alternative ways to negotiate tensions between food discipline and desire. Not only do women figure out ways to yield ‘good sugars’ two hours after their meal, women’s narrative resonate with the notion of “negotiated pleasures” put forth by Jallinoja, Pajari and Absetz (2010) This refers to the diverse strategies used by individuals to negotiate tensions between food-related pleasures and overall health-seeking lifestyles. In other words, each episode of
consuming an ‘unhealthy’ treat is negotiated, balanced, and rationalized. For women in the study, this process of negotiation and rationalization regarding their dietary practices, or as Natalie Armstrong (2005: 162) calls it “self-positioning,” is crucial to secure their subjectivities as ‘good mothers.’ Given that carb-indulgence/hedonism potentially opens women up to charges of irresponsibility and contributes to conflicting subjectivities, women actively engage in the process of self-positioning in order to account for tensions that arise from food discipline and desire in ways that are relevant for them within their particular social context. In this way, women do not passively accept expert-defined discourses, nor do they simply adopt recommendation unquestioningly without consideration. Rather, women demonstrate agential acts of resistance through mobilizing their experiential knowledges in ways that subvert expert knowledges.

Moreover, what is so intriguing in the above accounts is that women demonstrate resistance and agency through mobilizing a panoptic technology (i.e., glucometer) that seemingly promotes objectification. Their narratives run counter to the humanist argument that “selves need to be protected from technological objectification to ensure agency and authenticity” (Cussins, 1996). Women in the study illustrate Cussins’s (1996) central point that there are non-reductive manifestations of objectification that make possible a notion of agency not opposed by, but pursued in objectification.

2.1 Carb-consciousness and confessionals

Although women demonstrate carb-consciousness to varying degrees, there are differential effects on those who are on different regimens of insulin treatment. More specifically, women on once-daily (bedtime) insulin are even more carb-conscious than women on multiple daily injections because they are not prescribed a meal time insulin that will lower the rise of blood sugars 2 hours after the meal. Thus, carb-consciousness permeates and penetrates into the everyday existence of women on bedtime insulin. Gayatri laments that the hardest part about managing diet with once-daily insulin is “keeping up the food level, what I eat.” When asked to clarify what she means by this, Gayatri explains:

Sometimes if I’m hungry, like I told you, I eat extra roti or extra whole wheat bread and that it did bring up my sugar level, like 1.0 or 2.0, like that. And that makes me feel, like pressure, like
stress, and I’m like ‘oh my god! I’ll be one point higher, so I should be eating less, just to maintain. (Gayatri, second interview, 21/06/12, pp. 9)

It is apparent from what she is relaying that every carb that she puts in her mouth results in an elevation of her sugars. Not only that, it sounds as though Gayatri is obsessively monitoring her sugars to determine the effects of the carbs on her blood sugar levels. This constant triangulation between the quantity and quality of carb, the postprandial rise in blood sugar, and then figuring out if it is still within the target range takes a psychic toll on her.

Similar to Jennie’s previous account of feeling excluded at family meals as a result of rice restrictions, Gayatri explains that her preoccupation with the effects of carbs on her blood sugar excludes her from enjoying social activities with her workplace peers.

Like yesterday, it was so hot, the heat and humid. And everyone in the office would get, like, iced cappuccino, like, iced Cap and Coke. And I’m like ‘get out of my face!’ I don’t want to see anyone else having it!... I couldn’t take it, so I had to go and get some water and drink the water. And I’m like ‘I hate you all!!!’ (laughs) Just like, everybody’s... like it’s hot and if I wasn’t diabetic, like, I’d have like 5 cappuccinos or 5 Iced Caps or stuff like that, so... it’s just like, I can’t have it, and people are having it and I’m like craving it... It’s so depriving and depressing. (Gayatri, second interview, 21/06/12, pp. 9)

While her colleagues are free to indulge in carb-laden beverages without having to worry about its effect on blood sugar, Gayatri cannot participate in the luxury of being carefree about carbs, leaving her with only one alternative: water. Not only is this unfulfilling, it’s offensive, unfair, and deeply frustrating. In times like these, Gayatri mourns for what she calls “a good meal”:

Sometimes, you feel you want to eat like junk food or like a good meal... do you know what I mean when I say good meal? It’s not 1 roti and curry, it’s like a good portion, full of meal. It’s not just necessarily rice, but veggies, rice, and meat, like chicken, or anything. But you can’t because you’ve already had your lunch. (Gayatri, second interview, 21/06/12, pp. 10)

This last comment is informative because it reveals the degree to which she is so hungry after lunch that she is ready for another meal – but not just any meal, a good meal. She explains “So, you have to wait for that 2 hour and even if you wait for that 2 hours, you’re not having a meal, you have to wait for your dinner time. So, that time, I’m going to pass out. It’s like stress!”

Precisely at these moments, Gayatri feels like cheating on her diabetic diet. It is as though food discipline heightens her desire for carbs. Frustrated with carb restrictions and feeling excluded from social activities revolved around food, she blurts out the following:
Sometimes, I feel like cheating! But I haven’t so far. I haven’t. Whenever I feel like cheating, I think ‘no, that’s not good for the baby.’ So, it’s not about me anymore, so that’s kind of a big barrier for me. But... I’ve felt so many times that I want to cheat. But, I can’t! (Gayatri, second interview, 21/06/12, pp. 9)

Her desire to indulge is put to a halt as soon as she thinks about the baby. She’s caught in a catch-22: satisfying one’s cravings for a few minutes or spend a lifetime wondering whether high sugars from indulging in carbs had a negative impact on the baby’s health.

Maternal sacrifice for the sake of the baby and being a “good mummy” are the key discursive drivers that keep Gayatri from cheating on her diet. During the second interview when I asked Gayatri how things are now with managing diet – especially with eating whole wheat products, she responds in a way that illustrates how she has been reformed by the regimen.

Now, I’m so used to it! Because it kinda like I don’t want anything to happen to the baby, right?! I’m like, one month after this, I can eat anything I want. Well, it’s not like I can eat anything I want. I should be healthy, but still, I mean anything I crave I’ll be able to eat, so... I had to cut down and eat healthy and be good mummy... I stopped all that craving now, like, it’s like I’m mentally prepared myself, so...it’s good. (Gayatri, second interview, 23/07/12, pp. 3)

Even though Gayatri cannot satisfy her cravings, there is no harm in fantasizing and speaking candidly about them. Desires for sweets are still alive and well during the second interviews. “Sometimes, I crave, like, fast food, or like sweets, or like ice cream.... Like with weather like this, you want some ice cream! [laughs] You just WANT it!!!” When I ask Gayatri whether it is difficult to see her family members enjoying sweets in front of her, she quickly responds: “Yeaaaahhh! I’m like, ‘mom, you’re diabetic!’ And she’s like ‘yeah, but I take medication, so I’m allowed to.’” But in her mother’s case, she’s not pregnant with child, so there is nothing to impede her from indulging on sweets.

Although carb-consciousness continues throughout pregnancy, women boldly share their carb confessions. When Penelope admits to “cheating a little,” Roxanne is at once relieved and immediately confesses, “I cheat too!” Unlike the first interviews when food discipline loomed large in the foreground, Penelope and Roxanne admit to making exceptions, refusing to adhere to the dietary recommendations and giving into cravings for Iced Caps, donuts, French toast with maple syrup, and Bubble Tea. Mandy also finds that she can “eat a lot more,” including her favourite cream cakes. She confesses “secretly, I started a little bit of cream cakes...(laughs). Yeah, but the sugar is fine. So, I’m like ‘okay, it’s fine’ [laughs]...a little bit of treat.”
Vicky is quite candid about having “a little cheat here and there.” She openly admits to what happened on Halloween night:

I have this sweet tooth now, like in my last trimester. I’m not gonna lie. Like Halloween night, I had like 4 or 5 chocolate bars (laughs). And it’s like, my mom’s like ‘don’t!’(sighs). [My kids] are on my case too. My daughter’s like ‘mom, mom, please don’t, don’t, you’re gonna hurt the baby!’ I’m like, I’m not gonna hurt the baby, I’m not doing it everyday... Gotta cheat sometimes! (Vicky, second interview, 05/11/12, pp. 2-3)

Not only does she take pleasure in treating herself with sweets, according to Vicky, her baby enjoys it as well. She accounts for her actions phenomenologically:

Like, every time I eat a chocolate bar, it’s like the baby loves it! [laughs]... Like a couple of weeks ago, there was a day when the baby didn’t move for like 2 days, and I put a chocolate bar in my mouth and it’s like...active right away! I’m like ‘it’s the sugar maybe’[laughs]. (Vicky, second interview, 05/11/12, pp. 2)

Underwriting Vicky’s comment is an interesting inversion that runs counter to of risk discourses that discursively position the woman in opposition to her fetus. Here, Vicky justifies her desires for forbidden sweets by aligning herself with the baby in a way that resists regimes of truth around risk. It is as though this alignment signposts a subversive bond that they share.

Women’s carb-confessions of “cheating here and there” can be conceptualized as agential acts of resistance. Madden and Chamberlain (2010: 306) suggest that such resistance reveals a reaction against dominant cultural norms of morality that surround food and also serves as a means by which women can talk back to power and effectively alleviate the anxiety they experience when engaging in ‘forbidden foods’ or ‘risky dietary practices.’ In doing so, women in the study legitimate their ‘forbidden’ or ‘risky’ practices by offering alternative discursive constructions of themselves as deserving individuals who derive pleasure from giving into desire for coveted carbs. Whether it be brunch with a girlfriend to celebrate her pregnancy, the hot weather necessitating a slushie or Iced Cap, the social circumstances of sharing a Bubble Tea with her son, or opting for a bagel during a busy time at work, women have their logics and legitimations for “being far more lax” and factor in desirous carbs into their diabetic diet. Here, the tension between food discipline and desire relate closely to Foucault’s productive hypothesis, a retort to Freud’s repressive hypothesis, with regard to the productive power of food discipline. As described by Ann Stoler (1995), the naming, describing, and dissection of a condition or characteristic does not control the condition but actually goes to enable or create it. What is so
interesting about the narratives of women on food discipline is that it seems to produce even more desire for coveted carbs.

The act of confession, whether in church or the clinic, is a key component in the operation of power/knowledge. In *The History of Sexuality: Volume One*, Foucault (1978) points out that since the Middle Ages, the West has made increasing use of the rite of confession in the production of truth. Samantha Murray (2009: 82) asserts that acts of confession “demonstrates the ways in which we have embodied the biopedagogy of ‘proper’ bodies.” Murray contends that we mobilize confession as a tool in producing the truth about ourselves in myriad contexts: personal relationships, juridical matters, and medical consultation. Foucault is specifically interested in how confession plays a central role in individualization, in the processes of subjectification, in systems of categorization and systems of discipline that pivot around the binary of normal/deviant. Women’s carb-confessionals offer insight on the ways in which confessions are employed not only to demonstrate resistance but also to reconcile the tensions between conflictual subjectivities that arise when desire for carbs overrides food discipline.

### 2.2 Conflictual subjectivities

Food discipline and desire for coveted carbs co-exist and compete, operating simultaneously in women’s everyday accounts of living with GD and giving rise to conflictual subjectivities. Madden and Chaberlain (2010: 292) explain that conflictual subjectivities arise when women are positioned as immoral, both as individuals and as mothers when they do not engage in “correct” dietary practices. What is more, the authors argue that conflictual subjectivities perpetuate subjectivities of anxiety around dietary practices. In order to overcome contradictions of simultaneously being cast as the fetus’ ardent protector and most dangerous threat, as Ruhl (1993: 95) puts it, some women in the study seek to re-position themselves by offering a variety of legitimations for giving into desires for coveted carbs while engaging in food discipline. In doing so, they subvert expert knowledges on carb-restrictions yet they reveal how risk discourses have unintended consequences of locating women as morally reprehensible.

Conflictual subjectivities also arise when frustration and uncertainty about food makes women’s subjectivity as ‘good mother’ suspect. Throughout her pregnancy, Kaya’s relationship with food is fraught with doubt as evidenced in her fluctuation in weight. Like several women in
the study who starve themselves after being diagnosed with GD, Kaya recalls her frustrations and concerns with weight:

I started to lose the weight as soon as I found out that I have the sugar. I reduced the food and then I lost weight. Before, they said I’m gaining too much weight. So, I watched out and now they say I’m losing too much. They said at least not gain, keep it steady but now they say I’m losing now. Before I was gaining 5 pounds, 7, 8, or 9 pounds, and now I’m all the way down... When I had an appointment with the OB, he said that I lost 6 pounds... he said that it wasn’t good. I should have mentioned it to [the endocrinologist]. I lost weight! 6 pounds I lost... maybe that’s why I was feeling weak too!...The next appointment is like July 31st and he wants to see a little bit of weight going up. Because within a month, not even a month, I lost 6 pound and that’s not good, so, they’re sending me to ultrasound to make sure the baby’s growth is okay because I lost weight. (Kaya, second interview, 23/07/12, pp. 3)

Kaya’s preoccupation around food and fluctuation in weight is tied to the size of the baby and feeling responsible for ensuring the baby gets enough nutrition. She shares the kinds of thoughts that run through her mind whenever she encounters food:

The size of the baby...because when I see the food, I’m like ‘no, I can’t!’ But at the same time, you know what? I’m so concerned if I’m eating the right amount of food. And I get low, that worry, I have because I lost 6 pounds and I wonder if the baby is getting enough food. So, when I worry about it, I just go and grab a glass of milk and drink it. But then I think ‘milk is okay, isn’t it?’... Sometimes I don’t see the baby move, and even for one day. And so I’m like thinking ‘am I giving him enough food?’ (Kaya, second interview, 23/07/12, pp. 2-3)

More than any of the women in the study, Kaya illustrates the tenuous relationship with food, simultaneously desiring and disavowing it:

I crave mango... I used to eat 3 or 4 mango a day! I don’t eat mango now, not at all! As soon as I found out that this baby might be bigger, I cut down, totally down. I don’t eat much fruits now, only like orange and banana... and I drink milk, but not much. Because we used to eat a lot of rice... but now it’s like a little portion... And sometimes, I want to drink 7up or Sprite so badly, like soda so badly, but I didn’t know if it’s okay to drink it... well, it’s because of the sugar, I don’t touch it!... I think sometimes I want to drink it and also to eat so much, but I’m controlling it. (Kaya, second interview, 23/07/12, pp. 3-4)

When the simple act of eating, once associated with pleasure, is now laden with fear and doubt, Kaya questions her ability to manage her sugars, or worse, she questions herself as a mother-to-be. In her narrative, both food and maternal subjectivity become suspect. Not only does she second guess everything she puts into her mouth, she questions her ability to manage her sugars and weight as well as the possibility of carrying this pregnancy through to term. Kaya’s efforts to achieve ‘good sugars’ and ideal weight gain are imbued with uncertainty and self-doubt;
consequently, her moral status both as mother and patient is thrown into question. This creates a state of continual anxiety around dietary practices which undermines her confidence.

Although social support is essential during pregnancy, ultimately the responsibility rests heavily on the shoulders of woman to ensure the health and well-being of the baby and in a sense to protect the baby from herself. Siva makes reference to this when she says the following:

I have got the support too, but it’s mostly up to me, like if I’m neglectful, then it’s going to affect the babies. It’s an everyday thing. Like, it’s three or four times a day, you have to be concerned about injecting yourself and how you eat. It’s like a whole lifestyle change. Like you can’t eat whenever you want to and you just have to be ON it! Get the whole schedule adjusted around you, right?! Before it was like we have dinner together at home and stuff, but now it’s like I don’t wait for anybody, it’s just me. Because my sugar would drop! It’s like, even at home, the concern is on me. I get, you know, I get my needle done, and the food done, prepare the food for me. (Siva, second interview, 26/11/12, pp. 6)

What is interesting here is how responsibility is so intimately tied to risk. Discourses on risk and responsibility simultaneously cast the pregnant woman as an authority and an agent in the care of herself and her fetus even while it supports a subtext which invokes the very opposite: the irresponsible pregnant woman who endangers the health and well-being of her fetus should she not be “ON it.” This connects to Lealle Ruhl’s (1993: 95) argument: “the effort here is not to reduce maternal risk during pregnancy, but rather to reduce possible risk to the fetus due to maternal behaviour.” Even though intensive self-care practices pertaining to GD is temporary, the enormous responsibility placed on women throughout pregnancy to reduce risk has profound and enduring effects that contribute to the making of an emergent type of racialized subject.

3 Making of the multicultural bio-citizen

By the third interview conducted with women post-partum, their narratives illustrate how normalizing disciplinary practices have contributed to the making of a multicultural biocitizen. This term brings together the concept of ‘biological citizen’ or ‘biocitizen’ from Foucauldian scholars and critiques of multiculturalism from anti-racist scholars. By multicultural, I do not mean the popular song-and-dance or ‘Saris and Samosas’ version of tolerating and celebrating diversity that multiculturalism promotes, but rather in the way that it operates as a governmental strategy that manages through racialization (Bannerji, 2000). A multicultural biocitizen is one who continues to take responsibility of monitoring and managing her blood sugars even after
pregnancy in order to allay anxieties about developing type 2 diabetes while distancing herself from negatively evaluated aspects of her cultural lifestyle viewed as contributing to racial disparities in diabetes. Moreover, the multicultural biocitizen draws upon the language of biomedical risk and discourses of multiculturalism to make sense of ethnicity as a risk factor. In the following paragraphs I will elaborate on these two areas of scholarship and offer empirical examples that illustrate the ways in which women embody multicultural biocitizenship.

3.1 Diabeticized biocitizens

Drawing from Adriana Petryna’s term ‘biological citizenship,’ Nikolas Rose in writing with Carlos Novas (2005) widens the term in order to emphasize the ways in which citizenship has been shaped by biological conceptions of human beings, particularly through the language of biomedicine. That is, notions of citizenship involve the ways citizens should conduct themselves in relation to their health and reproduction. Rose (2007: 24) argues that the citizen is not merely a passive recipient of social rights, but the citizen is also obliged to actively care for and take responsibility for his/her own body, and for a woman, those of her spouse and offspring. While the state engages in managing the collective health of the population, individuals themselves are called upon to exercise biological prudence for their own sake, that of their family, that of their own lineage, and that of the nation as a whole. In doing so, individuals participate in the “ethic of active citizenship” in a way that maximizes health through lifestyles, almost to the point of being obligatory. Furthermore, Rose (2007: 25-6) asserts that biomedical discourse is actively involved in the production of biocitizens insofar as we “experience, articulate, judge and act upon ourselves in part in the language of biomedicine.” Women’s narratives, particularly during the third interviews, demonstrate characteristics of biological citizenship in relation to concerns about converting to type 2 diabetes.

Even though GD has “disappeared” after delivery and their blood sugar has returned to normal, women report being haunted by lingering concerns of developing type 2 diabetes and thus continue to engage in disciplinary practices in order to allay their anxieties. For example, Roxanne says “whenever I’m eating something, I think ‘well, I can’t eat too much of this’ – my mind still goes to diabetic mode.” She elaborates further on what she means by this:
I’m like ‘I can’t eat too much of this because when I do my test, then it’ll be high! Which is a good thing because I don’t want to eat too much of it and I’m portioning my food now as opposed to not portioning it...Because I’m more aware of sugar that’s in everything. So, I’m still portioning my eating...like I eat when I’m hungry, but I’m still portioning it... I don’t eat too much of the bad things. I’m trying to eat more of the good things. [laughs] (Roxanne, third interview, 22/10/12, pp. 7)

Roxanne’s comments are rife with residual worries about diabetes, reverberating at the level of quotidian life. Proscriptions and preoccupation with portion sizes still prevail, post-partum.

Perhaps more than other participants in the study, Minnie is deeply worried about developing type 2 diabetes after delivery. She says “I hope I won’t get type 2...I’m still concerning about that [nervous laughter]. You know, like I told you, maybe I don’t have a good digestion ability of the sugar...ummm, like whenever I eat sweet buns, the sugar in the blood goes up very quickly...So, I can’t tell in the future.” In attempts to assuage her anxieties about developing type 2 diabetes, Minnie continues to monitor her blood sugars, almost to the point of being obsessional:

Every day before I eat, I think about what to eat and I think whether my blood sugar is going up or not. You know, I have to, you know, wait until 2 hours later... you know, sometimes, I just keep checking, like maybe up to 2 hours... I found that sometimes it’s higher than I thought and then, um I check the time and I’m like ‘oh, it’s not 2 hours yet, maybe it’s one and a half or something’...two times like that...It’s like the first time I get the blood from the left hand, it was 4.8, no, no 4.5 at first, and then I um, there was a sudden impulse that I might be higher. I got another package of the strips and I said ‘okay, I’ll do it again.’ So, I tried again, this time I get the right hand, blood from the right hand. But it comes like from 4.5 to 4.7 and I feel very confused and I checked back from the left hand, and it’s 4.8. And then I checked again, and it was 4.6. And the left hand is lower than the right hand, 4.6, and then the other time the right hand it was 4.7. So it went from 4.5 to 4.8 four times. (Minnie, third interview, 14/01/13, pp. 2)

When I asked Minnie what prompted her to check her sugars multiple times that moment, she offers the following rationale:

You know, I sometimes I try to check myself to see if I’m in a healthy state. Like, um, if I had sweet things before, like the night before, I will check in the morning to see if it’s normal. So last time, I told you and [endocrinologist], I have a poor ability to digest food, I think, that’s not very good. And so, I, so the day before I get these 4 digits, I ate lots of dates...it was very sweet, right?! So it was very late in the night, I still ate a couple of dates. I boiled the dates and then the water is sweet, right?! I still drank a cup of that water. And I need to make sure that I have, you know, um...the ability to consume sugar, right?! So, um I tried and I called you that time...So I, the time before, when I had sweet things or things which contain more or as much sugar, I will check later...I always keep thinking that, like today, my blood sugar is normal and each time I eat, I keep thinking about it. I think about it. But I look at the amount I have swallowed and then the sweet thing I drank, I would, you know, um, I will go and check it...I try to, you know, why I
have such an impulse, like even an hour or half an hour, or 4 times in 2 minutes, right?! I just have the impulse to do something. (Minnie, third interview, 14/01/13, pp. 3-4)

This repeated “impulse” to check her sugars after she eats carbs illustrates how normalizing disciplinary practices have left an indelible mark on her mode of thinking, acting, and being. Minnie’s preoccupation with the *norm* exemplifies Ewald’s (1990: 154) point that “the norm can work to create inequalities.” The norm invites Minnie to imagine herself different from others, forcing her to turn back upon her particular case of having “a poor ability to digest food.” More specifically, as Ewald (1990: 154) contends, “the norm affirms the equality of individuals just as surely as it makes apparent the infinite differences among them.”

Although post-partum self-glucose monitoring is encouraged by diabetes clinicians (albeit only once a week), Minnie does it obsessively to the point of inducing, what Abby Lippman (1991:31) calls “iatrogenic anxiety.” When I inquire whether this practice makes Minnie anxious, she responds “I know that this is a warning to my health”. She recounts a recent moment when she discovered an elevated reading:

You know, like the last time, I got within an hour, I got 14.2 and that nearly killed me! (nervous laughter) I’m so anxious about it, right?! I was scared but I feel I was lucky...I was lucky to find that I have this habit from pregnancy and I have the really diabetes or just like pregnant diabetes. That is lucky thing to know because health is so important, right?!...It’s like, you know…like I told you before, it’s about my health and about the baby’s health and about the family, right?! So, that’s the impulse that makes me grow further and further. I have to [sighs], so…that’s something that I try for me to do...So, like, if I don’t do that, maybe, I’m going to suffer a lot, you know, in the future. And also, you know, to have a healthy baby, eat right, you know…I just take it very seriously…I’m quite aware that we have the higher potential, possibility to get the diabetes than those who do not have diabetes during pregnancy...I’m aware of that. I’m aware that in the future, that might be the case for me. I told you that before I was so concerned about my health. And I really take myself as a diabetes patient! (Minnie, third interview, 14/01/13, pp. 4-5)

Minnie is the quintessential diabeticized biocitizen in the sense that she engages in the process of her own self-governance through endless self-examination, self-care, and self-improvement in order to moderate her burden on herself, her family and society. These strategies rely on potent affects of anxiety and fear, yet she considers herself “lucky” to have acquired the skills of diabetes self-management during pregnancy to prevent future diabetes. What’s more, her narrative demonstrates how neoliberal discourse dovetails with discourses of motherhood. Minnie gestures towards notions of individualism and responsibilization characteristic of being a “rational” and autonomous subject who is doing everything for the health of her baby, herself
and her family. She illustrates the ways in which she performs and embodies such discourses through restraining herself from fulfilling her desires for carbs, following the dietary regimen, yet modifying them in ways that make sense for her. Minnie’s narrative demonstrates that the moral imperative to care for one’s blood sugars in order to care for one’s offspring does not abate after the birth of their child but continues thereafter.

3.2 Multicultural biocitizen

Women in the study also demonstrate another dimension to the diabeticized biocitizen in a manner that reflects and reproduces discourses of multiculturalism. In particular, women frequently mobilize the trope “it’s cultural” in a way that places their cultural characteristics as different or deviant from the ‘Canadian’ national subject. Women’s use of ‘culture’ mirrors multiculturalism in the sense that race becomes reconfigured as culture. Razack (1998: 60) refers to this as the “culturalization of racism” and argues that this has the effect of placing onus for racial inequalities (and by extension, health disparities) experienced by people of colour onto their own cultural inadequacies. By elevating and reifying ‘culture’ as the most significant aspect of the nation’s relations with its (internal) Others, not only does this deflect attention away from the disquieting history of racism in Canada, it casts people of colour as culturally problematic, irrespective of their place of birth, their legal citizenship status, or their length of residence within the country. In other words, multiculturalism has had the effect of constituting people of colour as possessing an excess of culture that marks them as outsiders to the nation (Thobani, 2007: 162). In turn, people of colour learn to see themselves through the nation’s eyes as problematic, ill-informed, and unhealthy even when they contest such images themselves. The following excerpts illustrate the effects of multiculturalism in the way that women as multicultural biocitizens employ ‘culture’ to make sense of the link between race and risk.

Jennie’s observations of the presence of women of colour who populate the clinic reflect biomedical understandings of GD in “high-risk ethnic groups.” In an attempt to rationalize the link between race and risk, Jennie meditates on carbs common to members of a “high-risk ethnic group”:

Well, I see a lot of ethnicities. Most of them are Asian, I think. So, I cannot tell if they are Chinese, Japanese. But, I see a lot of Indian people too. So...obviously, diabetes is an issue with those kinds of cultures and those kinds of ethnicities…I’ve been talking to some friends who are
from Philippines, some who are Asian and Sri Lanka... I mean... the common food: it's the rice, right?! (laughs) And then, we...tend to eat more rice than meat or veggies... So, it’s a cultural thing. (Jennie, second interview, 29/01/13, pp.10)

Here, causal attribution to common cultural carbs reflects and reinforces biomedical perspectives on dietary risk factors.

Mirroring the language of multiculturalism, the common quip ‘it’s cultural’ is invoked by women whenever they make categorical comparisons between ‘lifestyle’/ habits of ethnic ‘Others’ and ‘Canadian Canadians.’ This is evident in Kaya’s remarks about cultural differences regarding meal times:

Because most Asian people, they don’t eat on time. And they, everything is late. Late breakfast, late lunch, late dinner, and they go to bed late... it’s cultural. (Kaya, first interview, 03/07/12, pp. 2)

What’s intriguing about Kaya’s comment is that she does not specify ‘Canadians’ as the comparative group, but it is implied in the sense that it is present in its absence. Jennie is more explicit in making categorical comparison when she talks about cultural differences in physical activity:

[Exercise is] not something we consciously do. Yeah. Like you see people from here...Occidental people, I mean, you see in their routine, they have an hour to go to the gym or an hour to do jogging. But it seems to us, it’s not part of a program or not part of a daily routine. As I was saying, you go to work and if you have to walk like 20 minutes, okay, but it’s not something you have to do, you have to exercise, you have to do physical activity... So, it’s really cultural. (Jennie, second interview, 29/01/13, pp.7)

Here, Jennie makes a categorical distinction between normative Anglo-activities such as going to the gym or jogging from activities of daily living which she attributes to being “cultural.”

It’s interesting how culture immediately invokes categorical comparisons between ‘us’/non-white ethnic groups and ‘them’/white/ ‘real Canadians.’ When I asked Mandy about her thoughts on the prevalence of GD in ethnic groups, she instantly makes an ‘us’ vs. ‘them’ distinction:

You mean typical like, culture, Asian people, not like white people?... I think it’s because we eat a lot of rice. And... umm, and I know a lot of white people are like...[pause]... vegetarians. In China, we don’t have that. I had never heard of that...but like here, a lot of people are like vegetarian. They don’t even eat meat...and they even eat more like sweets, like chocolate. Like that’s where we’re not a big fan of those, like in a Chinese family...I don’t know
because...actually, Canadians are looking way bigger than us. Seems like they’re supposed to get diabetes (laughs), you know, like their body type... Because you know how the Canadians, they’re moving. They’re doing exercise while pregnancy. But in China, parents almost put you in bed and don’t let you move if you’re having like morning sick or little bit of sickness...that’s Chinese! (Mandy, second interview, 26/11/12, pp. 9-10)

What is especially notable about Mandy’s comments is how she mobilizes dualistic reasoning about Canadians and Chinese to make sense of racial disparities in diabetes. Mandy illustrates how race-based risk discourses invite categorical comparisons in the construction of difference.

Barbie also engages in categorical comparisons of ‘us’ versus ‘them,’ but does so in a manner that gestures towards race rather than culture as an entry point to understanding racial disparities in diabetes. More specifically, she attributes higher prevalence of diabetes to stress that arises from the complexities of immigration, isolation and everyday experiences of racism:

I think another reason too, like why Asian having [diabetes]...once again, the family is away, it’s a very very big part of your life, or like stress you cannot share with? That’s one of the reasons why...’cuz, you know, whoever born here, they have family...they don’t have the issues which we have. It’s a very big difference because they live very far away... this is one of the reasons and the second thing is people who are from here, they cannot understand because they don’t know that stress because they don’t go anywhere! WE go everywhere! (laughs) You know, there are so many things...our race, our colour, our ethnicity, our religion, and everything. They never think these things, it’s very, very complicated... you can’t stop people until you get along with them, that’s another story, then they came to know that they’re judging. (Barbie, third interview, 24/12/12, pp. 4-5)

While she recognizes the interpersonal forms of racism at the level of the individual, Barbie struggles to access a vocabulary that can effectively address the complexities of racism and how it contributes to racial disparities in health.

On the subject of stress, Jennie shares her experience of being racialized in everyday encounters which signposts how stress contributes to chronic illnesses:

Well, I’ve been in Montreal and I’ve been seeing that prejudice against people who are different. It’s more, it’s far more than here. In Toronto, it seems like everyone is an immigrant...so, it’s hard to...being an immigrant, to be prejudice against by someone else...some people with their clothing, the others tend to be very...having prejudice against them. So, definitely, I think it has an impact on the stress level and some chronic illness like high blood pressure, diabetes, stress, chronic anxiety, right?!...But having been in Montreal or Quebec and Toronto, I mean, here, I mean... you get involved in the community. It’s easier to fit in...You don’t feel like a 100% outsider, right?! Of course, you’re an immigrant and you’ll feel it a bit out of space sometimes, but not 100%...But some people or some cultures...tends to be more... I mean, people tend to
judge them more than others. So, this might have an impact on their health too, definitely. (Jennie, third interview, 29/01/13, pp. 11)

In both Barbie and Jennie’s narrative, undertones of non-belonging and Otherness are evident in the ways they see themselves as “outsider” which is symptomatic of immigrants accepting their construction as non-Canadians.

Women’s reflection on race as culture also plays a constitutive role in the production of the multicultural biocitizen. Women of color reinforce racial stereotypes and race-based risk discourses when they conceptualize race as culturally-mediated differences in risk behaviours and treat risk factors as explanations for racial disparities in diabetes incidence, and vice versa in circuitous fashion (Shim, 2005: 416). Women’s representation of race as cultural practices linked to “high-risk ethnic groups” also reinforce the ways in which women of colour come to understand their experiences which shapes what they believe to be true about themselves. That is, women of colour come to see themselves as biologically and culturally inferior. As multicultural biocitizens, they consider themselves as perpetually at-risk, or as Armstrong calls “semi-pathological pre-illness at-risk state” and enduringly ethnic outsiders. When women do raise the link between race and risk, they do so indirectly through experiences of stress from everyday encounters with racism but struggle to access a vocabulary that effectively addresses the complexities of racism outside of ‘culture talk’ of multiculturalism.

Much of what women have to say about GD in “high-risk ethnic groups” reflect multicultural and biomedical constructions of cultural difference which, as Shim (2005:416) points out, “functions to stigmatize racially defined groups, and at their core, uphold essentialist notions of racial difference.” Such understandings reinforce and strengthen biomedical and multicultural conceptions of race as culturally-mediated differences in risk behaviour and justify treating risk factors as explanations for racial disparities in diabetes. In turn, any disparities in diabetes are attributed to differences in risk behaviours, legitimatizing cultural understandings of racial difference and race-based risk discourses in a tautological manner. Shim (2005: 417) refers to the effects of cultural conceptions of race in relation to chronic illnesses as a “self-authenticating style of practice” that reinforces the loop of logic through which race and racial groups become targeted. Such representations of race as cultural differences have the conceptual power to shape women’s interpretation of their experiences as illustrated in the above excerpts.
Not only do women concur with their racialization and internalize their Otherness by making a distinction between themselves and ‘Canadians,’ they view themselves as not belonging to the society that they are actually a part of (Li, 2003). However, women in the study also signpost that stress experienced from being racialized contributes to racial disparities in diabetes.

In summary, this chapter offers a thematic analysis of interview findings to illustrate how women respond to, engage with, and resist risk discourses pertaining to GD in “high-risk ethnic groups” and how race-based risk discourses and self-care practices take part in the formation of women’s subjectivities. Upon diagnosis, heightened affects and concerns about causality incite women to actively engage in food discipline by restricting rice and colonizing their diets with whole wheat. As some women in the study accrued situated and experiential knowledge about diabetes self-management, they engaged in agential acts of resistance and recalcitrance.

Women’s experiences of GD contribute to the making of a particular kind a subject: a multicultural biocitizen who sees herself as perpetually at-risk for diabetes while simultaneously divesting negative aspects of her culture caricature in order to seek acceptance into the national fold. The following chapter brings together findings from the last three chapters to expand upon the unintended consequences of GD in “high-risk ethnic groups.”
Chapter Eight
Unintended Consequences

This chapter brings together findings from the analysis of authoritative texts, ethnographic field notes and interviews to bear on the overall thesis of this dissertation: discourses and practices related to GD in “high-risk ethnic groups” are far from being benign or neutral in their social effects but actively involved in the processes of racialization and subjectification. Representation of race/ethnicity as a risk factor not only inflects and invites racialized interpretations but reifies and reproduces race. Although race-based risk discourses are productive in the sense of constituting strategies of intervention and emergent subjectivities, they are equally problematic in concealing power relations and broader social forces that contribute to racial disparities in diabetes. Moreover, regimes of truth that constitute authoritative texts cast the mother in objectifying ways to discursively erase maternal subjectivity. In what follows, I raise three contributions that are derived from the findings of this doctoral study on the social effects of GD in “high-risk ethnic groups”: the racialization of carbs, the dangers of compliance, and the motherless fetus.

Before elaborating on these three contributions, I briefly recapitulate the findings from critical discourse analysis of authoritative texts, participant observation, and interviews. In the 2008 CDA CPG, “high-risk ethnic groups” are represented as non-white immigrants who have a genetic predisposition as well as cultural challenges related to self-care capacities, health literacy, and acculturation to Canadian society, casting them as biologically and culturally problematic. Here, “high-risk ethnic populations” operates as a racialized category that constructs and targets bodies of colour as ‘risky’ and a burden to the nation state. By expanding the rubric of ‘risk,’ the 2009 IDF GG inaugurates the intra-uterine environment as a site of fetal programming and the source of future generation of diabetics, aligning well with the moral panic of ‘epidemic’ discourses. Illustrating how disease is brought into being through the ideas, practices, and personnel of biomedicine, the 2009 IDF KD Life Circle Approach aims to address and arrest the ‘diabetes pandemic’ by offering an avalanche of interventions at different stages of a woman’s life from preconception, pregnancy, and post-partum. The regimes of truth that constitute the three authoritative texts make deeply problematic assumptions. Not only do they locate risk and responsibility in the womb of non-white women, giving rise to interventions that
disregard power relations and the social conditions that contribute to chronic illnesses, they render invisible dominant cultural norms which keep hegemonic practices in place.

Findings from participant observation illustrate how race-based risk discourses are accomplished locally in the clinic through three strategies of intervention. First, dividing practices of screening and referral to the diabetes education centre are largely contingent upon ethnicity as a risk factor, bringing non-white women into biopedagogical places of the GD classroom and clinic where they are subjected to disciplinary practices that further divide them into treatment groups. The second strategy involves etiological explanations for GD in “high-risk ethnic groups” which are interpreted through the prisms of genetics and culture in ways that uphold essentialist notions of racial difference. And third, racial carbopolitics operates as a biopedagogical strategy that employs carbohydrates as a proxy for race, thereby governing food practices of women in attempts to assimilate them to norms of whiteness. All three strategies are instances of race-based risk ideologies that illustrate the “complex feedback loop and interaction effects between phenotype and social practices related to that phenotype” (Duster 2005: 1050).

Interviews elucidate the modes of subjectification involved in the making of an emergent kind of racialized subject. Initial interviews demonstrate how women engage with discourses and practices pertaining to GD in “high-risk ethnic groups,” rendering women docile through “food discipline” and dietary recommendations of restricting rice and colonizing their diet with whole wheat foods. By the second interview, some women acquire experiential knowledge and figure out ways to subvert expert knowledge by engaging in agential acts of resistance and recalcitrance. While this contributed to conflictual subjectivities, women offered legitimations for giving into to their desires for forbidden carbs in order to keep their subjectivities as good mother/patient/citizen secure. Although GD is temporary and typically disappears after delivery, the third interview with women are replete with concerns about converting to type 2 diabetes which reverberate in their consciousness, leaving women in a liminal zone between health and illness, precariously perched in a “semi-pathological pre-illness at-risk state.” Women are made into multicultural biocitizens who hyper-embody risk and assume active responsibility for themselves, their offspring and family through the discourses of biomedicine and multiculturalism. The following sections synthesize and further elaborate on the study findings to explore the unintended consequences of GD in “high-risk ethnic groups.”
1 The racialization of carbs

It has become something of a given that what we eat is closely connected with who we are. The popular cliché “you are what you eat” or Brillat-Savarin’s oft-cited aphorism “Tell me what you eat, and I will tell you what you are” resonate because food, race, and subjectivity are intimately intertwined. In his essay “Steak and Chips” in *Mythologies*, Roland Barthes (1972) meditates on the ways in which *les frites* is tied to French national identity. For people of colour who are seeking a sense of national belonging, perhaps the quote that best captures how food is employed at the GD clinic and mobilized in the processes of subjectification and nationalization comes from Warren Belasco (2008:1): “food identifies who we are, where we come from, and what we want to be.”

In this section, I build upon my previous discussion of ‘how a carb becomes ethnic’ by examining the processes involved in the racialization of carbs. I will do this in three parts. First, I elaborate on the term racialization and the processes of racialization, drawing largely on the works of critical anti-race scholars. Second, I explain how racialization gets superimposed from people of colour onto carbs in ways that offer simplistic and reductive readings of culture, thereby essentializing race and contributing to the reproduction of racism. Third, I illustrate the ways in which women of colour reinforce the racialization of carbs while simultaneously disrupting essentialized notions of what constitutes healthy ‘Canadian’ food.

While *racism* is “a social feature that recognizes the social significance of classifying people into immutable racial groups based on real or imagined congenital features,” Peter Li (2001: 78) explains that the term *racialization* is often used to “highlight the social process of attributing social significance to phenotypical features of people and designating those so signified as ‘racial.’” Li states that one result of racialization is to offer a normative coherence for people to organize and to interpret some of their experiences; however, at a more extreme level, racialization can provide grounds for unequal treatment and a rationale for justifying inequality. Similarly, Miles (1989: 75) explains that racialization involves situations where social relationships between people have been organized based on the significance of human physical characteristics “in such a way as to define and construct differentiated social collectivities.” However, racialization can occur even in the absence of the term “race” (Satzewich, 1998: 32).
For instance, comparing “high-risk ethnic groups” to “Canadians” entails a process of signification of physical difference which is equivalent to racialization. Closely aligned with the process of racialization is the production of racialized subjects (Dei, 2007: 61). Here, Dei refers to ‘racialized’ as a verb in the sense that the act of doing something to the body based on its phenotypic features. The production of racialized subjects refers to how bodies are read or scripted according to skin colour and other features.

Sunera Thobani (2000) takes it a step further, explaining that racialization is a two-sided process that enables nationalization. That is, “the social construction of immigrant women as outsiders is also simultaneously a parallel process constructing Canadians as insiders in relation to, and in opposition to, this Other” (Thobani: 2000: 282). These two are integrally interconnected in the sense that the category of immigrant is unthinkable without its opposite. In other words, the ways in which “the category of immigrant as it relates to, serves to define, and hence, concretizes its opposite – the category of Canadian/citizen – thus enables the nationalization of the latter” (Thobani: 2000: 283). Moreover, this two-sided process also attributes other characteristics: it constructs Others as inferior/less than ‘human’ while it constructs Anglo-Europeans as ‘superior’/‘civilized’ races. Historically, Thobani (2000: 287) argues that non-white women were ideologically and materially constructed as “outsiders” to the Canadian nation and considered a two-fold threat to the nation: “first, their own presence and their ‘uncivilized’ practices threatened to ‘pollute’ the ‘purity’ of the nation, and second, their capacity to reproduce future generations of ‘non-preferred races’ threatened to overwhelm the whiteness of the nation.”

This two-sided process of racialization is operative in authoritative texts. The 2008 CDA CPG clearly constructs an ‘us’ versus ‘them’ divide between white Canadians and non-white immigrants. Despite the ritualistic use of “high-risk ethnic population,” no explanation is offered about the connection between ethnicity and risk. Authoritative texts can avoid this because racial ideology supplies one. Binary classification of ‘us’ versus ‘them’ ascribes opposing attributes to each side of the binary and presupposes the automatic distinction between modern/primitive, normal/abnormal, healthy/unhealthy, disciplined/willfully deviant, and virtuous/sinful. There appears to be a rigid binarism, or what Frantz Fanon (1986: 183) refers to as “Manichaeism delirium,” operating in authoritative texts on “high-risk ethnic groups” which reflects an
absolutist view of white and Other cultures as fixed, mutually impermeable expressions of racial and national identity. A similar ideological manoeuvre is seen in James Neel’s thrifty genotype hypothesis that relies on contrasting images of ‘modern civilized man’/’primitive hunter-gatherers’, ‘affluence’/ ‘feast and famine’, ‘technologically advanced nations/ ‘the Stone Aged body’ (Fee, 2006: 2992). There seems to be, what Steven Epstein (2007: 90-93) calls, “categorical alignment” in the way political/national and medico-scientific classifications superimpose upon each other in a manner that seems natural and self-evident. Furthermore, the expanded rubric of ‘risk’ in the 2009 IDF Global Guidelines which problematizes the intra-uterine environment as a site for producing future generations of diabetics and interventions listed in the Kathmandu Declaration: Life Circle Approach to the Prevention and Care of Diabetes both reflect and reproduce ideologies and anxieties about non-white women as a two-fold threat to the nation.

Although 19th century anxieties about racial degeneracy continue in the present in subtle and nuanced ways as the explanation for non-white immigrants and Aboriginal peoples’ inability to live “properly,” contemporary or “new racism” organizes racialization through the discourse of ‘cultural’ difference, signifying membership in the national/racial community in cultural terms (Comeau, 2005). ‘Cultural’ difference, codified as diet and lifestyle, stands in for racial difference. As such, the focus then pivots on their ways of life and their diets, as though it were a matter of personal choice that can be simply changed through diabetes education. Racialization of carbs through the discourse of cultural difference appeals to clinicians because it shifts attention away from the problematic and racially-imbued notion of “high-risk ethnic groups” to a more neutral topic of carbs. Here, carbs functions as a ‘rough proxy’ for race, codifying what may otherwise be blatant racial messages and transforming them into noble concerns that are more palatable and acceptable ways of speaking about racial difference without sounding racist. As such, carbs commonly shared by “members of a high-risk ethnic population,” such as white rice, are problematized whereas carbs iconic of Canadian culture such as whole wheat bread are privileged and used as a barometer against which all Other carbs are compared.

At the diabetes clinic, when whole wheat bread is presented as the norm or default reference point against which all ‘Other’ carbs are measured, it is valorized as virtuous. By positioning whole wheat as superior in the hierarchy of carbs by virtue of its location on the
glycemic index, it locates carbs such as white rice as verboten and inferior. Moreover, this valorization is accompanied by a subtle suggestion to replace white rice with whole wheat bread in order to ‘eat healthily.’ This implicit injunction is illustrative of, what Christine Halse (2009: 47) calls, a “virtue discourse” which refers to “sets of values, beliefs, practices and behaviours that establish regimes of truths and shape subjects and subjectivities by articulating and constructing particular behaviours and qualities as worthy, desirable and necessary virtues.” By taking up the virtues of whole wheat bread, patients are praised and applauded for making healthier choices and in turn, they are made virtuous.

Virtue discourses, as Halse (2009: 48; 2006: 107) points out, can be “highly moralistic because they invoke and rely on binaries that ascribe opposing moral attributes to each side of the binary that seem natural, logical and fair.” In a society like Canada where ‘healthy eating’ is idealized and desired, lower glycemic carbs like whole wheat bread is aligned with notions of self-discipline and restraint while higher glycemic carbs such as white rice is the binary ‘Other,’ insinuating a sense of self-indulgence and a lack of self-discipline and moral fortitude. In this way, the virtue discourses can “do moral mischief” (Halse, 2009: 49) and have effects on establishing what qualifies as ‘being’ healthy/unhealthy, normal/abnormal, superior/inferior, virtuous/sinful, and worthy/unworthy. When carbs are considered as alimentary signs of ethnicity and culture, a categorical alignment occurs whereby the binaries of ‘us’/ ‘real Canadians’ versus ‘them’/ethnic ‘Others’ are superimposed onto carbs. This creates a divide between ‘healthy’ carbs that constitute the diet of ‘real Canadians’ from ‘unhealthy’ carbs commonly shared by people of colour. As such, biopedagogical discourses on the virtues of whole wheat implicitly exalt, to use Thobani’s (2007) term, national subjects as morally superior over the enduring inferiority of cultural Others.

Just as carbs can be employed as convenient proxies to problematize the ‘Other,’ they can also be used as an indicator to determine their degree of acculturation. That is, the proximity of non-white immigrants to normative dietary practices of ‘Canadian Canadians’ can serve as an implicit indicator or benchmark with which to measure the successes and failures of newcomers to conform to Canadian society. Thus, the changeover from white rice to whole wheat bread can be read as an indicator to determine ‘successful integration’ of immigrants. As Peter Li (2003: 55) puts it, voluntary conformity is celebrated as immigrants’ success in Canadian society and
the failure to do so is a problem of integration in the sense that their cultural diversity (in diet) are seen as incompatible with the culture and social fabric of traditional Canada and must therefore be the fault of people of colour themselves. In this sense, racialized ‘Others’ who adopt positive aspects of culture valued by the nation and distance themselves from negatively evaluated aspects of their culture are more likely to be accepted into the host society.

Virtue discourses on whole wheat are an integral and constitutive component of dietary governmentality that works in ways that are both enabling and racializing. For instance, instead of rice, Gayatri, relays how whole wheat has colonized her snacks and meals. “If I get too much hungry, then I’ll have whole wheat crackers, and for lunch I’ll have roti or brown bread, yeah, I stopped eating rice...[my husband] stopped eating rice too...whenever he makes pasta now, he makes whole wheat pasta instead of white pasta...Not to eat rice, it’s hard....but eating whole wheat throughout the day, it’s kinda getting boring!” (Gayatri, first interview, 21/06/12, pp. 5-6) Revisiting this account, it illustrates the productive and constraining aspects of dietary governmentality. Rather than operating in a uni-directional way, dietary governmentality functions in a capillary-like network fashion as Foucault would put it, extending to and through the family as a site for the promotion of food discipline and virtuous injunctions of ‘healthy eating’ (Ristovski-Slijepcevic et al, 2010). However, dietary governmentality also operates in neocolonial ways to assimilate the ‘Other’ through regulating, disciplining and colonizing ‘proper’ carb consumption practices aligned with dominant norms of whiteness. The danger here is that when cultural difference is conflated to the dietary practice of a group of people as a matter of personal choice, then the focus shifts to culturally informed choices rather than the effects of systemic racism or other axes of difference that contribute to health disparities.

The processes of racialization through carbs profoundly shape the subjectivities of ethnic ‘Others’ who seek acceptance and belonging to the nation. In order to further distance and divest themselves from negatively evaluated cultural practices, immigrants who long for acceptance take part in disavowal and derision of their own cultural practices by projecting a caricatured cultural self onto other people of colour (Thobani, 2007: 170). For instance, responding to a question related to the high prevalence of diabetes among ethnic groups, an interview participant makes the following remark that mirrors back a stereotypic assumption about the immigrant Other’s inability or unwillingness to care for themselves through dietary changes. “It’s because
they don’t care!... if you don’t care about it, then you just go all the way down, what you used to be, who you used to be, then things will get worse, right?!” (Minnie, first interview, 20/08/12, pp. 7) Her comment is revealing in the way she anathematizes people of colour as the anti-prudent unethical subject who lacks moral character to take responsibility for their own care. She illustrates the emotional labour required to maximize the distance between her and this idea of the stereotypical ‘Other’ so that she does not fulfill that very stereotype. Moreover, the fear of slipping back “all the way down” into the ‘fresh-off-the-boat’ behaviour is a perpetual concern which requires this participant to be ever vigilant of any gestures outside of the sanitized cultural self that confirm the static stereotype that ‘they are all really like that’ or ‘they will always be that way’ (Thobani, 2007: 171). As Sara Ahmed (2012: 160) states: “The *encounter* with racism is experienced as the intimate labour of *countering* their idea of you.”

What is particularly paradoxical about the virtue discourse of whole wheat and the imagined construction of ‘healthy’ ‘Canadian food’ is the curious erasure of unhealthy high-glycemic fast foods prevalent in Canada. Even though this is not explicitly discussed in diabetes biopedagogical settings, unhealthy Canadian food enters obliquely into the narratives of participants when they secretly disclose their carb-confessions. Seemingly oblivious to any existential crisis Canadians may have about the definition of ‘Canadian cuisine,’ participants go on to name and make matter-of-fact statements of what constitutes unhealthy Canadian food (Cho, 2010: 53). That is, they speak back their own stereotypical ideas of the kinds of Canadian food that they most covet: Tim Horton’s ‘Iced Caps,’ donuts, maple syrup, and poutine – foods that are proudly iconic of Canadian national identity. In this way, participants trouble the binaries embedded in the racialization of carbs by asserting their acculturated subject position and desires through food. Moreover, they disrupt the validity of virtuous discourses by engaging in alternative ways to acquire a sense of national belonging and demonstrating ‘successful integration’ through participating in a consumer culture of Canadian fast foods.

Just as there is an erasure of unhealthy high-glycemic Canadian food, there is an equally curious erasure of healthy low-glycemic carbs found in diets of so-called “high-risk ethnic groups.” Aside from obvious alternatives such as brown or basmati rice, there is a scarcity of information (and food replicas) not to mention a paucity of discussion during biopedagogical discourses regarding low-glycemic foods enjoyed in various cultural cuisines. I raise this point
not to criticize dietitians, but to foreground what seems to be, as Homi Bhabha (1994) calls, “the fixity of representation” in his book *The Location of Culture*. In a chapter entitled *The Other Question: Stereotype, Discrimination and the Discourse of Colonialism*, Bhabha explains that the fixity of representation is one of the hallmarks of racial stereotypes. He writes: “The stereotype is not a simplification because it is a false representation of a given reality. It is a simplification because it is an arrested, fixated form of representation that, in denying the play of difference...constitutes a problem for the representation of the subject in significations of psychic and social relations” (Bhabha: 1994: 107). The representation of carbs as fixed and denied of heterogeneity or difference contributes to a kind of carb-orientalism that is being reproduced in biopedagogical settings.

The Otherness represented in the CDA ethnic meal plans or the Spectrum Food Catalogue functions within a persistent kind of fixity of representation. The expectation of a kind of soothing sameness in different ethnic meal plans speak to the demand and proliferation of ethnically-specific food models and meal plans, but also signpost some standardized representation of ethnic Otherness that is disseminated across diabetes education centres across Canada. In other words, the meal plans stabilizes a kind of Otherness which offer clinicians the possibility of a reassuring uniformity not only in food but in Otherness the food signifies. The ethnically-specific meal plans are so simple, so uncomplicated, and so common sense that they are exactly what whiteness might expect of Otherness. However, as Sherene Razack (1998: 9) asserts: “What makes the cultural difference approach so inadequate in various [bio]pedagogical moments is not so much that is wrong, for people in reality are diverse and do have culturally specific practices that must be taken into account, but that its emphasis on cultural diversity too often descends, in a multicultural spiral, to a superficial reading of difference that makes power relations invisible and keeps dominant cultural norms in place.”

As Bhabah (1994: 95) usefully reminds us, a critique cannot be located at the level of whether or not good or bad stereotypes are being perpetuated; rather, it needs to be centered on the *processes of subjectification* itself. Thus, it would not be sufficient to simply say that meal plans and food models produce stereotypes, but instead examine how subjects are reproducing and perpetuating such stereotypes. During interviews with participants, difference between nationals and outsiders are overly amplified, almost to the point of absurdity, while
commonalities within these groupings are inflated (Thobani, 2007: 6). Participants’ narratives, as Cho (2010: 68) puts it, “eerily echo the projection of the dominant culture” in the sense that they “serve back to power precisely its own projection.” In response to the question ‘why are Asians more prone to gestational diabetes?’, one interview participant immediately replies “it’s because we eat a lot of rice and a lot of white people are like...[pause]...vegetarians – they don’t even eat meat – in China, we don’t have that” (Mandy, second interview, 26/11/12, pp. 9-10). However, participants also trouble the fixity of representation by asking for both ‘Canadian’ and ‘Asian’ meal plans or questioning “where does poutine fit in this [South Asian] meal plan?” (Fieldnotes, GD class: Campus Z, 13/06/12, pp. 107) Not only is the fixity of stereotypes around food simultaneously reproduced and resisted in their narratives, they also illustrate how carbs play out in the processes of subjectification and nationalization.

Racial carbopolitics in many ways mirror how multiculturalism, as a specific policy and a socio-political racial ideology, operates in Canada as a mode of managing internal difference and constituting this difference in cultural terms (Mackey, 2002; Bannerji, 2000). Drawing on insightful critiques of multiculturalism by anti-racist scholars, multiculturalism has had the effect of constituting people of colour as possessing an excess of culture, marking them as outsiders to the nation irrespective of their place of birth, their legal citizenship status, or their length of residence within the country (Thobani, 2007: 162). By elevating and reifying ‘culture’ as the most significant aspect of the nation’s relations with its (internal) Others, the discourse of multiculturalism casts people of colour as culturally problematic and deflects attention away from the unsettling history of racism in Canada and the ongoing institutionalized forms of racism. When race becomes reconfigured as ‘culture’ in multicultural discourses, this has the effect of placing onus for racial inequalities experienced by people of colour onto their own cultural inadequacies. In diabetes biopedagogical settings where carbs are employed as a cultural marker for race, a similar operation occurs whereby racial disparities in diabetes are attributed to cultural differences in diet and lifestyle as a matter of personal choice rather than sociopolitical and historical forces and power relations that produce them. Without reflecting upon the relationship between the social construction of race-based risk discourses embedded in clinical practice and research on the ‘diabesity epidemic,’ inequality will continued to be blamed on those who differ from the norm, further reinforcing racial hierarchies while simultaneously
suppressing anti-racist discourse and politics that might be in service to better understand racial disparities in health.

In short, the racialization of carbs is made possible by relying on dominant neocolonial ideologies that draws upon problematic binaries of ‘us’ versus ‘them’ along with virtue discourses on whole wheat versus white rice. Race-based risk discourses, as illustrated in authoritative texts, reify race by casting non-white subpopulations as immigrants and ‘Canadians’ as opposites based on phenotypic features and socially constructed differences. That is, such binaries operate by ascribing opposing attributes to each side of the binary in ways that seem logical and self-evident. Physical and cultural characteristics of non-white immigrants become socially significant because they represent convenient markers by which they can be distinguished and problematized. From participant observations conducted at the GD clinic, cultural differences in carbs serve as palatable proxies to stand in for racial differences. The same binary structure operating in authoritative texts is reproduced in the way carbs are racialized, locating rice as a signifier for Otherness/ inferiority/exclusion and whole wheat bread as a signifier for Canadian-ness/ superiority/ inclusion. In biopedagogical/clinical settings, when whole wheat is valorized as virtuous and rice is represented as verboten, carbs serve as powerful tools to assimilate non-white bodies to dominant cultural norms and determine the degree of acculturation. During interviews with women of colour, categorical comparisons are reflected and reinforced in their narratives. By restricting rice from their diet and adopting whole wheat products, women mirror the processes of assimilation demanded by their ‘host’ society. Women also illustrate acculturation by adopting unhealthy eating practices of ‘Canadian Canadians’ to gain a sense of national belonging. Racialization of carbs do similar political work as historical discourses of race with the effect of reproducing colonial and racist power relations while working to mask this process.

The relevance of racial carbopolitics is to account for the contemporary neocolonial strategies that operate in the clinic setting. This contribution extends beyond theoretical ones, taking the form of a conceptual intervention directed at the level of ethics and practice. This intervention invites greater reflexivity on the subtle and subterranean ways in which race/ethnicity is represented and mobilized in clinical practice that go beyond perpetuating stereotypes. Racialization of risk through carbs not only participate in the processes of
subjectification that shape the ways in which people of colour believe to be true about
themselves, they participate in the reproduction of racial hierarchies that ultimately have both
social and biological effects, directly and indirectly, on people of colour.

2 The dangers of compliance

This section aims to complicate the notion of compliance and lay bear the tensions that
patients and practitioners live with so that they may be more widely reflected upon. More
specifically, I will elaborate on the iatrogenerated consequences of compliance by focusing on
two typologies of women that are derived from ethnographic and interview findings: ‘women
who figure’ and ‘women who don’t figure.’ While the former group is able to convince clinicians
to remain on ‘diet-only’ by engaging in agential acts of resistance and recalcitrance based on
their experiential/ subjugated knowledges, the latter group is ironically put ‘on-insulin’ even
though they have faithfully followed expert knowledges and disciplinary practices. The former
group might be considered as ‘non-compliant’ in the eyes of clinicians, whereas the latter would
be categorized as compliant. That’s not to say that all women who demonstrate compliance are
prescribed on insulin, rather those who are put on insulin despite being compliant with the
diabetic diet are in danger of iatrogenerated effects. In what follows, it will be argued that there
are potential dangers associated with insulin that paradoxically contribute to developing type 2
diabetes after delivery. Although these two typologies are by no means mutually exclusive, they
offer a useful heuristic to highlight the interplay of what Foucault calls ‘technologies of the self’
and ‘technologies of power’ in order to show up the enabling and constraining aspects of such
strategies for the management of GD in “high-risk ethnic groups.”

One of the key findings from interviews with women is ‘figures don’t lie, but women
figure.’ To recapitulate, while the figures on the glucometer don’t lie, some women figure out
creative strategies to produce ‘good sugars’ in order to remain ‘on-diet’ and circumvent the
possibility of being prescribed insulin. Even though clinicians may be ‘the experts’ in diabetes
self-management strategies, their theoretical knowledge of managing blood sugars is
overshadowed by women’s experiential knowledge and expertise of living with GD. Perhaps
even more than clinicians, women have refined their experiential knowledge of managing GD
through daily acts of testing and figuring out how to yield ‘good sugars.’ In other words, through
the process of taking stock of their carb consumption and compulsively monitoring their sugars after their snacks and meals, women soon learn the ‘tricks of the trade.’ Rather than strictly following the dietitian’s recommendation, some women figure out what they can “get away with” through “experimenting” with various portions of virtuous and verboten carbs. Moreover, they learn subversive strategies of reconfiguring their meal plan by reversing their meals with snacks, skipping their next meal after indulging in sweets, as well as “burning off” their sugars with impromptu exercise so that their sugars register as optimal on the glucometer. Because clinicians are oblivious to these behind-the-scene strategies of generating ‘good sugars,’ women inadvertently offer spurious validation of expert knowledges. That is, clinicians are convinced that women are compliant with the meal plan because the optimal glycemic readings add validity to their authoritative knowledge. However, were they to know that women engage in subversive strategies, they would have been regarded as ‘non-compliant.’

‘Women who don’t figure’ things out characterize what Foucault calls ‘docile’ subjects because they diligently follow the disciplinary practices of the diabetic regimen and take up expert knowledge on risk. Rather than “experimenting” with different portion sizes and reconfiguring their meal plan in order to yield ‘good sugars,’ they are compliant in the sense that they adhere closely to the dietitian’s recommendations even though they might consistently come up with elevated readings. Despite being disciplined and docilized to the diabetes diet and regimen, women report feeling ‘punished’ when they are prescribed insulin, often lamenting “but I did everything they told me to do!” (Fieldnotes, GD clinic: Campus Y, 03/07/12, pp. 79) Even though they resent having to take insulin multiple times a day, women soon learn that they can eat more and ‘diet goes out the door’ because the insulin magically lowers their sugars regardless of the kinds of carbs they choose to consume. However, one of the unintended or iatrogenerated consequences of insulin is weight gain which paradoxically puts them at greater risk for insulin resistance and developing type 2 diabetes after delivery.

I raise these two typologies of women because they illustrate the complex interplay of Foucault’s technologies of power and technologies of the self and exemplify the paradox of self-management practices: disciplinary practices are both constraining and enabling of new skills and capacities. Foucault’s account of disciplinary practices might be usefully supplemented by his later concern that overemphasized technologies of power at the expense of technologies of
the self (Foucault, 1988: 19). Foucault (1988: 18) makes the thematic shift from his earlier work on technologies of power to a new emphasis on technologies of the self “which permit individuals to effect by their own bodies and souls, thought, conduct, and way of being so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality.” Rather than being mutually exclusive, Heyes (2006: 126) points out that enabling moments of self-transformation “occur[s] in tandem with the intensification of power relations.”

With respects to this paradox in the practices of care of the self, feminist Foucauldian scholar McWhorter (1999: 179-80) writes, “normalizing disciplinary practices may tremendously enhance a person’s ability to perform certain kinds of functions or accomplish certain kinds of task, but they decrease the number of different ways a person might be able to respond in a given situation; they narrow behavioural options.” While ‘women who don’t figure’ are rendered docile by attending to the minutest detail of the diabetic regimen, ‘women who figure’ were able to imagine alternatives and act in innovative ways that exceeded the regime of normalization, thereby cultivating a broader repertoire of capacities beyond increasing docility. That’s not to say that ‘women who don’t figure’ do not engage in acts of self-transformation or that compliant women are always prescribed insulin. However, the point being made here is that hyper-adherence to disciplinary practices occludes the possibility of cultivating capacities and agential acts of resistance that escape both the biomedical gaze and the iatrogenerated effects of insulin.

As stated earlier in the previous chapter, Foucault is not interested in diet per se nor does he explicitly link diet with governmentality. He does however invoke diet as a mode of managing one’s existence through careful regulation of food. For Foucault, dietary regulation is one of several practices of the self that constitute subjectivity. In *The History of Sexuality Volume II: The Use of Pleasure*, Foucault remarks upon the dangers inherent in diet which shed more light on the distinction between women who figure from those who don’t. He writes, “[t]he possibility of a danger in the very practice of ‘diet’ was readily acknowledged. For if the aim of regimen was to prevent excesses, one might exaggerate the importance one lent to it and the autonomy one permitted it to assume” (Foucault, 1985: 104). In the case of ‘women who don’t figure,’ they become excessively preoccupied with sticking to the rules of the regimen that they forget that, as Foucault (1985: 105) puts it, the purpose of diet was “to make [life] useful and happy within the limits that had been set for it.” He goes on to say, “A regimen was not good... if
it did not allow one to be open to any change. The usefulness of a regimen lay precisely in the possibility it gave individuals to face different situations.” That is, ‘women who don’t figure’ become so obsessed with the micro-management of disciplinary practices that alternate possibilities, of approaching food with flexibility in ways that allow for desires, fall from view.

As Foucault (1985: 106) points out, “a regimen should not be understood as a corpus of universal and uniform rules; it was more in the nature of a manual for reacting to situations in which one might find oneself, a treatise for adjusting one’s behaviour to fit the circumstances.” Rather than regarding the regimen as a rigid set of ‘do’s and don’ts,’ technologies of the self involve a dialectical engagement with the regimen that is open to flexibility and contingency. Whereas ‘women who figure’ reconfigured and adjusted their dietary regimen in innovative ways that allowed for forbidden foods while managing to yield ‘good numbers’ in order to avoid insulin, ‘women who didn’t figure’ obediently complied with the dietary regimen and read it as absolute despite consistently coming up with elevated sugars which inevitably put them at risk for insulin treatment. Ironically, ‘women who don’t figure’ soon figure out that insulin has a greater impact on blood sugars than diet. Rather than counting carbs to yield good sugars, women learn that they can simply count on insulin to lower blood sugar irrespective of what they consume. What’s more, the endocrinologist incrementally increases the insulin dose to match the rising blood sugar levels with every follow-up visit. Thus, instead of matching carbs to insulin in order to yield good sugars, women learn that they can get the insulin to match the amount of carbs they have eaten. However, as one endocrinologist candidly put it to a patient, “with insulin, you can eat more, but I don’t tell that to all women because insulin makes you fat” (Fieldnotes, GD clinic: Campus Y, 23/07/12, pp. 131). The upshot of insulin is that women can eat whatever they desire because insulin can simply be increased to lower blood sugar. The downside with gradually increasing the dose of insulin, besides the possibility of hypoglycemic reactions, is gaining excess weight during pregnancy which then becomes that much more difficult to lose after pregnancy. When women are unable to lose the extra pounds post-partum, this increases their risk of developing insulin resistance and type 2 diabetes.

Interestingly, the concept of control operates in divergent ways for ‘women who figure’ from those who don’t. For ‘women who figure’ things out, control is demonstrated in the ways they engage in agential acts of controlling their sugars in subversive and strategic ways as well as
in the ways they are able to control clinician’s perceptions of them as compliant. They are able to illustrate the following quote from Foucault (1985: 108): “[f]or by such attention to yourselves, you can discover better than any doctor what suits your constitution.” For ‘women who don’t figure’ things out within the two week trial period of dietary regulation and subsequently put on insulin, their attempts at controlling their blood sugar through diet is jettisoned out once they relinquish their control to insulin which acts as an internal regulatory agent that lowers their sugars. However, once on insulin, women figure out ways to regain their sense of control by making insulin work for them to cover their carb indulgence. This later strategy is precisely where the danger lies in setting up the cascade of iatrogenenerated consequences from intensive insulin treatment: weight gain from insulin increases insulin resistance which increases the risk for type 2 diabetes, paradoxically perpetuating the vicious life cycle of diabetes. Sometimes “solutions to problems,” as Sara Ahmed (2012: 143) puts it, “are the problems given new form.”

Alternative metaphorical readings can be made for women who develop insulin resistance and women who engage in acts of resistance against insulin treatment. For women in the former group, insulin resistance can be read as psychic and corporeal manifestations of broader social and political resistance to the indignities of social inequality and racial hierarchies (Montoya, 2011: 135). While this may come across as a rather abstract and dramatic reading of insulin resistance amongst women of colour, it is worthwhile considering given that stress (or allostatic load, in biomedical parlance) induced by systemic racism can have biological effects, as Dorothy Roberts (2011: 129) points out. This is further substantiated by Nancy Krieger’s work on the biological expression of racism (Krieger, 1999: 295; Krieger & Sydney, 1996: 1370). With regard to women in the latter group who figured out subversive ways to resist being put ‘on-insulin,’ their resistance to insulin therapy can be read as a refusal to have their subjectivities as good mother/patient/ citizen defined by “correct” carb-consumption practices for the purpose of achieving ‘good sugars.’ The metric of control is so seductive and powerful in its effect precisely because glycemic readings are not simply read as neutral figures but as the ultimate arbiter of control and visible indicators of inner moral fortitude. However, women’s resistance can be interpreted as refusal against morally-charged accusations and against the tyranny of compliance dictated by the metric of control. That is, women are refusing the notion that any deviation from the normal target range is interpreted as automatic proof of poor dietary conduct which threatens their subjectivity as responsible mothers and citizens.
What is so interesting about the discursive power of compliance is that it extends beyond women as the object and subject of power/knowledge. The same normalizing and moralizing pressure that discourses exert on women apply equally to clinicians. As noted in the discourse analysis of authoritative texts, the object and subject of compliance in the clinical practice guidelines are health care practitioners. Those who do not follow the recommendations are subject to accusations of non-conformity which insinuates that they are indirectly implicated in contributing to the ‘diabetes epidemic.’ This leaves little space to question the validity, relevance, and unintended consequences of the recommendations themselves. Although the guidelines are far from being conclusive, they are regarded as absolute because they are enshrined in evidence-based medicine and thus operate as regimes of truth. Any controversies and contestations surrounding GD are not visible to clinicians because the guidelines translate scientific uncertainty into definitive interventions. However, women in the study reveal what the guidelines conceal. That is, ‘women who figure’ wrestle with and mirror back the uncertainty and controversy rendered invisible in the guidelines by resisting insulin treatment and calling into question the dangers of blindly following recommendations.

This theoretically-informed discussion based on empirical findings regarding the dangers of compliance should give us pause. It is often thought that compliance to medical recommendations is associated with good outcomes or a means through which to avoid further medical interventions; however, this is not always the case. Compliance to dietary recommendations does not necessarily guarantee that women will produce ‘good sugars’ or prevent the possibility of being prescribed insulin. By diligently following the diabetic regimen, women assume that they will achieve adequate control. When this does not come to fruition, they are equally frustrated and anxious about the effects of high sugar on their growing fetus. Compliance does however render women into docile subjects, foreclosing possibilities of “adjusting one’s behaviour to fit the circumstances,” as Foucault puts it, which might have attenuated the need for insulin treatment. In this regard, compliance places woman on a trajectory or pathway of unintended consequences: intensive insulin treatment increases side effects of hypoglycemia and treatment of, or efforts to avoid, unpleasant hypoglycemic reactions lead to excess weight gain which paradoxically puts them at greater risk of developing insulin resistance and subsequently type 2 diabetes post-partum. Sometimes being non-compliant pays off. Even though women who figure out how to yield ‘good sugars’ though subversive strategies
might be labelled as “non-compliant” in the eyes of clinicians, figuring out alternative ways to avoid insulin also means that they avoiding the trajectory of iatrogenerated consequences.

The importance of this analysis lies in the possibilities it offers to those who think and act in the world of diabetes medicine. Rather than silencing and suppressing dialogue about the dangers of compliance and iatrogenerated consequence of intensive interventions, acknowledging the unintended effects can generate productive discussions about alternative possibilities that are aligned with the intended objective of preventing type 2 diabetes and addressing the ‘diabesity epidemic.’ Moreover, the above analysis of the iatrogenerated effects of insulin therapy prompts us to reflect upon the unintended consequence of medicalization of maternity as addressed below.

3 The motherless fetus

In this section, it will be argued that authoritative texts and disciplinary practices that reduce pregnancy to a diabetic management regimen risk a discursive erasure of the mother. The disquieting discourse of risk that problematizes the ‘aberrant intrauterine environment’ simultaneously casts the mother as eerily absent yet present. Disciplinary practices paradoxically position her as the “fetus’ most ardent protector and its most dangerous threat” (Ruhl, 1999: 97). What’s more, the gluco-centric regimen that hinges heavily upon a metric of control runs the risk of alienating women from the experience of pregnancy. In order to elucidate what is at stake with this notion of a motherless fetus, philosophical literature may help illuminate the tensions that arise when the authoritative texts that guide clinical practice are actualized and enacted in the diabetes clinic. Where Foucault’s explanatory power attenuates, insights from feminist poststructuralist, Luce Irigaray, will be invoked to better understand the disjuncture between biomedical discourse on risk and women’s engagements with them.

The 2009 IDF’s Global Guidelines on Pregnancy and Diabetes have implications for shaping clinical practice of diabetes practitioners and altering the embodied reality of pregnant women. Longstanding attempts to reconcile the duality of diabetes and pregnancy continue today through on-going debates over the definition, diagnosis, screening, treatment and management of GD. In an effort to minimize ambiguities and uncertainties surrounding diabetes in pregnancy, the IDF Kathmandu Declaration has recommended intensive interventions throughout the
reproductive life of a woman. Underwriting authoritative texts is the unrelenting rhetoric of risk: ‘focus on the future of the fetus,’ interpellating practitioners to disseminate risk discourses and implement disciplinary practices into clinical settings.

At the diabetes clinic, disciplinary modes of treating and managing GD are preoccupied with rendering the interiority of the pregnant body visible through “specular and speculative means” (Irigaray, 2002a: 144). Such practices privilege the metric of control and make glycemic data readily available and knowable. This illustrates the biomedical logic of mastering the diabetic status of the mother in order to optimize the future health of the fetus. Ensuing relations between the practitioner and patient are characterized by appropriation, production, and transmission of information rather than established through attentive communication and contemplation of the other, including thoughtful consideration of the other within the other (Irigaray, 2004b: 391). That’s not to say that clinicians are insensitive to women’s affect and emotions during clinical encounters but disciplinary practices encourage preoccupation with quantitative figures over qualitative inquiry of a woman’s situated knowledge. During clinical encounters, the woman and her fetus are reduced to an object of knowledge rather than respected as an irreducible and unknowable subject in communication. Irigaray (2004a: 390) argues that practices that privilege visibility not only seizes, dominates, and flattens the other’s subjectivity, it immobilizes any possibility of entering into ethical relations with the other.

The totalizing discourses of race-based risk imposed on women of colour diagnosed with GD have profound consequences on social relations. The discourse of biomedicine constrains through enforcing a unitary logic: “to count everything, to number everything by units, to inventory everything” (Irigaray, 1985: 26). However, as Irigaray argues, her language cannot be “fixed or congealed” in the “discursive machinery” of biomedicine as a linear, quantifiable and singular discourse. Caught up in a system of classification of risk, race, and disease, the woman’s words are incomprehensible and “inaudible for whoever listens to [her] with ready-made grids with a fully elaborated code in hand” (Irigaray, 1985: 29). By imposing a language of conformity and uniformity, the rhetoric of risk related to GD in “high-risk ethnic groups” collapse the plurality of multiple meanings of pregnancy into the singular discourse of diabetes.
Upon diagnosis of GD, the maternal gaze directed toward the fetus is forced in alignment with the medical gaze, redirecting her attention towards the prescribed practices of self-surveillance and management. The unrelenting emphasis placed on the visible verifications of diabetic control via quantitative glycemic data not only overshadows and eclipses the woman’s experience of pregnancy, it runs the risk of rupturing relations with her unborn baby. Irigaray would question the privileging of the medical gaze over the maternal gaze as it forms the basis of objectification and commodification, as well as subordinates the woman’s subjectivity and interiority of pregnancy. Subsequently, the maternal relations between mother and baby, as two subjects, is effaced and objectified as one in the clinical setting. In flattening out their intersubjectivity, this conflation alienates the woman from her lived reality of pregnancy.

In attempts to seek an alternative to practices based on visibility and verticality of social hierarchies, Irigaray (2002b: 148 & 150) suggests developing an approach that privileges invisibility and horizontal relations. For Irigaray, invisibility refers to the mediating space of human relations, or the “third ground,” where we enter into each other’s presence as unknowable and irreducible human beings (Irigaray, 2004a: 395). In other words, invisibility does not simply refer to a lack of seeing but rather it is a new way of seeing that has the potential for a different modality of relations characterized by becoming and transformation (Ziarek, 2007: 71). This mode of relationality is different from relations based on appropriation, manipulation and intensifying processes of production that are typically observed in biomedical practices. The main distinction between an approach of visibility that privileges making/producing and an approach of invisibility that values letting be/enabling is that the former disregards the other, whereas the latter respects the emergence of the other (Ziarek, 2007: 72). Although Irigaray does not dispute the importance of making/producing as it is indispensable to human development, she does however question the dominance of making over letting be as it forecloses the possibility of being in a world that cultivates a culture of ethical relatedness. Irigaray’s notion of invisibility may be helpful in cultivating a different way of thinking and acting in clinical encounters.

Irigaray departs from the hegemonic modes of visibility by emphasizing that it is this very capacity to create invisibility that enables a different visibility of the world and others encountered within it. Although Irigaray is silent on invisibility in relation to whiteness, her
notion of invisibility speaks more broadly to ethical relations and offers a way to think through similarities between sexual and racial difference which might contribute to cultivating pedagogies and praxis that affirm both feminist and anti-racist discourse and politics. This is not to advocate for a colour-blind approach that often plays out in Canadian multicultural discourses or render invisible racial politics. However, what Irigaray is attempting to put forward is the notion of invisibility, as a third space, can create the conditions of coevality, mutuality and reciprocity to imagine Other-wise. Just as the placenta serves as a mediating space in pregnancy or a third entity between mother and fetus by neutralizing its immunological reactions and making co-existence possible (Irigaray, 1993: 39), the third space represents an opening to re-imagine a capacious understanding and approach to ethical relations inside and outside of the clinic.

In summary, this chapter brings together key findings from the dissertation study to illustrate the unintended consequences of discourses and practices pertaining to GD in “high-risk ethnic groups.” Race-based risk discourses and disciplinary practices are not benign or neutral, but they actively participant in subjectification and racialization. Expanding upon findings from previous chapters, I identify and discuss three areas of concern: the racialization of carbs, the dangers of compliance, and the motherless fetus. The unintended consequences that arise from discourses and practices pertaining to GD in “high-risk ethnic groups” beg us to go beyond reductionism in knowledge production, clinical practice, and pedagogy. Rather than reducing race to carbs, compliance to a metric of control, and women to glucotoxic wombs, greater reflexivity is required to offer alternative possibilities of addressing disparities in diabetes beyond racialization and medicalization. In the following chapter, I conclude this dissertation by offering conceptual interventions that affirm feminist anti-racist politics and praxis and ultimately contribute to a better collective and individual response to addressing racial disparities in diabetes.
Chapter Nine
Conclusion

This dissertation concludes by reflecting upon the study limitations and contributions and making recommendations based upon study findings for knowledge production, clinical practice and pedagogy. By attending to key issues derived from the study findings, I aim to stimulate discussion, and dare I say discomfort, on how we conceptualize GD in “high-risk ethnic groups.” My intention here is to return the biomedical gaze by calling for greater reflexivity on the cross-articulation of risk, race, and disease beyond reductionism in the following areas: 1) the articulation of the use of race/ethnicity; 2) the distinction between risk and disease; 3) the recognition of the unintended effects of intensive interventions; and 4) the acknowledgement of medico-moral assumptions underwriting authoritative texts. Greater reflexivity in these areas will open up alternative possibilities that direct attention away from current strategies of intervention that invite surveillance, regulation, and management of the reproductive lives of racialized women. Moreover, meditation on these areas of recommendations will contribute to a better collective and individual response for addressing the knowledge of problems and problems with knowledge related to GD in “high-risk ethnic groups.”

1 Reflections on the study

1.1 Study limitations

This section elaborates on methodological and theoretical limitations of this dissertation study in relation to data generation, analysis and interpretation of research findings. The initial intention set out for this dissertation study was to conduct interviews with participants in the community or home setting in order to elicit women’s everyday lived realities of GD. However, women in the study were not comfortable with this for various reasons, including the inconvenience of arranging time and space for the interviews beyond the clinic, lack of privacy in the home given that some women in the study lived with extended family, and discomfort with interviews outside of the clinic considering that there was little time to establish research rapport and trust. Challenges with gaining entree or access into the interview participants’ home occluded an opportunity to better understand the context within which women engage with or resist the diabetic regimen. However, it occurred to me while conducting phone interviews with
study participants that the phone offered aural access into their homes. In other words, the cacophony of background noise and repeated interruptions by family members during our conversation yielded insight into women’s home lives and provided a contextual understanding of women’s preference to have the interviews at the clinic. Also, the duration of the interviews was largely contingent upon the temporal and spatial circumstances of the clinic and the time women could afford before or after clinical appointments. Thus, rather than a 60 minute interview as initially proposed, most interviews were approximately 30 minutes in length. A shorter duration of interviews foreclosed opportunities to inquire further into issues that were raised by participants and attenuated the possibility of delving deeper into women’s narratives. However, given that women were interviewed in a three time sequence, missed opportunities were carried over and explored in subsequent interviews.

Another methodological limitation of this dissertation study relates to my positionality as an insider or former nurse clinician at the research setting. As mentioned previously in the method chapter, while my insider status proffered advantages such as gaining entry into clinical spaces with relative ease, sidestepping the initial process of garnering trust of clinicians, and learning cultural norms and clinical routines, there were disadvantages in the sense that my familiarity with the setting contributed to overlooking practices that to an outsider would have been unusual or quite strange. In instances when my former role subconsciously swayed me to assume the position of a clinician/educator, I reflected upon whether I was complicit in reproducing the very thing I was investigating (i.e. regimes of truth, strategies of intervention, and modes of subjectification).

There are theoretical limitations with approaching this study from a poststructuralist framework employing Foucauldian concepts of biopower, governmentality and subjectification. Although these theoretical tools have relevance and utility for rendering visible power relations and elucidating the ‘how’ of dietary governmentality, they foreclose other theoretically-informed analyses and alternative insights on the body and embodiment. For instance, a Foucauldian analysis attenuated a phenomenological understanding of embodied risk, or worse positioned myself as the researcher complicit in reproducing the erasure of women’s bodily experience of pregnancy. Moreover, the process of engaging in reflexivity from a poststructuralist orientation is challenging in the sense that I am located and shaped by the very discourses that I aim to
interrogate and trouble. Although the process of writing fieldnotes had productive value in becoming reflexively aware of and attuned to prevailing ways of thinking about risk, race, and disease, there were limits to the degree to which I could de-center myself and render the object of research strange whilst constructing an intelligible account of the topic.

1.2 Study contributions

The methodological strength and contribution of this dissertation study lies in the use of multiple data sources. Analysis of authoritative texts, fieldnotes, and interviews productively informed one another to illustrate the cross-articulation of risk, race, and disease in practice guidelines, clinical settings, and women’s narratives in order to show up the social effects of GD in “high-risk ethnic groups.” Multiple data sources offered possibilities to analyze each data source separately and comparatively, closely attending to aspects of the findings that were present in some but absent in others. This analytical and comparative process within and amongst data sources contributed to examining the complexities of contested categories of risk, race and disease and elucidating the unintended consequences of race-based discourses and practices pertaining to GD. The following paragraphs review the substantive findings of this dissertation study and highlight the contributions that this study brings to bear in order to provide points of departure or recommendations for future research, clinical practice, and pedagogy.

A critical analysis of authoritative texts illustrated that medico-scientific discourses are not neutral but infused with latent assumptions underwriting the category of “high-risk ethnic populations.” Employing a vocabulary and codified language of race, the 2008 CDA CPG constructs members of a “high-risk ethnic population” as non-white immigrants who are genetically and culturally problematic. The CDA CPG does not however operate in a vacuum or exist in solitude. Rather, the CDA CPG is in conversation with international organizations (i.e. American Diabetes Association, International Diabetes Federation, and World Health Organization) and reflects and reproduces racial ideology in the broader social context. Thus, the CDA CPG represents one node in the web of knowledge production and dissemination whereby national guidelines are informed and shaped by another set of guidelines on a global scale. Expanding the rubric of “risk,” the 2009 IDF Global Guidelines on Pregnancy and Diabetes casts the intrauterine environment as a site of fetal programming and the source of the diabetes “pandemic.” In order to arrest this vicious cycle, the 2009 IDF Kathmandu Declaration: Life
Circle Approach offers an “action plan” of wide-reaching interventions that target different stages of a woman’s life. Taken together, categories of race, risk, and disease cross-articulate, painting a particular portrait of pregnant women of colour whose bodies and cultural behaviours require various interventions to arrest the global “pandemic” of diabetes.

Findings from participant observation in the clinic contributed to gaining a better understanding of how race-based risk discourses operate in the classroom and clinic setting as a technology of governance. Drawing on ethnographic fieldwork, I have illustrated three ways in which GD in “high-risk ethnic groups” are accomplished locally in the clinical setting. Through dividing practices of screening based on race/ethnicity and a panoply of disciplinary techniques, etiological explanations of risk qua race, and biopedagogical strategy of racial carbopolitics, race-based risk discourses were brought into being and accomplished locally in the clinical setting. Such practices not only run the risk of inviting moralistic and racialized interpretations, they also reproduce racism because they render invisible power relations and social conditions that contribute to GD in “high-risk ethnic groups.”

Interviews with women in a three time sequence generated insights into how women respond to, engage with, and resist risk discourses pertaining to GD in “high-risk ethnic groups” and how race-based risk discourses and self-care practices take part in the formation of women’s subjectivities. Upon diagnosis, heightened affects and concerns about causality incite women to actively engage in food discipline through restricting rice and colonizing their diets with whole wheat. As some women in the study accrued situated and experiential knowledge about diabetes self-management, they engaged in agential acts of resistance and recalcitrance. Women’s experiences of GD contribute to the making of a particular kind a subject: a multicultural biocitizen who employs the language of biomedicine and multiculturalism to make sense of and take responsibility for type 2 diabetes. Race-based risk discourses as a technology of governance and ensuing disciplinary practices are “successful” insofar as women come to see themselves as perpetually at-risk for diabetes while simultaneously divesting negative aspects of her culture in order to seek acceptance into the national fold.

This dissertation study brings the above findings together to bear on the overall thesis of the study and draw attention to the unintended consequences of discourses and practices.
pertaining to GD in “high-risk ethnic groups.” Race-based risk discourses and ensuing disciplinary practices are not inconsequential but have profound effects of reproducing racism through the racialization of carbs, subjectification, and nationalization. Moreover, intensive interventions have iatrogeneic consequences of contributing to the development of type 2 diabetes, post-partum, as well as running the risk of medicalizing pregnancy which in turn risks a discursive erasure of maternal subjectivity.

2 Recommendations

2.1 Articulation of the use of race/ethnicity

Careful consideration must be given to the ways in which race/ethnicity are conceptualized in authoritative texts and employed in clinical practice. Critical discourse analysis of texts and participant observations point to the dangers of equating “high-risk ethnic groups” as non-white immigrants, engaging in processes of racialization through dividing and disciplinary practices, and employing biopedagogical strategies of racial carbopolitics. Such discourses and strategies invite racist and moralistic interpretations that have profound effects on women’s subjectivities and understandings of risk in relation to race. Discursive practices further marginalize women of colour, casting them as biologically and culturally inferior while diverting attention away from the social, political, economic and historical forces that contribute to racial disparities in diabetes.

One recommendation at the level of clinical practice and pedagogy is to improve training and continuing education of health care practitioners about the complexities of race, risk, and disease, and the ways in which they are conceptualized and employed in practice as fixed, absolute, and self-evident. In relation to race, instruction can be modified to include the history of racial categories in biomedicine, structural dynamics of whiteness, heterogeneity of risk within racial groups, current controversies of GD about their biological and cultural significance and the limits of their utility. Rather than continuing to use the antiseptic classification of “high-risk ethnic populations” unproblematically and reproducing racializing and exclusionary practices that ensue from them, health care practitioners can be encouraged to dwell more deeply about why and when race matters and why and when it doesn’t. Following Montoya (2011), it may be useful to make distinctions between using ethnoracial categories in a descriptive mode to
document health status of populations rather than using social categories to produce biological attribution of causes. Moreover, instruction can bring in the impact of socio-political and economic factors on health as well as biological expressions of racism that fall outside the conventional catchment area of evidenced-based medicine.

Another recommendation at the level of research and knowledge production is to clarify the meaning of “high-risk ethnic group” and reflect upon how the use of race/ethnicity connects with racist discourses. Those who study racial disparities in diabetes have the duty to make clear the link between risk and race and to meditate on whether their language unnecessarily focuses on racial distinction or engages in categorical comparisons that might lend to racist interpretations. Furthermore, a depoliticized and decontextualized understanding of race-based risk not only misses the complex forms of sociality that characterize racial disparities in health but narrows the kinds of policy that can be conceived and acted upon (Andersen, 2013: 646). Those who work in the area of knowledge translation and development of clinical practice guidelines must be more transparent on the grounds by which “high-risk ethnic populations” is employed. The radical removal of this chapter in the latest CPG ought to be accompanied by a rationale and a justification of its continual usage in other sections of the text.

A final recommendation would be to include stakeholders such as women of colour who have a situated knowledge of GD and interdisciplinary research teams consisting of anti-racist scholars and those from social sciences, science studies and/or humanities to overcome disciplinary narrowness of clinical epidemiology and biomedical sciences. Inclusion of other ways of knowing will promote external validity and contextual relevance. But more importantly, including alternative ways of knowing will lay bare tensions that practitioners and patients experience in their daily lives, promoting greater self-reflexivity beyond reductionism. This opens up possibility for practitioners to “reintegrate ethics into their practice in ways that refuse exclusion on the basis of local knowledge” (Purkis, 2001: 149). As Foucault (1980: 82) puts it, “it is through the re-appearance of this knowledge, of these local popular knowledges, these disqualified knowledges, that criticism performs its work.”
2.2 Distinction between risk and disease

Serious consideration must be directed towards clarifying the conceptualization of GD as a risk or disease. Given that GD conflates pre-gestational diabetes, ‘true’ GD, and impaired glucose tolerance in pregnancy, greater specificity is required to differentiate mild to more severe cases, particularly in light of reported concerns that the diagnosis leads to harm, either by increasing medical interventions such as caesarean section (Sermer et al., 1998), admission to neonatal units (Crowther et al., 2005; Landon et al., 2009), or by causing anxiety in mothers (Sjögren et al., 1994). If GD is approached as a risk factor in women with lower levels of glucose who are adequately treated on diet alone, then GD as a diagnosis will not lead to unnecessary clinical interventions and iatrogenesis that ensue from them (Petry, 2014: 44). However, women with higher blood glucose values or pre-existing type 2 diabetes would certainly benefit from diagnosis of GD as a disease so that rates of complications and stillbirth can be kept to a minimum with effective treatment.

There are two, if not more, pragmatic clinical reasons for making clear distinctions between risk and disease. First, identifying and reducing risk should not be conflated with or warp the notion of disease as this conceptual manoeuvre blurs the distinction between prevention and treatment. When GD is treated as a disease, preventative care results in an unnecessary blurring of the distinction between health and disease. Second, labelling GD as a disease has the potential of undermining patient understanding. For example, an endocrinologist who prescribes intensive insulin therapy to treat GD is not treating disease per se, but rather s/he is “diagnosing risk” (Fosket, 2004: 294) and proposing an intervention to reduce risk. However, when women hear a long list of negative perinatal and maternal risks associated with pre-gestational diabetes, women with GD might get the impression that they have a disease that warrants treatment. The benefit of treating GD is a reduction of risk of only a certain magnitude, not a guarantee of protection. These specific quantities of risk and risk reduction are rarely disclosed to patients in a way that is understood by them. Although re-categorizing GD as a risk factor rather than a disease may or may not facilitate patient understanding or immediately change current practices, it is a crucial first step in making the distinction between risk and disease, as well as clarifying the distinction between prevention and treatment. This has wider relevance with regard to other conditions that are classified as diseases, including hypertension, high cholesterol, osteoporosis,
and obesity. That is not to say that improved prevention in all these areas will not have significant benefits for individuals and public health for they undoubtedly do. However, such conditions, like socially constructed categories, also carry the very real risk of medicalizing normal life.

This aforementioned discussion raises questions about the cost-effectiveness and benefit of detecting and treating GD, particularly in light of the new criteria established by International Association of Diabetes and Pregnancy Study Groups (2010). As Ryan (2012) points out, “with the stroke of a consensus pen, nearly one-fifth of pregnant women – more than double the current incidence in Canada – would be labelled as having gestational diabetes if the criteria of the IADPSG were to be adopted.” This has implications on the health care system, particularly a publicly funded one such as ours that has finite funds. Although a recent cost-effectiveness study by the U.K. National Institute for Health and Clinical Excellence (2008) concluded that “screening, diagnosis, and treatment of gestational diabetes is cost-effective,” the new criteria established by the IADPSG failed to pass the first cost-benefit analysis (Werner et al., 2012). This recent analysis of the new criteria reported that it is cost-effective only if the diagnosis of GD can be linked to a future reduction of type 2 diabetes; however, this has been not been established. Thus, several points of contestation remain: whether GD is medically justified, whether our health care system can afford it, and whether funds could be better spent on women with pre-existing diabetes in pregnancy. Future research and debates regarding these matters are paramount given that changes in the diagnostic criteria carry widespread implications for policy, practice, health care funding, and everyday lives of women.

2.3 Recognition of the unintended effects of intensive interventions

Interventions are undoubtedly productive in the sense of generating practices, protocols and subjectivities, but they do not always produce the intended results. Interventions oftentimes produce unintended consequences that undermine the very objective of the intervention itself. To reiterate Ahmed’s (2012: 143) point, “solutions to problems are sometimes the problems given new form.” GD in “high-risk ethnic groups” is a case in point. This dissertation study illustrates the unintended consequences of intensive interventions, producing disturbing and paradoxical effects on women, particularly women of colour. What is so interesting about discourses and
Interventions related to GD in “high-risk ethnic groups” is that it produces more anxiety about it but not the intended result of preventing type 2 diabetes. Although GD is known as a temporary disease that disappears after delivery, the effects of race-based risk discourses and disciplinary practices do not entirely disappear but leave residual reverberations both psychically (i.e. iatrogenic anxiety) and physically (i.e. weight gain) for women post-partum. Intensive insulin treatment is but one illustrative example that captures the paradoxical effects of interventions.

Intensive insulin treatment may be considered the ‘gold standard’ for treating GD in authoritative texts and clinical practice (i.e., Grade A, Level 1 in the 2013 CDA CPG, despite notable contradictions on screening/diagnostic practices which are categorized as Grade D), but there is a paucity of discussion and dialogue between experts and within clinical encounters about the unintended effects of insulin taken during pregnancy. Weight gain as a side effect of insulin and its contribution to developing type 2 diabetes post-partum seems to be silenced and even suppressed in authoritative texts and clinical practice. In other words, there is no space to productively discuss this. Although it may be disquieting for experts and clinicians to acknowledge that side effect of insulin treatment (i.e. weight gain) might be contributing to insulin resistance which places women at greater risk of developing type 2, this conversation is necessary so that the least harmful intervention might be advocated.

A reflexive discussion about the iatrogenenerated effects of insulin may enable fruitful dialogue about the importance of offering women informed treatment options rather than unquestioningly imposing insulin upon them. In contrast to other biomedical specialties such as oncology where various treatment modalities and side effects are articulated and discussed with patients, management and treatment options related to GD are rarely discussed. Women are not asked but expected unproblematically to start injecting insulin multiple times a day. Moreover, the common practice of incrementally increasing the insulin dose with each follow-up visit must be approached cautiously with weight gain in mind and how this might in turn increase a woman’s risk of developing type 2 diabetes post-partum. Thus, engaging in an informed discussion with women in a manner that opens up possibilities to cultivate the care of the self in the way Foucault meant in his later works and Irigaray advocates in relation to cultivating a third ground of ethical relations. That is, to imagine alternative possibilities and innovative ways that exceeded the regime of normalization, thereby cultivating a broader repertoire of capacities
beyond increasing docility. This discussion might include encouraging women to “experiment” with diet, as women in this study put it, and physical activity in order to avoid or delay insulin treatment, extending the dietary modification period beyond two weeks for women to acquire experiential knowledge about the effects of particular carbs on blood sugars, or opening up a dialogue about oral hypoglycemic agents as an alternative to insulin injections. By doing so, the most individually relevant and least harmful intervention can be advanced.

Given that interventions have implications on the lived bodies and daily lives of people, this necessitates self-reflexive attention to its effects beyond its effectiveness. If biomedical activities are interventions in lives, then the lives of people need to be appreciated accordingly. A shift in self-reflexivity that centers on the effects of its activities on people’s lives might contribute to shifting attention to improving care rather than proving effectiveness of interventions. Not all of the effects of intervention are expected to be for the better. As Mol (2004: 58) points out, “in considering the effects of its activities, medicine would be wise to confront its own tragic character: medical interventions hardly ever bring pure improvement, plus a few unfortunate ‘side effects’; instead they introduce a shifting set of tensions.” Patients and practitioners encounter these effects and lay bear these tensions in one way or another, perhaps not in a manner that travels to people, practices, and places. Following Mol (2006: 412), my contribution with this dissertation study is to “unravel such tensions, articulate them, and cast them in words that allow them to travel so that they may be more widely reflected on.”

2.4 Acknowledgement of moral assumptions underwriting discourses

Closer attention must be made in the way discourses and practices pertaining to GD might risk a discursive erasure of the mother. We must carefully consider the ways in which women are positioned discursively in relation to their fetus in authoritative texts and ensuing clinical practice. For example, discourses in authoritative texts that cast the mother as an “aberrant intrauterine environment” or “environmental toxin” in biopedagogical settings have the effect of effacing maternal subjectivity. Moreover, comments noted during clinical encounters, such as “it’s not about you, it’s about the baby,” ignore the inchoate relational development of the maternal-baby dyad.
With respects to authoritative texts, one site of possibility in which critical reflection and counter-discourses can be proposed is within the Clinical Practice Guidelines itself, under the Level D classification system of recommendation which calls attention to the quality of evidence that may be conflicting. This category might open the door to welcome critical scholarship that questions the vocabulary and language employed in such texts by demonstrating how moral assumptions embedded in such discourses have implications on clinical practice and lived realities of women. By including qualitative research that foregrounds patient narratives, societal and cultural complexities around pregnancy and diabetes can be addressed with the aim of creating more relevant and positive strategies. In doing so, alternative and affirming pedagogies can be developed as a corrective to current strategies that employ, whether intentional or not, scare tactics of listing a number of negative consequences in the name of risk.

In relation to enhancing pedagogical training and continued education for health care practitioners, an understanding of situated knowledge (Haraway, 1988) can add critical reflexivity to the arsenal of evaluative tools clinicians bring to bear on their work (Wendland, 2007: 227). Practitioners could refine their capacities of critically examining the subtext and assumptions underwriting medico-scientific studies in addition to evaluating the medical research in their own terms. Engaging in the works of feminist scholars who analyze birth experiences might offer partial perspective to better understand how belief in scientific objectivity and ensuing discourses (which situate women’s bodies as dangerous sites from which fetuses must be rescued) might contribute to a discursive erasure of the mother and her experience of pregnancy. Moreover, practitioners might reflect upon our roles as “innocent subjects, standing outside of hierarchical social relations, who are not accountable for the past or implicated in the future” (Razack, 1998: 10). Problematizing one’s location within an institutional context will facilitate a better understanding of “the ways in which we are complicitous in the subordination of others” (Razack, 1998: 59). By troubling ‘truths’ through self-conscious reflexivity and interrogating the ways in which we are complicit in the subordination of others, practitioners can develop a feminist and anti-racist politics and praxis that promotes women’s health beyond greater degrees of intervention and surveillance.

In this present study, I have sought to give a situated account of the social effects of GD in “high-risk ethnic groups.” The key point I have made throughout this dissertation is that
discourses and practices related to GD in “high-risk ethnic groups” are neither neutral nor inconsequential in their social effects. They have potentially dangerous consequences of reproducing racism through the racialization of carbs, paradoxically putting women at greater risk of type 2 diabetes post-partum, and discursively erasing the mother in relation to her fetus. This study calls for greater reflexivity beyond reductionism and medicalization. I concluded this dissertation by offering recommendations that promote the articulation of the use of race/ethnicity, distinction between risk and disease, recognition of unintended effects of intensive interventions, and acknowledgement of the medico-moral assumptions underwriting discourses on maternal diabetes. I hope that findings from the study and recommendations that flow from them contribute to enhancing knowledge production, pedagogy and practice in ways that affirm feminist anti-racist politics and praxis and hold resonant value for practitioners and pregnant women alike.
References


Cutcliffe, R.J., & Ramcharan, P. (2002). Leveling the playing field? Exploring the merits of the ethics as process approach for judging qualitative research proposals. *Qualitative Health Research, 12*, 1000-1010.


Irigaray, L. (1985). *This sex which is not one.* Ithica NY: Cornell Paperbacks.


## Appendix A: Screening and diagnosis guidelines from different associations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Who is screened?</th>
<th>Method of screening</th>
<th>Screen positive threshold</th>
<th>Diagnostic test</th>
<th>Diagnostic threshold for GD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA 2013 (Canadian Diabetes Association)</td>
<td>All women</td>
<td>50 g GCT (preferred) Alternative: ‘1-step’ 75 g OGTT (see IADPSG below)</td>
<td>≥7.8 mmol/L</td>
<td>75 g OGTT</td>
<td>1. ≥11.1 mmol/L on 50 g GCT 2. 75 g OGTT Fasting ≥5.3 1 hour ≥10.6 2 hours≥9.0 One abnormal value needed for diagnosis</td>
</tr>
<tr>
<td>ADA 2013 (American Diabetes Association)</td>
<td>All women</td>
<td>‘1-step’ 75 g OGTT</td>
<td>N/A</td>
<td>N/A</td>
<td>Fasting ≥5.1 1 hour ≥10.0 2 hours ≥8.5 One abnormal value needed for diagnosis</td>
</tr>
<tr>
<td>ADIPS 1998 (Australasia)</td>
<td>1. All women 2. Only “high risk”*</td>
<td>50 g or 75 g GCT (non fasting)</td>
<td>1. 50 g GCT: ≥7.8 2. 75 g GCT: ≥8.0</td>
<td>75 g OGTT</td>
<td>Fasting ≥5.5 2 hours ≥8.0 One abnormal value needed for diagnosis</td>
</tr>
<tr>
<td>IADPSG 2010</td>
<td>All women</td>
<td>‘1-step’ 75 g OGTT</td>
<td>N/A</td>
<td>N/A</td>
<td>Fasting ≥5.1 1 hour ≥10.0 2 hours ≥8.5 One abnormal value needed for diagnosis</td>
</tr>
<tr>
<td>NICE 2008 (United Kingdom)</td>
<td>Women with risk factors</td>
<td>Risk factors¹</td>
<td>N/A</td>
<td>75 g OGTT</td>
<td>Fasting ≥7.0 2 hours ≥7.8 One abnormal value needed for diagnosis</td>
</tr>
<tr>
<td>WHO 1999 (World Health Organization)</td>
<td>1. Women with risk factors 2. All women</td>
<td>1. Risk factors¹ 2. ‘1-step’ with 75 g OGTT</td>
<td>N/A</td>
<td>75 g OGTT</td>
<td>Fasting ≥7.0 2 hours ≥7.8 One abnormal value needed for diagnosis</td>
</tr>
</tbody>
</table>

GCT = Glucose challenge test
OGTT = Oral glucose tolerance test

*Glycosuria, age > 30 years, obesity, family history of diabetes, past history of GD or glucose intolerance, previous adverse pregnancy outcome and belonging to a high-risk ethnic group

¹ Body mass index > 30 kg/m², previous macrosomic baby weighing ≥4.5 kg, previous GD, family history of diabetes (first-degree relative with diabetes), family origin with a high prevalence of diabetes, such as South Asian (specifically women whose country of family origin in India, Pakistan or Bangladesh), black Caribbean, Middle Eastern (specifically women whose country of origin is Saudia Arabia, United Arab Emirates, Iraq, Jordan, Syria, Oman, Qatar, Kuwait, Lebanon or Egypt).

² Older women; obese women; those with previous history of glucose intolerance; any pregnant woman who has elevated fasting, or causal, blood glucose levels; those with a history of GD; those with a history of large-for-gestational-age babies; women from certain high-risk ethnic groups; strong family history of diabetes mellitus.
## Appendix B: Risk factors for gestational diabetes

<table>
<thead>
<tr>
<th>Risk Factors for Gestational Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-pregnancy body mass index ≥25 kg/m²</td>
</tr>
<tr>
<td>Older maternal age</td>
</tr>
<tr>
<td>Higher parity</td>
</tr>
<tr>
<td>Ethnicity</td>
</tr>
<tr>
<td>Diet rich in saturated fat</td>
</tr>
<tr>
<td>Vitamin D deficiency</td>
</tr>
<tr>
<td>Previous pregnancy complications such as congenital malformations, stillbirth, macrosomia, caesarean section</td>
</tr>
<tr>
<td>Multiple pregnancy</td>
</tr>
<tr>
<td>Smoking</td>
</tr>
<tr>
<td>Physical inactivity</td>
</tr>
<tr>
<td>Lifestyle factors</td>
</tr>
<tr>
<td>Short stature</td>
</tr>
<tr>
<td>Maternal weight: higher pre-pregnancy weight and body mass index, gestational weight gain, adulthood weight gain</td>
</tr>
<tr>
<td>Infant of a diabetic mother</td>
</tr>
<tr>
<td>Fetal growth restriction</td>
</tr>
</tbody>
</table>

(Petry, 2014: 54)
Appendix C: Maternal and offspring risks associated with gestational diabetes

<table>
<thead>
<tr>
<th>Maternal Risks</th>
<th>Offspring Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short term</strong></td>
<td><strong>Long term</strong></td>
</tr>
<tr>
<td>Hypertensive disorders including gestational</td>
<td>Fetal:</td>
</tr>
<tr>
<td>hypertension and pre-eclampsia</td>
<td>Macrosomia</td>
</tr>
<tr>
<td>Operative vaginal delivery and episiotomy</td>
<td>Intra-partum traumatic lesions and asphyxia</td>
</tr>
<tr>
<td>Caesarean delivery</td>
<td>Birth trauma:</td>
</tr>
<tr>
<td></td>
<td>Shoulder dystocia</td>
</tr>
<tr>
<td></td>
<td>Bone fractures</td>
</tr>
<tr>
<td></td>
<td>Brachial plexus injury</td>
</tr>
<tr>
<td></td>
<td>Stillbirth due to possible congenital</td>
</tr>
<tr>
<td></td>
<td>malformations, respiratory distress</td>
</tr>
<tr>
<td></td>
<td>syndrome, extreme prematurity, metabolic</td>
</tr>
<tr>
<td></td>
<td>disorders</td>
</tr>
<tr>
<td></td>
<td>Neonatal:</td>
</tr>
<tr>
<td></td>
<td>Hypoglycemia</td>
</tr>
<tr>
<td></td>
<td>Hyperbilirubinemia and Jaundice</td>
</tr>
<tr>
<td></td>
<td>Polycythemia</td>
</tr>
<tr>
<td></td>
<td>Hypocalcemia</td>
</tr>
<tr>
<td></td>
<td>Hypomagnesemia</td>
</tr>
<tr>
<td></td>
<td>Type 2 diabetes</td>
</tr>
<tr>
<td></td>
<td>Obesity</td>
</tr>
<tr>
<td></td>
<td>Metabolic syndrome including hypertension</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular disease</td>
</tr>
<tr>
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<td>Metabolic syndrome including hypertension</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular disease</td>
</tr>
<tr>
<td></td>
<td>Type 2 diabetes</td>
</tr>
</tbody>
</table>

(Petry, 2014: 109)
Appendix D: Ethics review

UNIVERSITY OF TORONTO
OFFICE OF THE VICE PRESIDENT, RESEARCH

PROTOCOL REFERENCE # 27332
March 17, 2012

Dr. Sloban Nelson
FACULTY OF NURSING

Ms. Maki Iwase
FACULTY OF NURSING

Dear Dr. Nelson and Ms. Maki Iwase,

Re: Your research protocol entitled, "The social effects of gestational diabetes in high-risk ethnic groups"

ETHICS APPROVAL

Original Approval Date: March 16, 2012
Expiry Date: March 15, 2013
Continuing Review Level: 2

We are writing to advise you that the Health Sciences Research Ethics Board (REB) has granted approval to the above-named research protocol, for a period of one year. Ongoing research under this protocol must be renewed prior to the expiry date.

Any changes to the approved protocol or consent materials must be reviewed and approved through the amendment process prior to its implementation. Any adverse or unanticipated events in the research should be reported to the Office of Research Ethics as soon as possible.

Please ensure that you submit an Annual Renewal Form or a Study Completion Report 15 to 30 days prior to the expiry date of your current ethics approval. Note that annual renewals for studies cannot be accepted more than 30 days prior to the date of expiry.

If your research is funded by a third party, please contact the assigned Research Funding Officer in Research Services to ensure that your funds are released.

Best wishes for the successful completion of your research.

Yours sincerely,

[Signature]

Judith Friedland, Ph.D.
REB Chair

[Signature]

Daniel Gyeau
REB Manager

OFFICE OF RESEARCH ETHICS
McMichael Building, 12 Queen's Park Crescent West, 2nd Floor, Toronto, ON M5S 3E8 Canada
Tel: +1 416-344-3873 • Fax: +1 416-344-3870 • rebs@utoronto.ca • http://www.research.utoronto.ca/research-administration/
Appendix E: 2008 Canadian Diabetes Association Clinical Practice Guidelines

http://www.diabeteseducation.ca/images/CPG%202008.pdf
Appendix F: 2009 International Diabetes Federation Global Guidelines on Pregnancy and Diabetes

http://www.idf.org/guidelines/pregnancy-and-diabetes

2. Gestational diabetes mellitus (GDM)

2.1 Defining the condition

The widely accepted definition is that given by the American Diabetes Association (ADA) '...any degree of glucose intolerance with onset or first recognition during pregnancy' [3]. The definition is applicable even if the condition persists after pregnancy. It does not exclude the possibility that unrecognized glucose intolerance may have existed or begun preconception with the pregnancy. The widespread acceptance of this definition is in no small part due to the fact that it does not mention any specific diagnostic criteria.

Any definition of GDM has to take into account three elements of risk – maternal morbidity and mortality in the current pregnancy, of the mother developing type 2 diabetes, and of intrauterine programming of the developing fetus with subsequent expression of disorders in later life.

2.2 Diagnosis of GDM

There is a continuum of risk for maternal glucose levels and at least adverse pregnancy outcomes [6-11]. Currently there is a lack of international consensus regarding the diagnostic criteria for GDM. In most parts of the world, the diagnostic criteria are based on either the 100 gram 3-hour test as commonly used in the USA or the 75 gram 2-hour World Health Organization (WHO) test. Many national bodies have derived their own criteria based on local experience and their healthcare delivery systems. The lack of consensus may well be addressed by recommendations arising from the International Association of Diabetes in Pregnancy Study Groups (IADPSG), a working group analysing the results of the HAPO study. Any recommendations from the group will then need to be considered by relevant national bodies and incorporated into the local health service arrangements. The process will take some time. Other than by chance, it is not clear if any diagnostic criteria of GDM based exclusively on pregnancy outcomes will be applicable to the other two elements of risk.

2.3 Rationale for treating GDM

It is generally acknowledged that women with GDM are at increased risk of adverse pregnancy outcomes, particularly relating to perinatal mortality and morbidity. It is also generally acknowledged that treatment of women with GDM, by whatever means, can reduce the risk of these problems. In the developed world an increased perinatal mortality rate is unlikely but can still be demonstrated in a sufficiently large series [12]. However, in settings where obstetric care does not uniformly reach modern quality standards, perinatal mortality is still an important issue [13].

Perinatal mortality is an ongoing concern. Macroscopic or large-for-gestational-age (LGA) infants are still common, and can be considered a surrogate marker for at least some of the effects of intrauterine programming.

## Information and Consent Form for Participation in a Research Study

### Participant Observation in Clinical Setting

**Version Code/Date:** 21/11/2011

**Study title:** The Social Effects of Gestational Diabetes in High-Risk Ethnic Groups

<table>
<thead>
<tr>
<th>Name of Principal Investigator at Hospital:</th>
<th>Name of Faculty Supervisor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maki Iwase, RN, PhD candidate</td>
<td>Dean/Dr. Sioban Nelson</td>
</tr>
<tr>
<td>Lawrence S. Bloomberg Faculty of Nursing</td>
<td>Lawrence S. Bloomberg Faculty of Nursing</td>
</tr>
<tr>
<td>University of Toronto</td>
<td>University of Toronto</td>
</tr>
<tr>
<td>155 College Street, Suite 130</td>
<td>155 College Street, Suite 130</td>
</tr>
<tr>
<td>Toronto, Ontario M5T 1P8</td>
<td>Toronto, Ontario M5T 1P8</td>
</tr>
<tr>
<td>Phone: 416-946-3053 or 416-946-3053</td>
<td>Phone: 416-978-2862</td>
</tr>
<tr>
<td>Fax: 416-946-5798</td>
<td>Fax: 416-946-5798</td>
</tr>
<tr>
<td><a href="mailto:maki.iwase@utoronto.ca">maki.iwase@utoronto.ca</a></td>
<td><a href="mailto:dean.nursing@utoronto.ca">dean.nursing@utoronto.ca</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Names of Advisory Committee:</th>
<th>Name of Investigator and Coordinator:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Ping-Chun Hsiung</td>
<td></td>
</tr>
<tr>
<td>Department of Social Sciences</td>
<td></td>
</tr>
<tr>
<td>University of Toronto</td>
<td></td>
</tr>
<tr>
<td>1265 Military Trail</td>
<td></td>
</tr>
<tr>
<td>Toronto, Ontario M1C 1A4</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:pchsiung@utsc.utoronto.ca">pchsiung@utsc.utoronto.ca</a></td>
<td></td>
</tr>
<tr>
<td>Dr. Lorna Weir</td>
<td></td>
</tr>
<tr>
<td>York University- Department of Sociology</td>
<td></td>
</tr>
<tr>
<td>310 Founders College</td>
<td></td>
</tr>
<tr>
<td>Toronto, Ontario M3J 1P3</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:lweir@yorku.ca">lweir@yorku.ca</a></td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

You are being invited to take part in a research study. Before agreeing to take part in this study, it is important that you read and understand what will be done in this study. The following information describes what the study is about (purpose), what will be done (procedures), benefits, discomforts and risks associated with this study. It also describes your right to refuse to take part or withdraw from the study at any time. You should understand enough about what you will be asked to do, as well as the risks and benefits, to be able to make an informed decision. This is called the informed consent process.

This consent form may contain words that you do not understand. Please ask the study investigator to explain any part of this consent form that you do not clearly understand. Make sure all of your questions have been answered to your satisfaction before signing this form. If you decide that you do not want to take part, you do not have to give a reason. If you decide not to take part, there will be no penalty or loss of benefits to you.

BACKGROUND INFORMATION

Women who are members of particular ethnic groups, such as South Asian, Asian, Hispanic, Aboriginal and African descent, are more prone to develop gestational diabetes. However, not much is known about the social effects of gestational diabetes in women from high-risk ethnic groups. The purpose of this study is to examine how gestational diabetes shapes the lives and social relations of women from high-risk ethnic groups. This study is part of a PhD thesis.

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of the study is to describe and examine the social effects of gestational diabetes in women from high-risk ethnic groups. The goals of conducting participant observations are to describe how information about gestational diabetes in high-risk ethnic groups is accomplished in the clinical setting and better understand how women from high-risk ethnic groups respond to such information and related (self-management) practices.

Participant observation will be conducted at ________________, and this aspect of the research is expected to be completed by March 1st, 2013.

WHO CAN PARTICIPATE IN PARTICIPANT OBSERVATION?

Staff members at ___________________________ will be asked to consider participating in the observation portion of the study. If you agree to participate in this study, the principal investigator will observe your interactions with the patient(s). The observations visits will pertain only to the gestational diabetes class and follow-up clinic appointments pertaining gestational diabetes for approximately 3 months at each site.
WHO SHOULD NOT PARTICIPATE IN THE STUDY?

Staff members who are not a part of __________________________________________
____________________________________ should not participate in the study.

WHAT DOES THE STUDY INVOLVE?

If you decide to join this study: Specific procedures

During participant observation of the gestational diabetes class or follow-up clinic appointments:

- your interactions with the care recipient and family members will be observed by the researcher
- the principal investigator may take notes of what you are doing in the clinical context
- the principal investigator may ask you some questions to seek clarification/elaboration

In this study, the principal investigator will not be evaluating your work performance. Patient information or identifiers will not be collected.

WHAT ARE MY RESPONSIBILITIES?

Please notify the principal investigator if you have any questions or concerns pertaining to the study or if there is a change in your decision to participate in this study.

WHAT ARE THE POSSIBLE RISKS OF HARM AND INCONVENIENCES OF PARTICIPATING?

There are no obvious harms associated with taking part in this study. However, participating may involve some of your time and may inconvenience you. Every effort will be made to ask questions at appropriate times to minimize delays in your work routines. You may choose not to answer any questions the principal investigator may ask you during observations. You may stop the observation if you deem it inappropriate for you or the patient and family members.

Although your practice will not be evaluated, should unprofessional conduct be encountered during participant observation in the clinical setting or reported during the interviews, the principal investigator will take directions as per the appropriate regulating College.

WHAT ARE THE BENEFITS OF PARTICIPATING IN THIS STUDY?

You will not directly benefit from participating in this study. However, it is hoped that this research may help us better understand the social effects of gestational diabetes in high-risk ethnic populations.
WHAT ARE THE ALTERNATIVES TO PARTICIPATION IN THIS STUDY?

The alternative to participation in this study is to not participate at all. If you do wish to take part in the study, there will be no penalty or loss of benefits to you.

WHAT IF NEW INFORMATION BECOMES AVAILABLE THAT MAY AFFECT MY DECISION TO PARTICIPATE?

You will be informed of any new important findings which may become available during the course of this study that may affect your willingness to continue to participate in this study.

COMPENSATION/COSTS

There is a $10 gift card to Tim Horton’s for participating in the observations to compensate for any delays incurred in your work routines.

VOLUNTARY PARTICIPATION

Participation in this study is completely voluntary. It is up to you to decide whether or not to take part. If you decide not to take part, there will be no penalty or loss of benefits to you. Your decision will not disadvantage you in any way. You can decide not to participate in this study or decide to withdraw at any time without providing a reason.

WITHDRAWAL

You should tell the principal investigator if you wish to stop taking part in the study. You do not need to give a reason for doing so.

Your participation in this study may be stopped at any time by the faculty supervisor and advisory committee, The Research Ethics Board or The University of Toronto Research Ethics Board, or regulatory authorities, without your consent. The principal investigator may remove you from the study for any reason and has the right to end your participation for any of the following reasons:

- it would be in your best interest for you to continue
- you do not follow study procedures as directed by the principal investigator
- the faculty supervisor and advisory committee decides to end the study

WHAT ABOUT CONFIDENTIALITY?

You have a right to privacy. All information collected for this study will be confidential to the limit possible by applicable laws and regulations. This information will not be voluntarily disclosed or made publicly available. While every effort will be made to protect the privacy of your information, absolute confidentiality cannot be guaranteed.
As a PhD student, the study data will be analyzed by the faculty supervisor and advisory committee. In reports about the study, data from fieldnotes will be grouped together in order to develop conclusions that may be used to inform health care providers and develop guidelines and policies that are meaningful and relevant to women from diverse ethnic backgrounds. The results may also be used in reports of the study or for scientific presentations or publications.

Occasionally, at any time during or after the study, the faculty supervisor and advisory committee and/or regulatory authorities may be granted direct access to the study data so that they can confirm the information collected during the study is accurate. In these cases, these representatives would see your name on the study data, but nothing with your name on it will leave ________________________. Representatives of The ___________ Hospital Research Ethics Board may also be granted similar access.

By signing this form, you allow us to make fieldnotes available to the Research Ethics Board of The ___________ Hospital and The University of Toronto (two committees who watch over the ethical conduct of this study) and the faculty supervisor and advisory committee.

Any study data sent outside the hospital will have your personal identification removed. If we publish the information we learn from this study in a medical/professional journal, you will not be identified by name or in any way that could personally identify you.

The study data will be stored in a confidential location for a period of seven years. Any destruction of your data will be done according to applicable laws and regulations. Your name will not be placed on any mailing lists or sold to anyone for marketing purposes.

You do not have to sign this document if you do not agree with the uses and disclosures described above. However, if you do not sign this document, you will not be able to take part in the study.

**WHO DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?**

You are encouraged to ask questions at any time before and/or during the study. The principal investigator can answer any questions you may have about the research study. For any questions, or in case of a problem, emergency, or study-related concern, you can contact Maki Iwase at ____________, or by email maki.iwase@utoronto.ca, or her supervisor, Dr. Sioban Nelson at (416) 978-2862, or by email dean.nursing@utoronto.ca.

If you have questions regarding your rights as a research participant, please call _________, Chairman of the Research Ethics Board of The ___________ Hospital, at __________. Alternatively, you can contact Rachel Zand, Director, Office of Research Ethics, University of Toronto, at (416) 946-3389, or by email: rachel.zand@utoronto.ca.
PARTICIPANT STATEMENT AND SIGNATURE

Study Title: The Social Effects of Gestational Diabetes in High-Risk Ethnic Groups

I have read and understand the purpose of this study, the procedures that will be used, the risk and benefits associated with my involvement in the study. I understand the confidential nature of the information that will be collected and disclosed during the study.

I have had time to ask my questions about this study and these questions have been answered to my liking. I understand that I have the right to ask any questions about this study for as long as I take part in it.

I agree to participate in this study and allow the collection and use of fieldnotes as explained in this consent form. I understand that I will be given a copy of this signed information sheet and consent form.

___________________________________________
Printed name of study participant

___________________________________________   _____ _____________
Signature of Participant                                                                          Date

I, the undersigned, have fully explained the relevant details of this study to the subject named above.

_________________________________________________                         ________________
Printed name of individual conducting the consent discussion                               Date

___________________________________________   _____ _____________
Signature of individual conducting the consent discussion                                                                          Date
Appendix I: Patient and family notice of study

Patient and Family Notice of Research Study

Study Title: The Social Effects of Gestational Diabetes in High-Risk Ethnic Groups

My name is Maki Iwase. I am a Registered Nurse and studying my PhD in Nursing at the University of Toronto. I am doing research to learn more about women who are going through gestational diabetes. This study is supervised under Dean/Dr. Sioban Nelson at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. The Research Ethics Board at The Hospital has given me permission to do this study.

What is this study about?
Did you know that women from South Asian, Asian, Hispanic, Aboriginal and African backgrounds are more likely to get gestational diabetes? But there is little information about this. I want to see and hear how gestational diabetes is explained to women who come to this Diabetes Centre. And I want to learn how women from these different backgrounds understand gestational diabetes. The information from this study will help improve the care for them.

What will I be doing at the Diabetes Centre?
I will be watching and learning how gestational diabetes is explained to women from different ethnic backgrounds. And I want to describe how these women understand gestational diabetes.

What will you have to do?

- You can say ‘yes’ or ‘no’ to having me in your class or appointment.
- I will ask you a few questions, but if you don’t want to answer, it’s okay.
- Whatever you decide will not change your care at the hospital.

If you have any questions about the study, please call me: Maki Iwase at [Contact Information].

Thank you!
Appendix J: Interview consent

Information and Consent Form for Participation in a Research Study
Interviews with Participants
Version Code/Date: 21/11/2011

Study title: The Social Effects of Gestational Diabetes in High-Risk Ethnic Groups

Name of Principal Investigator at Hospital:
Maki Iwase, RN, PhD candidate
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
155 College Street, Suite 130
Toronto, Ontario M5T 1P8
Phone: 416-946-3053 or 416-531-7452
Fax: 416-946-5798
maki.iwase@utoronto.ca

Name of Faculty Supervisor:
Dean/Dr. Sioban Nelson
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
155 College Street, Suite 130
Toronto, Ontario M5T 1P8
Phone: 416-978-2862
Fax: 416-946-5798
dean.nursing@utoronto.ca

Names of Advisory Committee:
Dr. Ping-Chun Hsiung
Department of Social Sciences
University of Toronto
1265 Military Trail
Toronto, Ontario M1C 1A4
Phone: __________________
pchsiung@utsc.utoronto.ca

Dr. Lorna Weir
York University- Department of Sociology
310 Founders College
Toronto, Ontario M3J 1P3
Phone: ___________________
lweir@yorku.ca

Name of Investigator and Coordinator:

Name of Investigator and Coordinator:
INTRODUCTION

You are invited to take part in a research study. Before you agree, it is important that you read and understand what will be done in this study. The following information describes what the study is about (purpose), what will be done (procedures), benefits, discomforts and risks with this study. It also describes your right to not take part or remove yourself from this study at any time. You should be able to understand what you will be asked to do, as well as the risks and benefits, to be able to make a decision. This is called the informed consent process.

This consent form may have words that you do not understand. Please ask the study investigator, Maki Iwase, to explain any part of this consent form that you do not clearly understand. You may talk about this study with your doctor, friends and family before you decide. Make sure all of your questions have been answered before signing this form. If you decide that you do not want to take part, you do not have to explain why. Your care will not change.

BACKGROUND INFORMATION

Women who are from South Asian, Asian, Hispanic, Aboriginal and African backgrounds are more likely to get gestational diabetes. But, not much is known about gestational diabetes in these women. This study hopes to learn more about how information about gestational diabetes changes the experiences and relationships of these women. This study is part of a PhD thesis.

WHAT THIS STUDY IS ABOUT?

The purpose of this study is to explain the social effects of gestational diabetes in women from high-risk ethnic groups. The interviews from this study will show how these women understand gestational diabetes, how it changes their experience of pregnancy and motherhood, and their relationships with others, such as family, friends and health care providers.

This study will be done at __________________________. Between 10-15 women will be expected to participate in the study. This study will be over by March 1st, 2013.

WHO CAN TAKE PART IN THIS STUDY?

Women who 1) are pregnant and have gestational diabetes; 2) are from South Asian, Asian, Aboriginal, Hispanic, African backgrounds; and 3) can speak English.

WHO SHOULD NOT TAKE PART IN THIS STUDY?

Women who are mentally unable will not take part in this study.
WHAT DO I HAVE TO DO?

If you decide to join this study: Specific procedures

You will take part in three interviews:

1. a week after your first visit to the Diabetes Centre
2. a few weeks before you have your baby
3. 6 weeks after your baby is born

You choose when and where our meetings will be. For example, we can meet at your home in the morning or afternoon or evening. You decide what is best for you. Each interview will be for 1 hour with the principal investigator (Maki Iwase). With your permission, an audio tape recorder will be used during the interviews so that nothing is missed.

During the interviews, you may be asked if your experience of gestational diabetes has changed your life, your family, friends, or health care providers, and your experience of pregnancy and motherhood.

Everyone has their own personal story and there are no right or wrong answers.

The audio-recordings will be written out by the principal investigator (Maki Iwase) and kept on a computer that is protected by a password. The audio-recordings will be erased after they have been written.

You will also be asked to fill out a questionnaire during the first interview. For example, your age, ethnicity, place of birth, language, living situation, history of gestational diabetes in previous pregnancies. This will take 10 minutes. The principal investigator (Maki Iwase) will help you with how to fill out the form. You do not have to answer any question that makes you feel uncomfortable. If you would like to see a copy of the questionnaire before deciding to take part in this study, please ask the principal investigator (Maki Iwase).

WHAT ARE MY RESPONSIBILITIES?

Please let the principal investigator (Maki Iwase) know if there are any changes to your health, interview time or place, if you wish to stop participating in this study, or if you have any questions.

WHAT ARE THE POSSIBLE RISKS OF HARM AND INCONVENIENCES OF TAKING PART IN THIS STUDY?

There are no obvious harms with taking part in this study. This study may take up your time. You may be uncomfortable with talking about your experience with gestational diabetes. At any time during the interviews, you do not have to answer any questions that make you feel uncomfortable.
WHAT ARE THE BENEFITS OF TAKING PART IN THIS STUDY?

You will not get direct benefits from taking part in this study. But, you may find it enjoyable and helpful to talk about your experiences. Hopefully, this study will help explain how women from different ethnic backgrounds understand gestational diabetes. The information from this study will help improve the care for them.

WHAT OTHER CHOICES DO I HAVE?

You can choose not to take part and this will not change your care at the hospital.

COMPENSATION/COSTS

You will not be paid for taking part in this study. But, if you ask, some travel and/or parking costs will be covered. Instead you will get a $30 gift card for Shoppers Drug Mart. This will be given to you even if you cannot complete all three interviews.

YOUR PARTICIPATION IS UP TO YOU

Taking part in this study is up to you. If you do not want to take part or decide to remove yourself from this study, then you will not lose any benefits and your care will not change at the hospital.

REMOVING YOURSELF FROM THIS STUDY

Please tell the principal investigator (Maki Iwase) if you decide to stop taking part in the study. You do not need to give a reason for this.

Taking part in this study may be stopped at any time by the supervisor and advisory committee, The ___________ Hospital Research Ethics Board or The University of Toronto Research Ethics Board, or regulatory authorities, without your consent. The principal investigator (Maki Iwase) may remove you from the study for any reason and has the right to end it for any of these reasons:

- it would not be in your best interest for you to continue
- you do not follow study procedures
- the faculty supervisor and advisory committee decides to end the study

WHAT ABOUT CONFIDENTIALITY?

You have a right to privacy. All information from this study will be confidential according to laws and regulations. This information will not be disclosed or made public. While every effort will be made to protect the privacy of your information, complete confidentiality cannot be guaranteed.
Your name will never be used to identify the information given to the faculty supervisor and advisory committee. Instead, your study information will be in code only. If the results of this study are written up in a medical/professional journal or presented at a conference, your identity will be kept confidential.

As a PhD student, the study information will be looked at by the faculty supervisor and advisory committee. In reports about the study, your experience of gestational diabetes will be grouped with other women so that this information can help health care providers.

At any time during or after the study, the faculty supervisor and advisory committee and/or regulatory authorities may have access to the study information so that they can make sure it is correct. If this happens, then they will see your name on the study information, but nothing with your name will leave The ___________ Hospital. Representatives of The ___________ Hospital Research Ethics Board may also have this access.

By signing this form, you are making your records available to the Research Ethics Board of The ___________ Hospital and The University of Toronto (two committees who watch over the ethical conduct of this study) and the faculty supervisor and advisory committee. This information may include things like your name, address, date of birth, medical history, clinical information related to this study.

Your study information will be kept in a confidential place for seven years. This information will be destroyed according to proper laws and regulations. Your name will not be placed on any mailing lists or sold to anyone for marketing purposes.

You do not have to sign this document if you do not agree with anything that you have read so far. But, if you do not sign this form, you will not be able to take part in the study.

**WHO DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?**

If you have any questions or emergency situations, please call the principal investigator, Maki Iwase, at (416) ________, or by email maki.iwase@utoronto.ca, or her supervisor, Dr. Sioban Nelson at (416) 978-2862, or by email dean.nursing@utoronto.ca.

If you have questions about your rights in this research, please call _____, Chairman of the Research Ethics Board of The ___________ Hospital, at. Or call Rachel Zand, Director, Office of Research Ethics, University of Toronto, at (416) 946-3389, or by email: rachel.zand@utoronto.ca.
PATIENT STATEMENT AND SIGNATURE

Study Title: The Social Effects of Gestational Diabetes in High-Risk Ethnic Groups

I have read and understand the purpose of this study, the procedures that will be used, the risk and benefits related to taking part in this study. I understand how this information will be kept confidential.

I have had enough time to ask questions about this study and they have been answered. I understand that I have the right to ask any questions about this study for as long as I take part in it.

I agree to allow the principal investigator (Maki Iwase) to let my doctor know that I am taking part in this study.

YES  NO

I agree to take part in this study and give permission to collect and use my personal information as explained in this consent form. I understand that I will be given a copy of this signed information sheet and consent form.

___________________________________________
Printed name of study participant

___________________________________________   _____ _____________
Signature of Participant                                                                          Date

I, the undersigned, have fully explained the relevant details of this study to the subject named above.

_________________________________________________                         ________________
Printed name of individual conducting the consent discussion                               Date

___________________________________________   _____ _____________
Signature of individual conducting the consent discussion                             Date

N.B. The original of this form must be inserted in the participant’s file held at the investigator’s office and a copy given to the patient.
Appendix K: Interview participants

Table of Interviews with Participants

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Diagnosis</th>
<th>Intervention</th>
<th>Pregnancy</th>
<th>Hx GD/ Family hx</th>
<th>Date of Interviews (dd/mm/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Penelope</td>
<td>IGT</td>
<td>Diet</td>
<td>3rd</td>
<td>No/yes</td>
<td>11/06/12*</td>
</tr>
<tr>
<td>Roxanne</td>
<td>GDM</td>
<td>Diet</td>
<td>2nd</td>
<td>Yes/yes</td>
<td>11/06/12*</td>
</tr>
<tr>
<td>Siva</td>
<td>T2DM</td>
<td>Insulin QID</td>
<td>2nd (twins)</td>
<td>Yes/yes</td>
<td>18/06/12</td>
</tr>
<tr>
<td>Gayatri</td>
<td>GDM</td>
<td>Insulin hs</td>
<td>2nd</td>
<td>Yes/yes</td>
<td>21/06/12</td>
</tr>
<tr>
<td>Kaya</td>
<td>GDM</td>
<td>Insulin QID</td>
<td>1st</td>
<td>No/no</td>
<td>03/07/12</td>
</tr>
<tr>
<td>Mena</td>
<td>GDM</td>
<td>Diet</td>
<td>1st</td>
<td>No/yes</td>
<td>16/07/12</td>
</tr>
<tr>
<td>Savitha</td>
<td>GDM</td>
<td>Diet</td>
<td>1st</td>
<td>No/no</td>
<td>16/07/12</td>
</tr>
<tr>
<td>Vicky</td>
<td>T2DM</td>
<td>Insulin QID</td>
<td>4th</td>
<td>Yes/yes</td>
<td>23/07/12</td>
</tr>
<tr>
<td>Mandy</td>
<td>GDM</td>
<td>Diet</td>
<td>1st</td>
<td>No/no</td>
<td>23/07/12</td>
</tr>
<tr>
<td>Jennie</td>
<td>GDM</td>
<td>Insulin QID</td>
<td>1st (twins)</td>
<td>No/yes</td>
<td>13/08/12</td>
</tr>
<tr>
<td>Minnie</td>
<td>IGT</td>
<td>Diet</td>
<td>2nd</td>
<td>No/no</td>
<td>20/08/12</td>
</tr>
<tr>
<td>Barbie</td>
<td>GDM</td>
<td>Diet</td>
<td>1st</td>
<td>No/no</td>
<td>27/08/12</td>
</tr>
</tbody>
</table>

IGT: Impaired Glucose Tolerance in Pregnancy

GDM: Gestational Diabetes Mellitus

T2DM: Type 2 Diabetes Mellitus

QID: four times daily insulin injections

hs: bedtime insulin (once daily)

*Penelope and Roxanne were interviewed together

— Third interview not completed
Appendix L: Interview guide

Interview Guide

Text in *italics* indicates what the principal investigator will say during the interview

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction and brief description of the study.</td>
</tr>
<tr>
<td>2.</td>
<td>Allow for questions:</td>
</tr>
<tr>
<td></td>
<td><em>Do you have any questions for me about the study or taking part in the study?</em></td>
</tr>
<tr>
<td>3.</td>
<td>Inform the participant of potential risk:</td>
</tr>
<tr>
<td></td>
<td><em>You may feel uncomfortable talking about your experiences of gestational diabetes</em></td>
</tr>
<tr>
<td></td>
<td><em>You do not have to answer any of the questions that make you feel uncomfortable</em></td>
</tr>
<tr>
<td></td>
<td><em>You can stop the interview or stop taking part in the study at any time</em></td>
</tr>
<tr>
<td></td>
<td><em>You will have your name removed from any written documents for journals or presentations about the study.</em></td>
</tr>
<tr>
<td></td>
<td><em>Do you have a code name that you would like to use in this study?</em></td>
</tr>
<tr>
<td>4.</td>
<td>Inform the participant of health risk:</td>
</tr>
<tr>
<td></td>
<td><em>Your health is important to me. Please let me know if at any time you feel too tired, unwell or no longer wish to continue the interview. I will stop our interview right away and reschedule it at a time when you are feeling better. If our interview is not finished, can I still use the information that you have provided in this study?</em></td>
</tr>
<tr>
<td>5.</td>
<td>Allow for questions:</td>
</tr>
<tr>
<td></td>
<td><em>Do you have any questions for me before we begin?</em></td>
</tr>
<tr>
<td>6.</td>
<td>Obtain written consent.</td>
</tr>
<tr>
<td>7.</td>
<td>Begin interview:</td>
</tr>
<tr>
<td></td>
<td><em>I will ask you some questions and listen to what you have to say about having gestational diabetes, your pregnancy, and being a mother. There are no right or wrong answers.</em></td>
</tr>
<tr>
<td></td>
<td><strong>Interview guide for first interview (after diagnosis):</strong></td>
</tr>
<tr>
<td></td>
<td><em>Tell me about the time when you were told that you have gestational diabetes.</em></td>
</tr>
<tr>
<td></td>
<td><em>What was your pregnancy like before you were told about gestational diabetes?</em></td>
</tr>
<tr>
<td></td>
<td><em>Tell me what worries you the most with gestational diabetes.</em></td>
</tr>
<tr>
<td></td>
<td><em>What is the hardest thing about having gestational diabetes?</em></td>
</tr>
</tbody>
</table>
| What does gestational diabetes mean to you?  
| How has gestational diabetes changed your everyday life?  
| How has gestational diabetes changed your relationships with people in your life?  
| Tell me about what you have to do to take care of your blood sugar?  
| What happens at the diabetes clinic?  
| How has gestational diabetes changed your pregnancy?  

**Interview guide for second interview (before delivery):**

Tell me about your experience with gestational diabetes.  
What does gestational diabetes mean for you now?  
How did your family respond when you told them about gestational diabetes?  
How have things changed since the day you were told that you have gestational diabetes?  
What is it like now to take care of your blood sugar?  
Tell me about your visits to the diabetes clinic.  
What is your biggest worry about having gestational diabetes?  
How has pregnancy been like for you in the last month?  
Tell me what it’s like knowing that you’ll be a mother soon?

**Interview guide for third interview (6 weeks after delivery):**

Tell me about your experience of being a mother.  
What was it like giving birth to your baby?  
How has having gestational diabetes affected your experience of pregnancy?  
What does gestational diabetes mean to you now?  
How has having gestational diabetes changed the way you live your life now?  
What are your future concerns about diabetes?

| 8. Probes:  
| Can you tell me more about that?  
| **Can you tell me about your experiences... (i.e. with the doctor, nurses, and dietitians at the diabetes clinic)**  
| **Can you say some more about any changes to your relationship... (i.e. with family member since you were told that you have gestational diabetes)**  

| 9. In order to demonstrate my interest in the participant’s experience and understanding of gestational diabetes and to clarify my own understanding of the things said during the interview, I will use the following statement:  
| Let’s see if I have understood... |
10. Interview closing:

*Thank you for sharing your experience of gestational diabetes.*

*Once this study is finished, I would like to share the findings with you. Would you like to get a summary of the results? Would you like to know if I write up the study findings in a medical/professional journal or for a conference presentation? How would you like to be contacted?*
Appendix M: Schedule of GD class and clinic

Schedule for Participant Observation at both sites

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.M.</td>
<td><strong>Y Campus:</strong></td>
<td></td>
<td><strong>Z Campus:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GD Clinic</td>
<td></td>
<td>GD Clinic</td>
<td></td>
<td>GD Class</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td></td>
<td>Follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.M.</td>
<td></td>
<td></td>
<td></td>
<td><strong>Y Campus:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GD Class</td>
<td></td>
</tr>
</tbody>
</table>
Appendix N: Patient letter of invitation

Patient Letter of Invitation to Participate in a Research Study

Study Title: The Social Effects of Gestational Diabetes in High-Risk Ethnic Groups

My name is Maki Iwase. I am a Registered Nurse and studying my PhD in Nursing at the University of Toronto. I am doing research to learn more about women who are going through gestational diabetes. Did you know that women from South Asian, Asian, Hispanic, Aboriginal and African backgrounds are more likely to get gestational diabetes? But there is little information about this.

I welcome you to help me with this study if:

1. You are pregnant and have gestational diabetes
2. You are South Asian, Asian, Hispanic, Aboriginal, or African
3. You can speak English

If you say YES to all of these, then please join this study.

We will meet 3 times for 1 hour each. Our first meeting will be a week after your first visit to the Diabetes Centre. Our second meeting will be a few weeks before you have your baby. And our last meeting will be 6 weeks after your baby is born.

You choose when and where our meetings will be. For example, we can meet at your home in the morning or afternoon or evening. You decide what is best for you.

At our meetings, I will ask you questions and listen to what you have to say about having gestational diabetes and your pregnancy, and being a mother. Everyone has their own personal story and there are no right or wrong answers. Being in this study is totally up to you.

If you want to join this study or have more questions, please call me:

Maki Iwase at [Contact information]

This study is supervised under Dean/Dr. Sioban Nelson at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. The Research Ethics Board at The [Hospital] Hospital has given me permission to do this study.

Thank you!
Appendix O: Script for recruitment

Script for Recruitment for Interviews

To be used by the Nurse Coordinator before the GD class

An important study will be taking place soon. The purpose of the study is to learn more about gestational diabetes amongst women from high-risk ethnic groups. Women from South Asian, Asian, Hispanic, Aboriginal and African descent are more prone to develop gestational diabetes, so this study is important in three ways. First, not much is known about the experience of gestational diabetes among diverse ethnic groups. Second, women from high-risk ethnic groups have important things to say gestational diabetes and how it has effects over women’s everyday lives and relations with others. And third, the findings from this study will help inform health care providers’ practice and contribute to developing clinical practice guidelines and policies that are meaningful and relevant to women from high-risk ethnic populations.

A student researcher from the University of Toronto will be conducting interviews and asking you questions about what it is for you to have gestational diabetes and how it has affected your everyday life and the way you experience pregnancy and motherhood. The student researcher’s name is Maki Iwase and she has a clinical background in diabetes education and community nursing. She would like to meet with you in a location that is convenient and comfortable with you on three separate occasions. Maki will meet with you once in the next few weeks, the second meeting will take place before delivery and the third meeting 6 weeks after delivery. Each interview will be approximately 30 minutes, and with your permission, tape-recorded to be transcribed later on.

I will hand out an information flyer about the study and you can read it over the weekend at your convenience. I will approach you when you return for your follow-up appointment next week to see if you are interested in participating in the study. If you are interested, then I will give your number to Maki and she will contact you to discuss the study in more detail and then schedule an interview time and location.
Appendix P: Script for initial phone call

Hello, my name is Maki Iwase. I am a PhD student at Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto. May I speak with (participant’s full name).

Participant: Speaking…

I received your name and phone number from the nurse coordinator at The ___________ Hospital. I understand that s/he informed you that I would be contacting you about participating in the research study on the gestational diabetes in women from diverse ethnic groups. Is this a convenient time to talk to you about the study?

***If no, ask if there is a better time to call back.

***If yes, proceed to provide background information.

I would like to start by giving you some information about the study.

The aim of the study is to examine the social effects of gestational diabetes among women from diverse ethnic groups. Women from South Asian, Asian, Hispanic, Aboriginal and African descent are more prone to develop gestational diabetes. So, it is important to understand how gestational diabetes shapes the everyday lives of women from diverse ethnic groups. The information from this study will inform clinical practice and contribute to developing guidelines and policies that are meaningful and relevant to women from high-risk ethnic groups.

For the study, if you decide to participate, I will be conducting interviews with you at three separate occasions: 1) soon after diagnosis; 2) before delivery; and 3) 6 months after delivery. The questions will be around your experiences of gestational diabetes. This is about your experience so there are no right or wrong answers. The interview would last about one hour, and would be arranged at a time and place that is convenient and comfortable for you.

Involvement in the interviews is entirely voluntary and there are no known or anticipated risks to participating in this study. You may decline to answer any of the interview questions you do not wish to answer and may stop the interview at any time. You may withdraw from the study at any time.

With your permission, the interview will be tape-recorded to facilitate collection of information, and later transcribed for analysis.

I will also ask you basic demographic questions such as age, ethnic background, etc to get an overall picture of the sample but no individual participants will be identified specifically.

All information you provide will be kept confidential. The data collected will be kept in a secure location and disposed of in 7 year’s time.

If you have any questions regarding this study later on, or would like additional information to assist you in reaching a decision about participation, please feel free to contact me at ___________. The final decision about participation is yours.
I would like to assure you that this study has been reviewed and received ethical approval from the University of Toronto Research Ethics Board and The [HOSPITAL NAME] Hospital. Should you have any comments or concerns resulting from your participation in this study, please contact Rachel Zand, Director, Office of Research Ethics, University of Toronto, at (416) 946 3389 or by email: rachel.zand@utoronto.ca. This person is not involved with the research project in any way and calling her will not affect your participation in the study.

After all the data has been analyzed, you will receive a summary of the research results.

I understand that you received the letter of invitation to participate in the study and also the information letter/ consent form from the nurse coordinator at The [HOSPITAL NAME] Hospital. It has all of the details of the study along with contact names and numbers on it to assist you in making a decision about your participation in this study. Would you like some more time to review it in detail?

***If no, reply: May I schedule a date and time at a convenient location with you right now?
***If yes, say: May I call you in 2 or 3 days to see if you are interested in being interviewed?

Once again, if you have any questions or concerns, please do not hesitate to contact me at [CONTACT INFORMATION].

Thank you very much for your time.

Good-bye.
Appendix Q: Toolbox for discourse analysis

**Toolbox for Discourse Analysis**

The content of this form is based on James Paul Gee’s (2011) *How to do Discourse Analysis*.

<table>
<thead>
<tr>
<th><strong>List of Tools and Description/Questions</strong></th>
<th><strong>Comments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. The Deixis Tool</strong></td>
<td></td>
</tr>
<tr>
<td>Deixis: “words whose reference must be determined from context” (Gee, 2011, p. 8)</td>
<td></td>
</tr>
<tr>
<td>How are deitics being used to tie what is said to context and to make assumptions about what the audience/reader already knows?</td>
<td></td>
</tr>
<tr>
<td>What aspects of their specific meanings need to be filled in from context?</td>
<td></td>
</tr>
<tr>
<td><strong>2. The Fill in Tool</strong></td>
<td></td>
</tr>
<tr>
<td>Based on what is said and the context in which it was said, what needs to be filled in to achieve clarity?</td>
<td></td>
</tr>
<tr>
<td>What is not being said overtly, but is still assumed to be known/ inferable?</td>
<td></td>
</tr>
<tr>
<td>What knowledge, assumptions and inferences does the reader have to bring for this text to be clear?</td>
<td></td>
</tr>
<tr>
<td><strong>3. The Making Strange Tool</strong></td>
<td></td>
</tr>
<tr>
<td>Try to act as if you are an ‘outsider’.</td>
<td></td>
</tr>
<tr>
<td>What would someone find strange here (unclear, confusing, worth questioning) if that person did not share the knowledge and assumptions that render the text so natural and taken-for-granted?</td>
<td></td>
</tr>
<tr>
<td><strong>4. The Subject Tool</strong></td>
<td></td>
</tr>
<tr>
<td>Why have the author chosen the subject/topics they have?</td>
<td></td>
</tr>
<tr>
<td>What are they saying about the subject?</td>
<td></td>
</tr>
<tr>
<td><strong>5. The Intonation/Emphasis Tool</strong></td>
<td></td>
</tr>
<tr>
<td>What information did the authors make salient?</td>
<td></td>
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<tr>
<td>What information did the author background as given?</td>
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<td></td>
<td><strong>The Frame Problem Tool</strong></td>
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<tr>
<td></td>
<td>The last tool to use in analysis once all tools have been used.</td>
</tr>
<tr>
<td></td>
<td>Does any additional context change your analysis?</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th></th>
<th><strong>The Doing and Not Just Saying Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>Ask not just what the author is saying, but what is s/he trying to do?</td>
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<thead>
<tr>
<th></th>
<th><strong>The Vocabulary Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How does the use of particular words function to mark this text in terms of style?</td>
</tr>
<tr>
<td></td>
<td>How does it contribute to the purposes of the text?</td>
</tr>
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<tr>
<th></th>
<th><strong>The Why This Way and Not That Way Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>Why did the author use grammar in the way s/he did and not in some other way?</td>
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<tr>
<td></td>
<td>How else could this have been said?</td>
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<tr>
<th></th>
<th><strong>The Integration Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>What was left out and what was included in terms of optional arguments?</td>
</tr>
<tr>
<td></td>
<td>Which perspectives are being subordinated?</td>
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<tr>
<th></th>
<th><strong>The Topics and Themes Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>What is the topic and themes for each/set of clauses?</td>
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<tr>
<th></th>
<th><strong>The Stanza Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>Look for stanzas and how they cluster into blocks of information. These organize your interpretation of data and display that interpretation.</td>
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<thead>
<tr>
<th></th>
<th><strong>The Context is Reflexive Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How is what the author is saying and how s/he is saying it help shape (even manipulate) what the audience will take as the relevant context?</td>
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<tr>
<td></td>
<td>How is it helping to reproduce contexts, allowing them to continue to exist through time and space?</td>
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<tr>
<td></td>
<td>Is the author unaware of aspects of the context that if s/he thought about consciously, s/he would not want to reproduce?</td>
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<tr>
<td></td>
<td>Is the author replicating/repeating contexts or transforming them?</td>
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<td></td>
<td><strong>The Significance Building Tool</strong></td>
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<td>---</td>
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<tr>
<td></td>
<td>How are words and grammatical devices used to build up or lessen significance/importance/relevance for certain things and not others?</td>
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<tr>
<th></th>
<th><strong>The Activities Building Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>What activity/practice is this text building/enacting?</td>
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<tr>
<td></td>
<td>What activity is this text seeking to get others to recognize as being accomplished?</td>
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<tr>
<td></td>
<td>What social groups/institutions/cultures support and set norms for these practices?</td>
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<tr>
<th></th>
<th><strong>The Identities Building Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>What socially recognizable identity(ies) is the author trying to enact or get others to recognize?</td>
</tr>
<tr>
<td></td>
<td>How does the author treat other people’s identities?</td>
</tr>
<tr>
<td></td>
<td>How does the author position others?</td>
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<tr>
<td></td>
<td>What identities is the author ‘inviting’ the audience to take up?</td>
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<tr>
<th></th>
<th><strong>The Relationships Building Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How are words being used to build and sustain or change relationships among the author, other people, social groups, cultures, and/or institutions?</td>
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<tr>
<th></th>
<th><strong>The Politics Building Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How are words being used to build/construct/assume what counts as social goods and to distribute these to or withhold them from the audience/others.</td>
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<tr>
<th></th>
<th><strong>The Connections Building Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How are the words being used in the text connect/disconnect things or ignore connections between things, or make things relevant/irrelevant to other things?</td>
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<tr>
<th></th>
<th><strong>The Cohesion Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How does cohesion work in this text to connect pieces of information and in what ways?</td>
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<tr>
<td></td>
<td>How does the text fail to connect other pieces of information?</td>
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<th></th>
<th><strong>The Sign Systems and Knowledge Building Tool</strong></th>
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<tbody>
<tr>
<td></td>
<td>How does the words being used privilege or de-privilege specific language, images, knowledges, different ways of knowing, believing or claim to knowledge and belief?</td>
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<tr>
<td></td>
<td><strong>The Topic Flow or Topic Chaining Tool</strong>&lt;br&gt;How do the topics link together to create (or not) a chain that creates an overall topic or coherent sense of writing?</td>
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<td></td>
<td><strong>The Situated Meaning Tool</strong>&lt;br&gt;What specific meanings does the audience have to attribute these words given the context and how the context is construed?</td>
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<td></td>
<td><strong>The Social Languages Tool</strong>&lt;br&gt;How are words used to signal and enact a given social language? The text may mix 2 or more social language.</td>
</tr>
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<td></td>
<td><strong>The Intertextuality Tool</strong>&lt;br&gt;How are words used to quote, refer to or allude to other texts?</td>
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<td></td>
<td><strong>The Figured Worlds Tool</strong>&lt;br&gt;What typical /figured worlds are the words assuming/inviting the audience to assume?&lt;br&gt;What participants, practices, ways of interacting, objects, people, environments and institutions or values are in these figured worlds?</td>
</tr>
<tr>
<td></td>
<td><strong>The Big “D” Discourse Tool</strong>&lt;br&gt;How is the author using language- ways of acting, interacting valuing, using various objects, tools, technologies in certain sorts of environments to enact a specifically socially recognizable identity?&lt;br&gt;What language is this discourse a part of?&lt;br&gt;What kind of identity is the author seeking to enact?&lt;br&gt;What sorts of action, interactions, values, beliefs and objects, tools, and technologies and environments are associated with this sort of language within a particular discourse?</td>
</tr>
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Appendix R: Analysis of ethnographic fieldnotes

**Analysis of Ethnographic Fieldnotes**

Asking Questions of Fieldnotes (Emerson, Fretz & Shaw, 1995: 146)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Analysis</th>
</tr>
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<tbody>
<tr>
<td>1. What are people doing?</td>
<td></td>
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<tr>
<td>What are they trying to accomplish?</td>
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<tr>
<td>2. How, exactly, do they do this?</td>
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<tr>
<td>What specific means and/or strategies do they use?</td>
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<tr>
<td>3. How do members talk about, characterize, and understand what is going on?</td>
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<tr>
<td>4. What assumptions are they making?</td>
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</tr>
<tr>
<td>5. What do I see going on here?</td>
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<tr>
<td>What did I learn from these notes?</td>
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</tr>
<tr>
<td>6. Why did I include them?</td>
<td></td>
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</tbody>
</table>
Appendix S: Glucometer

http://thehealthreportertv.files.wordpress.com/2012/11/gluometer.jpg
Appendix T: Food replicas

Figure 1: Bowl of rice


Figure 2: Slice of whole wheat bread

Appendix U: Food catalogue