RELATIONSHIP SATISFACTION AMONG INDIVIDUALS OF DIVERSE SEXUAL ORIENTATIONS AND GENDER IDENTITIES: THE ROLE OF LOVE AND ATTACHMENT STYLES

by

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Abstract

Empirical research on relationship satisfaction emerged and is largely situated within a cisgender heteronormative context. This study examines the application of various established relationship measures to diverse sexual orientations and gender identities. The objectives of this study are (a) to explore the factor structures and internal reliabilities of various well-validated adult intimate relationship measures of love styles (Love Attitudes Scale, Short Form; LAS-SF), relationship-specific attachment (Experiences in Close Relationships Scale – Relationship Structures; ECR-RS), sexuality (Sexual Relationship Scale; SRS), and relationship satisfaction (Relationship Assessment Scale; RAS) to determine their viability with a diverse and inclusive sample; and (b) to examine the relative abilities of love and attachment styles to predict relationship satisfaction among sexual orientation minority and trans-spectrum adults. Online survey data (N = 917) were obtained from an English-speaking, primarily North American and European community sample of adults recruited from various Internet sources. Exploratory factor analyses replicated the factor structures for all measures except the SRS measure, for which no reliable factor structure could be obtained. Although the LAS-SF Ludus subscale was somewhat problematic, deletion of one item improved internal reliability. Reliability analyses otherwise revealed that the remaining three measures demonstrated excellent psychometric properties, supporting their use in LGBTQ research. Hierarchical multiple regression analyses conducted separately for cisgender heterosexual male and female, cisgender sexual minority male and female, and transmasculine
and transfeminine adults revealed similar patterns across the six groups. Specifically, Eros emerged as a strong positive predictor and attachment avoidance and attachment anxiety as strong negative predictors, together accounting for 62% to 76% of the variance in relationship satisfaction. In addition, some significant but weak differences in findings between groups were noted, including Ludus as a negative predictor for cisgender sexual minority males, Agape as a positive predictor for cisgender females, and Mania as a negative predictor for cisgender sexual minority females. Differences in the use of sexual orientation labels by cisgender and transgender participants were also revealed. These results have important implications for theory, future research, and relationship counselling with individuals and couples representing a broader range of sexual orientations and gender identities considered in previous work.
DEDICATION

I dedicate this work to my wonderful spouse and our kind-hearted little one. I have experientially learned more about love from you both than I could from any study. You fill my life with so much happiness and laughter.

I also dedicate this work to all those who participated in this research and my brave, loving and colourful LGBTQ+ community, allied friends and chosen family. It is our diversity that defines our community, not our sameness. Through our openness and collective voices, we contribute so much. There is more work to be done.

When someone with the authority of a teacher, say, describes the world and you are not in it, there is a moment of psychic disequilibrium, as if you looked into a mirror and saw nothing. Yet you know you exist and others like you, that this is a game with mirrors. It takes some strength of soul – and not just individual strength, but collective understanding – to resist this void, this nonbeing, into which you are thrust, and to stand up, demanding to be seen and heard. - Adrienne Rich
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I would like to thank all of the organizations and individuals that assisted in getting the word out about my project and to my generous participants who contributed information about their experiences. In the words of one of my participants, it is my hope that this study is about more than just sparse “inclusion” in the research literature and that this work represents a step towards the prospect of some semblance of self-determination. This study was generously funded by the Social Sciences and Humanities Research Council (SSHRC) of Canada.

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INTRODUCTION

It is well established that close interpersonal relationships are crucial to well-being, and have protective effects in terms of happiness, mental health, physical health, and longevity. Baumeister and Leary (1995) maintain that the need to belong and to sustain meaningful connections to others is a fundamental human motive. The links that exist between people have been described as “the very essence of human existence” and “nearly as fundamental to survival as air and water” (Berscheid, 2000, p. xxii).

Romantic love is but one of a number of permutations of close relationships and an important area of scientific inquiry. Close loving relationships are often described as one of the most important factors in people’s lives (e.g., Brehm, 1992). In addition, difficulties and dissatisfaction in close relationships can contribute to increased stress and have been identified as an impetus that can lead people to seek mental health services (Doss, Atkins, & Christensen, 2007; Doss, Simpson, & Christensen, 2004; Veroff, Douvan, & Kukla, 1981). Along these lines, Berscheid and Reis (1998) stated that relationship difficulties are one of the most common presenting problems of individuals seeking psychotherapy. From the perspective of clinical and counselling psychologists, understanding factors associated with relationship satisfaction in romantic love relationships has important implications for working with clients who present with interpersonal distress.

In addition to causing general distress in individuals, marital relationship dissatisfaction has also been associated with a higher likelihood of psychiatric disorders among heterosexual adults and the balance of evidence from various studies seems to indicate that the nature of this relationship is both complex and bidirectional (for a review, see Kiecolt-Glasser & Newton,
2001). For this reason, Leach, Butterworth, Olesen, and Mackinnon (2013) argued that relationship quality among married and cohabiting individuals should be considered as a risk factor included in major epidemiological studies on mental health disorders. These researchers found that among heterosexual adults, men in poorer-quality relationships reported similar depression and anxiety symptoms to un-partnered men, and women in poorer-quality relationships reported similar depression symptoms and greater anxiety symptoms than un-partnered women. The authors concluded that only romantic relationships characterized by high relationship satisfaction resulted in mental health benefits over remaining single (Leach et al., 2013). Thus, research on factors that contribute to relationship satisfaction is essential for understanding risk factors for adult mental health issues and for improving counselling services for individuals seeking interventions for troubled relationships.

Relationship science inclusive of a spectrum of sexual orientation and gender expressions has been growing rapidly in recent years but remains a very small segment of the intimate relationships literature in comparison to the voluminous literature on heterosexual relationships. Relationships research has also tended to focus on marital relationships, which, until recently, have been less common among same-sex couples due to legal impediments in most countries. As a result, this large literature on marital relationships has included presumably heterosexual samples, although this is often not explicitly stated. The issue of gender identity has also not been directly discussed in much of this research; thus, the samples have also been composed of presumably cisgender (i.e., non-transgender) individuals. This relative lack of inclusion of sexual orientation and gender minorities within relationships research is concerning given the physical and mental health implications of relationship quality.
Although research on homosexuality has a long history, prior to the mid-1970’s the focus was primarily on the study of the pathology of same-sex attractions, etiology, and issues related to individual psychological adjustment and mental health (Peplau, 1993). At a time when homosexuality was viewed as inherently pathological by both psychologists and society at large, Evelyn Hooker, a researcher at the University of California Los Angeles (UCLA), conducted a groundbreaking study (Hooker, 1957). Hooker recruited a clinical panel of judges considered leading experts in the use of projective test protocols (e.g., Rorschach Inkblot Test, Thematic Apperception Test, and so on) and had them conduct assessments of a sample of nonclinical cisgender gay men and a comparable group of nonclinical cisgender heterosexual men. The judges were blind to participants’ sexual orientations and the study was so controversial that for the safety of all involved, Dr. Hooker conducted the research at her private residence. Results indicated that no differences were found in that the groups were found to be equally psychologically well-adjusted (Hooker, 1957). The findings were met with significant criticism and disbelief and were therefore subjected to repeat analyses (i.e., Hooker, 1958). Subsequently other researchers replicated Hooker’s (1957, 1958) findings and they gradually gained acceptance (McCandless & Strickland, 1971). However, it was not until 1973 that a decision was made to remove the classification of homosexuality as a mental disorder from the Diagnostic and Statistical Manual of Mental Disorders (2nd ed.; DSM-II; American Psychiatric Association, 1968) with the publication of the revised DSM-II in 1974 (2nd ed., rev.; DSM-II-R; American Psychiatric Association, 1974), and the 1986 decision to remove the mental disorder ego-dystonic homosexuality (3rd ed., rev.; DSM-III-R; American Psychiatric Association, 1987), that empirical research started to emerge that tested the accuracy of various social stereotypes and provided more reliable information about the lives of gay and lesbian individuals (e.g., Kurdek, 2004; Peplau, 1993; Peplau & Cochran, 1980, 1990; Peplau & Fingerhut, 2007; Risman &
Schwartz, 1988). Diamond (2006a) stated that, particularly over the past quarter century, there has been a dramatic increase in the volume and sophistication of intimate relationships research incorporating the experiences of same-sex partnerships. The literature on sexual orientation minorities has since grown further to include additional sexual minorities such as bisexual individuals (e.g., McLean, 2004; Peplau & Spalding, 2000, 2003; Reinhardt, 2002).

Research on transgender people also has a long history of focus on pathology in terms domains of identity, sexuality and interpersonal relationships. With the recent publication of the DSM-5 (5th ed.; DSM-5; American Psychiatric Association, 2013), various shifts in perspectives about transgender people have occurred. For example, the diagnostic term gender identity disorder has been changed to gender dysphoria, which some say represents an effort to destigmatize the experiences of individuals who face incongruence between their experienced/expressed gender and their biological sex and focuses instead on the distress associated with gender dysphoria as opposed to gender identity per se (Vance et al., 2010; Zucker & Brown, 2014). At the same time, maintaining a presence in the DSM classification system allows people desiring medical modifications and/or gender affirming medical interventions to access these treatments through public and private health insurance (Zucker & Brown, 2014). A gradual shift with the development of the DSM-5 diagnostic criteria is also reflected in an increasing amount of research providing more reliable information about the lives of trans individuals. Research into the intimate relationships of trans people is especially new and, to date, has tended to take a qualitative approach (e.g., Brown, 2010; Kins, Hoebeke, Heylens, Rubens, & De Cuypere, 2008; Lewins, 2002).

The topic of relationship satisfaction among cisgender sexual orientation minorities has tended to focus on comparisons of relationship satisfaction between same-gender and mixed-
gender couples, as well as both common and unique correlates of relationship satisfaction between these groups (Diamond, 2006a; Peplau & Spalding, 2000). Overall, this research has found many similarities that outnumber differences specific to same-gender couples (Diamond, 2006a). Thus, although recent research is promising towards expanding the voluminous work focusing on cisgender heterosexual relationships, which, to date, has been limited in scope and not entirely representative of the population, there is further work to be done. Specifically, there is a need for research that acknowledges and represents the experiences of individuals within diverse partnerships and relationship formations, and that broadens the scope of diversity studied in the realms of sexual orientation and gender identity. In pursuit of a more comprehensive and inclusive literature on love relationships and relationship satisfaction, it is the aim of this study to acknowledge the variety of experiences and promote the well-being of individuals with a range of gender expressions and relationship formations more reflective of the diversity of modern-day mainstream society.

This study utilizes three main theoretical and conceptual frameworks, which are believed to relate to the “three innate behavioral systems described by Bowlby (1969, 1982a): attachment, caregiving, and sex” (Mikulincer, 2006, p. 23). This study seeks to examine the applicability of three major theories related to these three domains which have not been examined specifically with sexual and gender identity minorities; namely, adult love styles, relationship-specific attachment, and approaches to sexual relationships. It is believed that there will be a contribution towards relationship satisfaction from each of these three areas, based on prior research among cisgender heterosexual individuals, which will be reviewed in the following section. Although it is anticipated that there may be some overlap in the theories of love styles, adult attachment and exchange/communal approaches to sexual relationships, it is believed that none of these theories can fully account for differences in relationship satisfaction on their own. By examining these
theories together and their relative contribution to relationship satisfaction, the aim is to achieve a more adequate and holistic account of the individual attitudes, beliefs and motivations predictive of relationship satisfaction. This assertion is similar to that of Shaver and colleagues (e.g., Hazan & Shaver, 1987; Shaver & Hazan, 1988; Shaver, Hazan, & Bradshaw, 1988) that the optimal functioning of each of these three domains “facilitates the formation and maintenance of stable and mutually satisfactory emotional bonds, whereas malfunctioning of these systems creates relational tensions, conflicts, dissatisfaction, and instability that often leads to relationship breakup” (Mikulincer, 2006, p. 25).

In relation to love, this study utilizes the multidimensional theoretical framework of Lee’s (1973) love styles, later expanded upon by Hendrick and Hendrick (1986). The love styles, a set of six constructs that reflect attitudes or beliefs that people have about a love relationship(s), will be described and explored. With respect to attachment, this study utilizes attachment theory first posited by Bowlby (1977, 1980, 1988) and later extended by Shaver and Hazan (1988) to adult romantic relationships. Domains of attachment have since been extended further by Fraley, Heffernan, Vicary, and Brumbaugh (2011), who has examined attachment across several types of relationships, including specific adult romantic relationships. With respect to the sexual aspect of relationships, a third theoretical framework utilized in this study is that originally proposed by Blau’s (1964) exchange theory of love, which was later extended by Clarke and Mills (1979) to describe exchange and communal approaches to relationships. This theory was extended further to cisgender heteronormative approaches to sexual relationships by Hughes and Snell (1990), who developed the Sexual Relationship Scale (SRS) measuring these dimensions in this context.
This study examines the importance of these three areas of theory in relation to relationship satisfaction among a diverse sample of sexual orientation and gender minority adults, including genderqueer and transgender individuals. One of the limitations of the measures commonly used to measure love styles, relationship-specific attachment, approaches to sexual relationships and relationship satisfaction is a lack of data regarding their applicability to diverse samples inclusive of a wide spectrum of sexual orientation and gender minority adults. Thus, as a first step, this study seeks to explore and establish the psychometric properties of the following measures among individuals of diverse sexual orientations and gender identities: (1) Hendrick, Hendrick, and Dicke’s (1998) Love Attitudes Scale – Short Form (LAS-SF) measure of Lee’s (1973) love styles; (2) Fraley et al.’s (2011) Experiences in Close Relationships – Relationship Structures (ECR-RS), a relationship-specific measure of attachment anxiety and avoidance; (3) Hughes and Snell’s (1990) Sexual Relationship Scale (SRS) measure of Clark and Mills’ (1979) exchange and communal relationships; and (4) Hendrick, Dicke, and Hendrick’s (1998) Relationship Assessment Scale (RAS), a commonly used measure of relationship satisfaction. A second objective of the study is to empirically explore the relative abilities of love styles, relationship-specific attachment, and exchange and communal approaches to sexual relationships to predict concurrent relationship satisfaction across a wide spectrum of sexual orientations and gender expressions.

In sum, this study focuses specifically on romantic love relationships among adults within a wide variety of relationship formations, inclusive of a variety of sexual orientations and gender identities, including genderqueer and transgender individuals. Specifically, this study seeks to examine how interpersonal factors in the areas of love, attachment and sexuality contribute to relationship satisfaction across individuals of diverse sexual orientations and gender identities. To better understand the range of sexual orientations and gender identities included in
the following sections, a list of terms and definitions is provided in Appendix A. The following sections provide an overview of the literature and background of the study, including a review of the applicable theories and research findings of each with respect to relationship satisfaction, followed by a statement of the problem, purpose of the study, rationale, and research questions.
Relationship Satisfaction

Interpersonal relationship satisfaction in the context of intimate relationships has often been conceptualized as adjustment, which has traditionally been measured by assessing relationship behaviours such as conflict (e.g., Christensen & Heavey, 1990; Cramer, 2000; Glenn, 1990; Levenson & Gottman, 1985). The perspective of other theorists and researchers has been more individualistic, encompassing attitudes and subjective feelings expressed about a particular relationship context or feelings towards one’s partner (e.g., Fricker & Moore, 2002; Hendrick, 1981; Hendrick & Hendrick, 1997; Martin, Blair, Nevels, & Fitzpatrick, 1990; Morrow, Clark, & Brock, 1995).

Research suggests that an individual’s cognitions in the context of and about a particular relationship are associated with the way an individual feels about the relationship, as well as reciprocal behaviours between partners (Fletcher, Overall, & Friesen, 2006; Vangelisti, 2011). On this basis, researchers have used both subjective feelings and objective behaviours as ways to operationalize relationship satisfaction and have established methods of assessment to capture these constructs. However, Hendrick and Hendrick (1997) argued that adjustment and satisfaction are not always synonymous; although couples might be considered “well adjusted” in terms of an apparent well-functioning relationship on behavioural terms (e.g., via their utilization of similar parenting strategies, enacting similar values with respect to finances and spending, using appropriate conflict resolution skills with one another), the same partners may still experience subjective feelings of dissatisfaction if they lack intimacy in their relationship (e.g., strong physical attraction, emotional closeness). Hendrick (1995) and Hendrick, Dicke, et al. (1998) took a different approach to operationalizing relationship satisfaction and the current
study utilizes their perspective. First, Hendrick (1995) defined relationship satisfaction as an individual’s *subjective feelings* about a specific intimate relationship context. Second, Hendrick, Dicke, et al. (1998) defined relationship satisfaction in terms of a co-constructed phenomenological meaning context that results in each individual in a relationship experiencing their own *subjective valuing* of the relationship. It has been argued that the conceptualization of relationship satisfaction as both subjective feelings about a relationship and subjective valuing of a relationship provides researchers with an understanding of both the experience of an individual within a relationship as well as the co-created relationship context. Operationalizing relationship satisfaction in this way allows for the study of other relationship phenomena as predictors (Hendrick, Dicke, et al., 1998).

Furthermore, operationalizing relationship satisfaction in terms of subjective feelings and valuing is most consistent with the notion that what underlies relationship satisfaction is a vast range of subjective feelings and attitudes that may be experienced within the context of interpersonal relationships. For example, Fehr (2013) states that the emotion of love is often so pervasive and impactful in peoples’ lives that experiences of love can range from a sense of euphoria and ecstasy (e.g., the prototypical experience of “falling in love”) to rummaging the depths of despair (e.g., unrequited love). Baumeister and Leary (1995) argued that it is the fulfillment of the fundamental human need to belong that is critical for love to produce extreme positive emotions of happiness and that love without belonging results in emotions at the negative end of the spectrum, such as unhappiness, disappointment and distress. These authors reviewed a large body of empirical research to support the proposition that the positive affect associated with relationship satisfaction is associated with well-being and that the absence of positive relational bonds (due to a lack of achieving them, non-reciprocation, severing of desired connections, or dissatisfaction with relationships) can produce significant negative affect, which,
in turn, may be associated with poor mental and physical health (Baumeister & Leary, 1995). Of course, relationships are dynamic, not static, and it is relationship satisfaction over time that has the potential to result in the greatest impact on overall well-being. Studying predictors of relationship satisfaction is important because ultimately this construct has strong implications for relationship commitment and longevity (Hendrick, Hendrick, & Adler, 1988), which, in turn, has implications for overall health and well-being (Dush & Amato, 2005).

Several researchers have established that relationship satisfaction is an important correlate of well-being (e.g., Baumeister & Leary, 1995; Dush & Amato, 2005; Holt-Lunstad, Birmingham, & Jones, 2008; Riggle, Rostosky, & Horne, 2010; Wu & Hart, 2002). In addition, researchers have found that the positive association between relationship satisfaction and well-being occurs regardless of a person’s relationship status (e.g., marital, cohabitating, dating) and the gender of one’s partner (Dush & Amato, 2005; Holt-Lunstad et al., 2008; Wu & Hart, 2002). In terms of heterosexual married couples, researchers have found negative associations between marital quality and blood pressure, levels of perceived stress, and depression, and positive associations between marital quality and overall satisfaction with life (Holt-Lunstad et al., 2008). Researchers have found that well-being in the form of health gains associated with marital relationships also applies to those in other forms of committed relationships, such as cohabitating couples, although married adults tend to report the lowest levels of psychological distress and highest levels of mental health and well-being on average (Wu & Hart, 2002). Although the vast majority of research on adult love relationships to date has focused on heterosexual relationships, the science of relationships has broadened in recent years to include increasing diversity in relationships including individuals of various sexual orientation minority groups. Even more in its infancy is relationship research inclusive of trans people, although this area appears to be growing.
With respect to cisgender sexual minority adults, in terms of associations between relationship status, relationship quality and well-being, there have been similar findings among lesbian, gay and bisexual individuals within legally recognized civil or legal marriages (compared to lesbian, gay and bisexual individuals who are single, dating or in committed relationships that are not legally recognized) in terms of lower levels of psychological distress (e.g., depression, stress) and increased well-being (Riggle et al., 2010). Understanding the factors associated with relationship satisfaction, inclusive of diverse sexual orientations and gender identities, is critically important in terms of better understanding factors that contribute to overall well-being. By conceptualizing relationship satisfaction in terms of subjective feelings and the value attached to the relationship, researchers are better able to study and understand factors that contribute to relationship satisfaction.

The topic of relationship satisfaction among cisgender sexual orientation minority adults has tended to focus on comparisons of relationship satisfaction between same-gender (e.g., gay, lesbian) and mixed-gender (i.e., heterosexual) couples, as well as common and unique correlates of relationship satisfaction between these groups (Diamond, 2006a; Peplau & Spalding, 2000). According to Diamond (2006a), in general, researchers have found that the similarities outnumber the differences in terms of correlates of relationship satisfaction in heterosexual versus same-sex couples. In terms of similarities, contrary to historical stereotypes of same-gender couples as less satisfied and less in love than heterosexual couples (Testa, Kinder, & Ironson, 1987), numerous studies have since confirmed that, on average, same-sex and mixed sex couples are similarly satisfied (e.g., Beals, Impett, & Peplau, 2002; Duffy & Rusbult, 1986; Kurdek, 1988; Kurdek, 1998; Kurdek & Schmitt, 1986a, 1986b; Peplau & Cochran, 1980; Peplau, Padesky, & Hamilton, 1982). Furthermore, researchers have established similarities between mixed- and same-sex couples in terms of the association between relationship
satisfaction and partners’ shared attitudes and values (Kurdek & Schmitt, 1987), attachment styles (Ridge and Feeney, 1998), perceived costs and rewards associated with a relationship (Duffy & Rusbult, 1986; Kurdek, 1991), and positive/negative affectivity and age (Todosijevic, Rothblum, & Solomon, 2005), among other factors.

In terms of differences between mixed-gender and same-gender relationships, Mohr and Daly (2008) argued that one of the biggest differences relates to those in same-gender relationships having to cope with the societal stigma associated with being in a non-heterosexual relationship. Meyer (2003) argued that sexual minority stress, or the chronic stress associated with attempting to cope with a variety of chronic factors related to one’s minority status ranging from external factors (e.g., external social conditions and structures relating to acts of discrimination and violence) to internal factors (e.g., stigma consciousness, internalized homophobia, identity concealment), is related to decreased psychosocial functioning in lesbian, gay, and bisexual (LGB) individuals. For some individuals, difficulty coping with a climate in which one’s relationship is devalued and marginalized results in a state of chronic secrecy about their sexual orientation, leading to decreased social support, considerable stress and, ultimately, decreases in overall well-being (Smart & Wegner, 2000) and satisfaction in relationships (Berger, 1990; Jordan & Deluty, 2000; Mohr & Daly, 2008). For those who choose to reveal their sexual orientation to others, research has found that the impact on relationship satisfaction depends on whether the disclosure is met with acceptance or rejection by important others (Beals & Peplau, 2001; Jordan & Deluty, 2000). This effect may be particularly salient for lesbian versus gay male couples in that research has shown that lesbians tend to experience more stress related to family reactions to their sexuality (Todosijevic et al., 2005). Among lesbian couples, research has found that correspondence between partners in terms of the level of social involvement in the LGB community was more important to relationship satisfaction than the
level of “outness”; specifically, lesbian couples in which both partners were moderately involved in the LGB community were the most satisfied (Beals & Peplau, 2001).

The Minority Stress Framework (Meyer, 2003) has also been emphasized as particularly salient yet seldom acknowledged for those with bisexual identities. Ross, Dobinson, and Eady (2010) argued that the minority stress experienced by bisexual people is particularly impactful on well-being and relationship happiness due to the intersecting and multiple oppressions related to biphobia/binegativity (i.e., fear of and/or negative social attitudes towards bisexual people and the notion of bisexuality), monosexism (i.e., a view of single-gender sexual orientations as legitimate, including heterosexual and gay/lesbian identities, resulting in social discrimination both from heterosexual and gay and lesbian people), homophobia/homonegativity (i.e., fear of and/or negative social attitudes towards those in same-gender relationships) and heterosexism (i.e., a view of heterosexuality as the only legitimate form of sexuality).

Stigma associated with non-heterosexual sexual orientations not only arises from social climate but can also arise from within an individual in the form of internalized homophobia/homonegativity and/or internalized biphobia (Meyer, 2003; Ross et al., 2010). Frost and Meyer (2009) found that internalized homophobia (i.e., defined as negative social attitudes about homosexuality directed towards the self) predicted greater relationship problems, which was independent of the level of “outness” to important others and connection to the LGB community; however, depressive symptoms were found to mediate this association. Ross et al. (2010) found that experiences of multiple oppressions related to a combination of biphobia, monosexism, homophobia and heterosexism experienced by bisexual people is associated with direct effects on mental health (e.g., anxiety, depression, identity conflict, self-worth, self-esteem) and indirect effects on interpersonal relationships (e.g., distress in response to
relationship difficulties). Thus, although there appear to be many similarities between factors associated with relationship satisfaction between cisgender individuals in heterosexual relationships and those in LGB relationships, the unique social climate of the latter appears to be a source of possible differences. This social climate may be even more salient for those who are transgender, who are frequently faced with minority stress associated with oppressive experiences of *transphobia/transnegativity* (i.e., fear of and/or negative social attitudes towards transsexualism and/or transsexual or transgender people), and *cisnormativity* [i.e., a belief that the bodies and/or identities of trans people are somehow less real, authentic or “normal” (Travers et al., 2013)]. In addition, these attitudes are often coupled with additional stigmatization associated with sexual orientation and/or other minority identities such as race (Longman Marcellin, Scheim, Bauer, & Redman, 2013). However, much less is known about relationship satisfaction among transgender individuals due to a significant lack of research in this area, although there are some exceptions [see Kins et al. (2008) and Meier et al. (2013) discussed further below]. A further issue is that the LGBTQ umbrella has been somewhat contentious because it may wrongly communicate a conflation of sexual orientation and gender identity (Dargie, Blair, & Pukall, 2014). Transgender people are represented in all sexual orientation categories (American Psychological Association, 2013) and being transgender can raise unique issues in comparison with cisgender persons.

In summary, relationship theorists and researchers are highly interested in factors associated with relationship satisfaction in the context of intimate relationships and there is a need for the current literature to “broaden the existing knowledge base by increasing the diversity of types of relationships studied” (Peplau, 1993, p. 395). In the current study, I examine three specific theoretical and conceptual frameworks for understanding relationship satisfaction among adults across a spectrum of sexual orientations and gender identities. I draw on current
research on cisgender heterosexual relationships, where several measures have already been
developed, validated, and utilized within empirical studies examining predictors of relationship
satisfaction. These three frameworks include love styles, attachment, and exchange versus
communal approaches to sexual relationships. The following sections discuss these three
theoretical constructs in turn and their associations with interpersonal relationship satisfaction
within adult intimate relationships. Following this, a rationale is provided for extending this
work to examine how interpersonal factors in the areas of love, attachment and sexuality
contribute to relationship satisfaction across individuals of diverse sexual orientations and gender
identities.

**Love Styles Theory**

Although the importance of love has been acknowledged by philosophers for centuries, it
was not until approximately the middle to late 1970’s and early 1980’s that the topic became
accepted as a viable area of scientific inquiry by psychologists (Myers & Shurts, 2002). The
study of close relationships grew rapidly in the 1990’s with a focus on defining and measuring
love’s components and understanding the relationship between love and well-being. In more
recent years, the study of close relationships has been referred to by a number of researchers as
*relationship science* (e.g., Berscheid, 1999; Lewandowski, Loving, Le, & Gleason, 2011). This
area of inquiry has evolved into a multidisciplinary area of research encompassing various
branches within psychology, sociology, anthropology, communications, marital and family
therapy, economics, and health sciences (Berscheid, 1999). A multidisciplinary approach to the
study of love seems fitting given that it parallels the phenomenon of love, in that both have been
described as “complex and multifaceted” (Berscheid and Reis, 1998, p. 212).
In the early years of love research, a number of simplified theories were proposed. Initially theories focused on the giving and receiving of benefits between partners. For example, an exchange theory of love proposed by Blau (1964) characterized love as an equilibrium of mutual and consistent exchange of rewards between partners. Clarke and Mills (1979) expanded on these ideas, differentiating between two types of relationships that vary in their use of rewards between partners. In *exchange relationships*, one partner gives a benefit in response to a benefit; in *communal relationships* there is a more altruistic element, with one partner giving a benefit in response to the other partner’s need, without the element of mutuality. To explore these relationships, the authors conducted two studies in which they included unmarried male and female undergraduate participants to determine how receiving a benefit (in the form of an extra point that counted towards course credit from an individual of the opposite gender) influenced participants’ attraction towards each other. Study 1 included male participants only and examined the effect of preference for exchange versus communal relationships. For participants who preferred an exchange relationship, receipt of a benefit after prior aid of the other led to greater attraction; however, this led to less attraction when a communal relationship was preferred. Study 2 included female participants only and an expectation of an exchange or communal relationship was manipulated. Results indicated that when an exchange relationship was expected, the equitable giving and receiving of rewards between partners led to greater attraction; however when a communal relationship was expected such equitable giving and receiving led to decreases in attraction. The authors theorized that communal relationships, which involve an expectation of a long-term relationship, will become strained if expectations between partners are mismatched and the relationship approach becomes transactional (Clark & Mills, 1979).
Moving away from a focus on the behavioural aspects of love transactions in the form of giving and receiving of benefits and rewards, other theories incorporating physiological, emotional and cognitive elements of intimate relationships have also been developed. For example, Berscheid and Walster (1974) proposed that *passionate love* involves physiological arousal (including a strong emotional state of longing and sexual attraction) accompanied by cognitive cues in which such experiences are interpreted, appraised, or “labeled” as love. Building on this labeling approach, Walster and Walster (1978) proposed two kinds of love: passionate and companionate, with the passionate love characteristic of love early in a relationship evolving naturally into companionate love over time, characterized as a far less intense emotion that incorporates attachment, trust, commitment and intimacy. The idea here is that passionate love is viewed as intense yet fragile, dissipating over time and becoming replaced by a less intense but more robust companionate love. This theory has continued to be of interest to researchers in recent years who have examined the effect of time on passionate and companionate love (e.g., Contreras, Hendrick, & Hendrick, 1996; Hatfield, Pillemer, O’Brien, Sprecher, & Le, 2008; Tucker & Aron, 1993). It appears that time tends to have a detrimental effect on both types of love (Hatfield et al., 2008).

These earlier rudimentary theories of the nature of love were gradually replaced by more elaborate, multidimensional theories and classifications (Hendrick & Hendrick, 1986). The elaboration of individual difference typologies of the attitudes and dispositions people bring to their intimate relationships was considered one of the most promising relationship theory developments (Levy & Davis, 1988). One such theory of love that has received a great deal of attention by researchers is that proposed by a former University of Toronto sociology professor, John Alan Lee (1973, 1976a, 1976b, 1988).
Lee’s typology of Love Styles is grounded in research, emerging from a complex interview study with over 200 heterosexual and homosexual participants (Hendrick & Hendrick, 1986). As a result of qualitative analyses, Lee identified six basic love styles, each of which have salient characteristics independent of the other styles, and according to Lee, are equally valid ways of loving (Hendrick & Hendrick, 1986). Recognizing the paucity of vocabulary of intimacy, Lee assigned Greek names to the six dimensions as a result of his reliance on classical literature when interpreting the patterns in his interviews (Lee, 1976b, 1977). Each style consists of a combination of certain attitudes and beliefs (Weis, 2006). Of the six love styles, three were classified as primary types: **Eros** (romantic love, physically and emotionally passionate); **Ludus** (game-playing love; love and sex seen only as a fun activity) and **Storge** (friendship love); and three as secondary types: **Pragma** (logical, practical, “shopping list” love); **Mania** ( possessive, dependent love) and **Agape** (altruistic, all-giving, selfless) love (Hendrick & Hendrick, 1986, 1992a, 1992b). The secondary types were viewed by Lee as constructed out of combinations of salient elements of certain pairs of primaries (e.g., Pragma explained as a combination of elements of Storge and Ludus). His theory recognizes that there are some overlapping characteristics between the love styles, although each is said to represent a clustering of those elements that are most distinctive (Lee, 1977). Lee visualized his theory in a colour wheel, thus lending to his frequent use of the phrase “colours of love” in his writings (as well as the idea that pairs of primary colours may be blended to make secondary colours). He used the colour wheel as an analogy of love; that is, he used it to demonstrate the equality of love styles – not right or wrong, but merely differentially preferred (Lee, 1976a). Interestingly, the use of rainbow colours as a symbol of equality has a long history within the LGBTTIQQ2SA (lesbian, gay, bisexual, transgender, transsexual, intersex, queer, questioning, two-spirit, asexual) community that also dates back to the late 1970’s (Sanders, 2005). Not only is there a notion of equality among the
love styles but also the idea that individuals possess characteristics of more than one style to varying degrees (Hendrick, 2004). Further elaboration regarding the characteristics of the different love styles is provided in Appendix B.

Lee’s theory is important for a number of reasons, including his emphasis on the importance of empirical approaches to the study of love. He modeled this through his development of a “scientific taxonomy” of six love styles (i.e., conceptualizations of various forms of intimate adult affiliation), grounded in qualitative research (Lee, 1977). Not only did his work also provide a vocabulary of adult intimacy or love where one was previously lacking, but both the manner in which he developed his theory and applied labels to the various love styles were a result of his mindfulness of the pitfalls of personal biases. Lee (1977) brought attention to the issue of bias in love research by criticizing early attempts at universal definitions of love, such as “true love” defined as an attraction between opposite-sex persons, which failed to recognize love between same-sex individuals. Not only did he use neutral language, he was also an inclusive researcher in that he developed his theory by including both heterosexual and homosexual participants in his research. This is notable given that he likely started his research before the 1973 decision to remove homosexuality as a mental disorder from the Diagnostic and Statistical Manual of Mental Disorders (2nd ed.; DSM-II; American Psychiatric Association, 1968) with the publication of the revised DSM-II in 1974 (2nd ed., rev.; DSM-II-R; American Psychiatric Association, 1974), and that he published his work before the 1986 decision to remove ego-dystonic homosexuality with the publication of the DSM-III-R in 1987 (3rd ed., rev.; DSM-III-R; American Psychiatric Association, 1987).

In addition to the above noted important contributions of Lee’s work, Hendrick and Hendrick (1986) drew attention to the love styles theory as theoretically rich as a result of its
complexity, multidimensionality, and incorporation of other less extensive love theories into one coherent theory. For example, these authors noted conceptual similarities between Lee’s Pragma (logical love) and Blau’s (1964) exchange theory, Lee’s Agape (selfless love) and Clark and Mills’ (1979) communal love, as well as Lee’s Eros (erotic love) and Storge (friendship love) and Bersheid and Walster’s (1978) passionate and companionate love. The authors also noted that whereas previous conceptualizations of love were two-dimensional and dichotomous (e.g., communal versus exchange love, passionate versus companionate love), Lee’s (1973) love styles theory provides a multidimensional approach to love that is more inclusive of human differences and accounts for a greater variety of love relationships through its articulation of six equally viable styles of loving (Hendrick & Hendrick, 1997). One of the most important contributions of Lee’s work is that his love styles taxonomy has inspired the development of several widely used measurement instruments that have since been used in numerous empirical investigations.

Although Lee was a sociologist and was primarily concerned with the social conditions associated with the various love styles, he also considered some of the psychological aspects of the love styles. For example, Lee (1977) stated that successful performance of the Ludus style requires an individual to possess significantly high levels of self-esteem. He also pointed to prospects for future research in examining the relationships between love styles and various psychological dimensions such as attitudes and personality. As a result, the work of Lee inspired the development of a number of measurement instruments, including the well-known 42-item Love Attitudes Scale (LAS; Hendrick & Hendrick, 1986; Hendrick, Hendrick, Foote, & Slapion-Foote, 1984) and the 24-item Love Attitudes Scale Short Form (LAS-SF; Hendrick, Hendrick, et al., 1998). Although many other psychometrically sound multidimensional approaches to the measurement of romantic love have emerged, the Love Attitudes Scale Short Form continues to be among the most widely used (Levin, 2000).
One of the first scales developed to measure the six love styles was a true-false scale developed by Lasswell and Lasswell (1976). These researchers sought to examine the idea that love means different things to different people. They initially developed profiles of the six types of love, along with 144 items indicating the presence or absence of various thoughts, feelings and behaviours thought to match each of the six profiles. Using panels of expert judges, the items were reduced to 95 items and presented to 188 male and female participants from a variety of racial, ethnic and religious backgrounds. Each participant received a score on each of the six subscales calculated by counting the number of true responses within each subscale. The items were subsequently reduced to 53 as a result of a Gutman-Lingoes Multidimensional Scalogram Analysis and it was reported that the six love types were conceptually distinct, although the article did not include details of the data analysis.

Building on this work, Hendrick et al. (1984) developed the initial Love Attitudes Scale (LAS) using some of the same items and various new ones presented in a Likert scale format. The LAS was utilized in the context of a larger study of love and sex attitudes; thus, the original intention was for the measure to assess “love attitudes” in a general sense. The new scale was administered to 813 introductory psychology and sociology students at the University of Miami, including 374 males and 439 females, from various racial backgrounds (distribution for which was not specifically reported) with a mean age of 19.2 years. A principal components analysis with varimax rotation was performed separately for males and females. Seven clear factors were found on which males and females matched, as well as two other small factors unique for males and females. The most clearly defined factors were Pragma, Mania and Agape. The need for further work on scale development was noted, including a need to eliminate items that did not load onto any of the factors. The authors concluded that further work was needed to determine if
Lee’s theory was incorrect or whether their inability to replicate the six love styles was a reflection of a poor measurement scale.

The 42-item Love Attitudes Scale was subsequently developed due to a lack of factor clarity in the previous study. Hendrick and Hendrick (1986) substantially revised the earlier version of the scale and administered it to two separate undergraduate student samples representing different geographic areas (i.e., an original sample of 807 students and a confirmatory sample of an additional 567 students). Participants were described as coming from a number of different racial backgrounds; however, the distribution of the sample on this variable was not reported. Several principal components analyses were conducted for the two samples and the best solution extracted six factors, with factor loadings ranging from .33 through to .77. Internal reliabilities as represented by alpha coefficients ranged from .62 to .84. The authors concluded that results pointed to the viability of Lee’s (1973, 1976a) theory in that each of the six love styles could be clearly and distinctly measured. Following criticism that some of the scale items referred to a specific relationship while others referred to love relationships “in general” (e.g., Johnson, 1987), the scale was later revised to a relationship specific version (referring to one’s current romantic partner) in which the psychometric properties of the original version were replicated (Hendrick & Hendrick, 1990).

Following the development of the LAS, demand for brief relationship scales increased and a number of authors attempted to shorten the LAS without sufficient validation (e.g., Sprecher et al., 1992). For the purpose of satisfying the demand for brief love scales with acceptable psychometric properties, Hendrick, Hendrick, et al. (1998) developed a shortened version of the LAS that consisted of four-item subscales. They selected the best four items from each of the six scales based on large datasets used in previous studies. The datasets were also
used to explore the adequacy of possible three-item subscales. In total, participants included 2700 undergraduate students attending undergraduate classes at a large south western university, consisting of comparable sample sizes of men and women. The data indicated that the short-form versions had stronger psychometric properties than the original scales with the six factors demonstrating better internal consistency with alphas ranging from .75 to .88 (Fischer & Corcoran, 2007), although the four-item scale was somewhat superior to the three-item version. The measure also showed good seven-week stability, with test-retest correlations ranging from .70 to .82 (Fischer & Corcoran, 2007).

Following the establishment of the psychometric properties of the LAS and LAS-SF separately for men and women in a Western context, a number of studies have examined the suitability of Lee’s (1973, 1976a) six-factor love model within a number of different cultures (e.g., Kanemasa, Taniguchi, Daibo, & Ishimori, 2004; Neto, 1994; Neto et al., 2000; Pérez, Fiol, Guzmán, Palmer, & Buades, 2009; Wan Shahrazad, Hoesni, & Chong, 2012; White, Hendrick, & Hendrick, 2004; Yang & Liu, 2007). Findings from these studies generally supported the six-factor love model as universal across cultures, among cisgender heterosexual men and women. There are no published studies to date examining the applicability of the model among trans-spectrum or sexual orientation minority adults. Published data to date describes either cisgender heterosexual marital or dating relationships, presumes heterosexuality, or where romantic partner is specified, information about sexual orientation has not been gathered. The issue of gender variance or transgenderism has also not been addressed and samples have presumed participants are cisgender through their specification of participants using binary gender labels of male and female.
Despite this lack of research on diverse sexual relationships, individual differences in love styles have been explored in relation to a number of different demographic variables, such as gender, age, and culture. Early love styles research focused particularly on potential gender differences between men and women in order to explore the possibility that women and men love differently. Several studies have found consistent significant differences between presumed heterosexual cisgender men and women within the context of Western culture in terms of average scores on certain love styles. For example, Hendrick et al. (1984) examined differences between men and women using the original LAS and found that women tended to have higher average scores than men with respect to Storge (friendship) and Pragma (practicality), whereas men tended to have higher average endorsements on Eros (strong physical attraction) and higher endorsements or less disagreement with Ludus (game-playing). Also, on average, women were found to endorse altruistic love more than men. This research suggests that, at least within a context of a cisgender heterosexual Western undergraduate student population in the mid 1980’s, men seemed to more highly endorse passionate, game-playing, uncommitted love than women. On the other hand, women were more likely to view love as more friendship-based and possess more pragmatic attitudes.

Significant gender differences between presumably heterosexual cisgender men and women were further confirmed by Hendrick, Hendrick, et al. (1998) using the short-form LAS (LAS-SF), with women more likely to endorse storgic (friendship) and pragmatic approaches to love than men, and men more likely to endorse ludic and agapic approaches to love than women. Although the authors did not identify their sample as heterosexual and cisgender, there was no indication that the sample included individuals of more diverse sexual orientations or gender identities. Thus, it is presumed that the sample consisted primarily of cisgender heterosexual men and women. One difference in this study, compared to findings from previous research, was that
women were found to more highly endorse Eros (erotic love) than men; however, this finding is likely more reliable than the previous finding in the opposite direction, given the improved psychometric properties of the LAS-SF over the original LAS. These results suggest that, among Western, cisgender, presumably heterosexual individuals, men and women experience romantic love somewhat differently.

Another individual difference variable that has been explored with respect to love styles is that of age within a Western cultural context. Butler, Walker, Skowronsksi, and Shannon (1995) examined the relationship between love styles and age, in addition to a number of other demographic variables such as gender, social factors and culture among cisgender, presumably heterosexual, participants. The findings confirmed earlier research with respect to gender in that women were more likely to endorse Storge and Pragma love styles, whereas men were more likely to endorse Ludus and Agape love styles. In terms of age, age was negatively related to Eros (i.e., younger participants more highly endorsed passionate, romantic love than older participants) and positively related to Storge and Pragma (i.e., older participants more highly endorsed friendship and pragmatic love styles than younger participants).

Potential cultural differences in love attitudes have also been examined by a number of researchers (e.g., Portuguese – Bernardes, Mendes, Sarmento, Silva, & Moreira, 1999; Taiwanese – Cho & Cross, 1995; French – Murstein, Merighi, & Vyse, 1991; Spanish – Pérez et al., 2009). One of the most comprehensive studies was conducted by Neto et al. (2000) in which a large scale study was conducted including 1,157 undergraduate (presumably cisgender heterosexual) students from countries in Africa, Asia, South America, and Europe using materials composed of Cantonese, Portuguese, and French versions of the LAS-SF. One objective was to establish the psychometric properties of the LAS cross culturally. Factor
analyses showed that the six-dimensional factor structure postulated by Lee was applicable across multiple cultures. The second objective was to study variations in attitudes related to love. Findings were such that what the researchers considered to be love styles involving strong personal feelings including Mania, Eros and Agape did not vary between cultures; however, there was more variability in terms of love styles characterized by the authors as involving low affects and social rules, which included Pragma, Storge and Ludus. Specifically, Agloans, Brazilian, Cape Verdean, and Mozambican adults were more pragmatic in their responses than French and Swiss adults. In addition, Angloans, Cape Verdeans, and Mozambicans scored significantly higher on Storge (friendship love) than the French and Swiss. Few differences were found between genders. In terms of gender, a consistent finding across the various cultures studied was that men scored higher on Ludus and Agape than women, which is consistent with previous research (i.e., Hendrick & Hendrick, 1986; Hendrick, Hendrick, et al., 1998; Neto, 1994).

Other researchers have also found somewhat conflicting evidence about the influence of gender on love attitudes among adults outside of North America when compared to studies conducted using North American samples. For example, consistent with several North American studies showing consistent gender differences with men tending to more highly endorse ludic love styles than women, and women tending to more highly endorse storgic and pragmatic love styles, Neto (1994) found similar patterns of gender differences among college students in Portugal. Evidence has been more mixed with respect to findings about Eros. For example, Sprecher and Toro-Morn (2002) found that women were significantly more likely to endorse Eros as compared with men; however, similar to previous Western research, men showed significantly higher scores than women on Ludus and Agape and the researchers found no
significant gender differences in Storge or Pragma. Thus, it would appear that not only have differences in love styles been linked to gender and age, but also to culture.

To date, few studies have examined love styles in relation to sexual orientation minorities (including Adler, Hendrick, & Hendrick, 1986; Couperthwaite, 2005, 2011; Finch, 1999; and Zamora, Winterowd, Koch, & Roring, 2013). The first study that examined love styles with respect to cisgender sexual orientation minorities was conducted by Adler et al. (1986) who compared cisgender heterosexual and sexual minority men living in Texas and New York. Sexual orientation was assessed using a five-point Likert version of the Kinsey scale (Masters, Johnson, & Kolodny, 1982), which allowed individuals to identify their sexual orientation on a spectrum ranging from 1 (exclusively heterosexual) to 5 (exclusively homosexual). These endorsements were then used to assign participants to dichotomous sexual orientation categories as follows: heterosexual (indicated by scores of 3 or below) and homosexual (indicated by scores of 4 or 5). The final sample consisted of 60 men divided into groups as follows: 12 homosexual men and 16 heterosexual men living in New York; and 16 homosexual men and 16 heterosexual men living in West Texas. Results indicated that the love style patterns by sexual orientation groups were quite similar in that no differences were found with respect to Eros, Ludus, Storge, Pragma or Mania. In terms of differences, the homosexual men from New York endorsed altruistic love (Agape) significantly less than the so-called “homosexual” men from Texas and the heterosexual men from New York and Texas. No speculations were offered with respect to possible sources of this difference. Adler et al. (1986) hailed these findings as evidence to support Peplau and Cochran’s (1981) hypothesis “that homosexual relationships are multidimensional, and not based solely on sex” (p. 30). The study was an important first step towards a more inclusive literature; however, there are limitations in terms of the methodology used to assess sexual orientation, the use of dichotomous sexual orientation categories (i.e.,
heterosexual vs. homosexual) that erase experiences of bisexual men who may have participated, issues related to generalizability given the small sample sizes, and the lack of inclusiveness of other genders and gender minority individuals.

In an effort to further extend the work of love styles using a larger and much more diverse sample of sexual orientation minority, gender minority and heterosexual people participating via the Internet, my previous master’s research examined similarities and differences in these constructs across various genders and sexual orientations (Couperthwaite, 2005, 2011). This earlier study was the first to examine love styles in relation to both sexual orientation and gender identity minority adults (i.e., transgender/transsexual individuals), along with a comparison group of heterosexual adults (Couperthwaite, 2005, 2011). Using a sample of 494 participants primarily from Canada, the USA, Australia, and various English-speaking European countries, sexual orientation was assessed by way of participants’ self-identified sexual orientation labels (i.e., heterosexual, gay, lesbian, bisexual, queer, etc.). Similar overall patterns in the distribution of love styles were found among cisgender male and female participants (regardless of sexual orientation) and among transgender female and male participants (a group consisting of both heterosexual and non-heterosexual sexual orientations, which were collapsed due to insufficient sample size to examine differences across sexual orientation) in that most participants tended to score highest on erotic styles of loving. Between group comparisons (with groups categorized as cisgender heterosexual, cisgender gay/lesbian, cisgender bisexual, and transgender/transsexual) revealed that cisgender heterosexual adults exhibited higher practicality in their love styles, cisgender gay/lesbian adults were less friendship oriented, cisgender bisexual adults exhibited more “game-playing” qualities, and transsexual adults of various sexual orientations displayed higher altruist attitudes. Thus, although there were some minor differences between cisgender participants of different sexual orientations and between cisgender versus
transgender participants, the groups were more similar than they were different in terms of love styles.

Since the development of the LAS-SF, the two main authors of the scale have turned their attention to examining love styles as predictors of relationship satisfaction. First developed as a five-item measure of marital satisfaction, Hendrick (1981) devised the initial Relationship Assessment Scale (RAS) as a unifactorial measure of marital satisfaction. The scale was later revised to add two items and change the wording somewhat to make it more inclusive of other relationship formations (i.e., substituting partner for mate and relationship for marriage), resulting in a seven-item version of the scale (Hendrick, 1988). Since that time, the psychometric properties of the scale have been examined, with a reported mean inter-item correlation of .49 and excellent internal reliability with an alpha of .86, a reported correlation of .80 with the full Dyadic Adjustment Scale (DAS; Spanier, 1976), and the scale has also been shown to have good discriminant validity between individuals in continuing versus terminated relationships after two months in that couples with higher relationship satisfaction were less likely to have terminated their relationship (Hendrick, 1988). Furthermore, the scale has shown consistency over time with test-retest reliability coefficients of .85 after six to seven weeks among presumed heterosexual undergraduate students in dating and marital relationships (Hendrick, Dicke, et al., 1998). The psychometric properties of the instrument have also been established among cisgender heterosexual Anglo, Bicultural and Hispanic intercultural couples (Contreras et al., 1996), couples involved in parenting (Inman-Amos, Hendrick, & Hendrick, 1994), and dating couples (Meeks, 1996).

Researchers have consistently shown that several of the love styles are linked to relationship satisfaction, which has been studied almost exclusively with confirmed or presumed
cisgender heterosexual populations to date. One of the first studies to examine predictors of relationship satisfaction as measured by the RAS was conducted by Hendrick et al. (1988). A sample of 57 heterosexual college couples completed measures assessing a number of different constructs, one of which included love styles (also known as love attitudes), as well as two measures of relationship satisfaction, including the RAS and the DAS (Spanier, 1976). Regression analyses conducted separately for men and women found that for both sexes, Eros was a strong positive predictor of relationship satisfaction whereas Ludus was a strong negative predictor of relationship satisfaction on both the RAS and DAS. For women, Storge was an additional moderate positive predictor and Mania a negative moderate predictor of relationship satisfaction. Furthermore, the likelihood of couples remaining together after a two-month interval was positively related to Eros, self-esteem, commitment towards and investment in the relationship, and relationship satisfaction. There was a negative relationship between endorsements of Ludus and relationship continuance at two months.

In another study examining love style predictors of relationship satisfaction, Morrow et al. (1995) sampled 186 cisgender heterosexual undergraduates and their relationship partners using a version of the LAS (shortened by the researchers) to explore love style predictors of relationship qualities specified by Rusbult’s (1980, 1983) investment model. Correlational and multiple regression analyses run separately for men and women indicated that for both sexes, endorsements of Eros and Agape were positively associated with a number of positive relationship factors, such as higher perceived levels of rewards, relationship satisfaction and commitment. The reverse pattern was found with respect to Ludus. The study also found that the couples tended to exhibit similar love attitudes and relationship satisfaction with one another.
Yet another study relating to love styles and satisfaction is that of Martin et al. (1990), who also studied a presumably cisgender heterosexual married sample. These researchers surveyed 55 couples to compare marital adjustment with styles of loving. Wives’ endorsements of an Agape love style was found to contribute to their marital adjustment and contributed most to their husband’s marital adjustment. On the other hand, husbands’ style of loving and marital adjustment was not found to be related to their wives’ marital adjustment.

Predictors of relationship satisfaction among different cultural groups have also been a focus of inquiry. Contreras et al. (1996) examined both ethnic and gender differences in predictors of relationship satisfaction among 54 Mexican American and 30 Anglo-American, presumably cisgender heterosexual, married couples. In terms of ethnic differences in endorsements of love styles, Mexican American participants more highly endorsed Ludus (game-playing love) and Pragma (practical love) than Anglo-American participants; however, although these differences were statistically significant, both ethnic groups tended not to highly endorse Ludus or Pragma, although the Anglo-American participants scored significantly lower on both love styles. Other differences were found in that the Anglo-American couples were more similar to one another in terms of their love style endorsements than the Mexican American couples, which was attributed to Mexican Americans possibly ascribing to more traditional gender roles in their relationships. Despite these finite differences, no differences were found related to gender or ethnicity with respect to marital satisfaction or adjustment. In terms of love style predictors of relationship satisfaction, the groups were more similar than different in that Eros (passionate love) represented a strong positive predictor and Ludus (game-playing love) a strong negative predictor of relationship satisfaction for husbands and wives across both ethnic groups.
In terms of the impact of sexual orientation in relation to potential love style predictors of relationship satisfaction, only one study has been identified. Finch (1999) sampled 32 lesbian couples from five American States with an average relationship length of five years. Participants consisted of 22 Caucasian couples, three Hispanic couples, and seven couples of mixed ethnicities. Participants completed several self-report measures, including a demographics questionnaire, the RAS, the LAS, and a measure of “fusion” to determine couples’ degree of closeness, caregiving, and intrusiveness. Correlational analyses indicated that lesbian couples endorsing Eros as the primary love style had higher relationship satisfaction than lesbian couples with other primary love styles. This finding is consistent with past research on heterosexual couples, although the findings are limited to lesbian couples and do not consider other genders and sexual orientations (e.g., gay men, bisexual men and women). In addition, no studies to date have been identified that have examined predictors of relationship satisfaction among trans-spectrum individuals.

In summary, it appears that the most consistent finding regarding the relationship between love styles and relationship satisfaction is that Eros (passionate love; strong physical attraction) is the strongest of all the love styles in terms of positively predicting interpersonal relationship satisfaction, and Ludus (game-playing love; love and sex seen only as a fun activity) is the strongest negative predictor. The findings have been somewhat mixed with respect to Storge (friendship love), Agape (selfless giving love) and Mania (obsessive love). Although Lee (1976) attempted to portray the love styles as equal, it does appear that Eros and Ludus have historically been found to be the most salient predictors of intimate partner relationship satisfaction among primarily Western cisgender heterosexual samples.
Attachment Theory

A second theoretical framework that has been applied to understanding satisfaction in adult intimate relationships is attachment theory, which has its origins in developmental psychology. Attachment theory originated through the joint works of Bowlby (e.g., Bowlby, 1977, 1980, 1988) and Ainsworth (e.g., Ainsworth, 1991; Ainsworth, Blehar, Waters, & Wall, 1978; Ainsworth & Bowlby, 1991) who were interested in the ways in which infants bonded with their caregivers and the effects of these bonds on the infant’s ways of interacting with their world. Bowlby hypothesized that parent-child attachments were integral to the development of emotion regulation and interpersonal functioning and that they were stable throughout the lifespan. Bowlby characterized attachment in all or nothing terms and as knowledge structures, which he referred to as internal working models that influence people’s perceptions, emotions, thoughts (i.e., ways they attend to, interpret and recall information), and behaviours in the context of relationships over the course of their lives (Fraley & Shaver, 2000). As such, according to early attachment theory, these internal working models reflect an individual’s expectations and beliefs formed from early caregiving experiences. For example, on the basis of repeated interactions with a caregiver infants learn whether their caregiver (i.e., attachment figure) can be counted on in times of need on the basis of the caregiver’s warmth, responsiveness to their needs and consistency of such responsiveness. When these qualities (i.e., warmth, responsiveness to the infant’s needs and consistency) are present, secure attachment develops. Conversely, when an attachment figure exhibits coldness, insensitivity, unpredictability and/or rejecting behaviours, these experiences become solidified within either insecure or anxious attachment mental models. Although Bowlby believed that these mental models were somewhat modifiable based on new attachment experiences in adulthood, he believed they were relatively resistant to change over the course of an individual’s life and across various relationships.
(Bowlby, 1988). Fraley (2010), however, stated that this aspect of attachment theory is controversial and should be considered an empirical question rather than assumed.

In the mid 1980’s, researchers began to seriously examine the assumption that attachments from childhood are stable across the lifespan and affect people’s experiences of relationships in adulthood (Fraley, 2010). Shaver and Hazan (1988) established a framework for attachment that addressed the ways in which styles of attachment were associated with ways of being in adult romantic relationships. Shaver and Hazan (1988) described overlapping features of attachment and romantic love, including elements such as a feeling of safety when the attachment figure/romantic partner is accessible and responsive; engagement in close, intimate, bodily contact; a feeling of insecurity when the attachment figure/romantic partner is inaccessible; an intense desire to share in discoveries and reactions with one another; and engagement in “baby talk”. Based on these overlapping relational qualities, the authors concluded that romantic love is a property of the attachment behavioural system and that individuals experience romantic relationships in ways that correspond to their attachment style (Fraley, 2010; Mikulincer, 2006). Hazan and Shaver (1987, 1990) and Shaver and Hazan (1988) adopted Bowlby and Ainsworth’s three-category conceptualization of three styles of attachment: secure, avoidant and anxious-ambivalent. Following this categorical conceptualization of attachment, Hazan and Shaver (1987, 1990) developed a measure that contained three descriptions, each based on one of the three patterns of infant attachment described by Ainsworth et al. (1978) but applied to the realm of adult romantic relationships. These three styles of attachment in adult relationships outlined in the Hazan and Shaver (1987, 1990) measure are: (1) Secure (“I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don’t worry about being abandoned or about someone getting too close to me.”); (2) Avoidant (“I am somewhat uncomfortable being close to others; I find it
difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, others want me to be more intimate than I feel comfortable being.”); and (3) Anxious-Ambivalent (“I find that others are reluctant to get as close as I would like. I often worry that my partner doesn’t really love me or won’t want to stay with me. I want to get very close to my partner, and this sometimes scares people away.”).

Over time, the models identified by Hazan and Shaver (1987, 1990) have been revised and different working models of attachment have been conceptualized. Bartholomew (1990) and Bartholomew and Horowitz (1991) proposed an expanded model and argued for a four-type categorization that included Hazan and Shaver’s three types plus an additional avoidance type referred to as dismissing avoidant (characterized by avoidance of closeness due to negative expectations of significant others, yet maintaining a sense of self-worth by denying the importance of relationships in a defensive fashion). Bartholomew (1990) categorized the four types based on a combination of two dimensions: (1) Model of Self, characterized by the level of attachment anxiety, or the degree of sensitivity to threats of rejection and abandonment; and (2) Model of Other, characterized by attachment avoidance, or the degree of reliance on others for support in times of need. Specifically, attachment avoidance and anxiety were thought to be expressed to varying degrees on a two-dimensional axis (as opposed to categories) and related to each of the proposed four attachment styles as follows: secure attachment – low avoidance, low anxiety; preoccupied attachment – low avoidance, high anxiety; dismissing-avoidant attachment – high avoidance, low anxiety; and fearful avoidance – high avoidance, high anxiety.

As a result of the variability with which attachment was conceptualized theoretically, a variety of multi-item self-report attachment inventories emerged in the early 1990’s (e.g., Collins & Read, 1990; Feeney, Noller, & Hanrahan, 1994; Simpson, 1990). In a seminal large-sample
study with over 1,000 participants, Brennan, Clark, and Shaver (1998) completed a factor analysis of 323 items (60 subscales) from 14 measures, which confirmed that there are essentially two dimensions relating to patterns of adult insecure attachment in relationships: *Attachment-related avoidance* (i.e., degree of reliance on others for support in times of need) and *attachment-related anxiety* (i.e., degree of sensitivity to perceived rejection or perceived abandonment threats). A prototypical adult who is *secure* would be low on both attachment anxiety and avoidance. Attachment styles are therefore “things that vary in degree rather than kind” and individual differences are more recently conceptualized and measured dimensionally as opposed to categorically (Fraley & Waller, 1998, p. 1). Fraley and Waller (1998) recommended use of scales that define attachment in multi-item dimensional terms with continuous scales because of a loss of precision that occurs when using categorical measures that define attachment patterns as “types”.

Various self-report measures of attachment containing continuous scales have been designed, the most popular of which are Brennan et al.’s (1998) *Experiences In Close Relationships* (ECR) measure; Fraley, Waller, and Brennan’s (2000) *Experiences in Close Relationships Revised* (ECR-R) short form; and most recently, Fraley et al.’s (2011) *Experiences in Close Relationships – Relationship Structures* (ECR-RS). The latter scale is relatively new and has the ability to measure adult attachment with respect to specific relationships, such as current or past romantic relationships as opposed to global measures of attachment, which assess attachment style in general terms across a number of relationships. Attachment researchers in social-personality psychology have traditionally conceptualized attachment as stable and trait-like, while other researchers such as Fraley et al. (2011) have examined whether attachment varies across different relationships using measures such as the ECR-RS. Although many self-report measures of adult attachment have been devised based on an assumption that within-
person attachment representations are stable across a variety of relationships, research has shown that there can be considerable variability across relationships (Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Fraley et al., 2011). For example, Baldwin et al. (1996) demonstrated that an individual can hold significantly different expectations and beliefs towards significant others, such as romantic partners, parents, and friends. Fraley et al. (2011) found, based on a study of 21,000 participants who participated online, that relationship-specific measures of attachment generally predicted interpersonal outcomes such as relationship satisfaction better than broader attachment measures that examine individuals’ attachment style more generally. Because of this, the current study utilizes a conceptualization of attachment as potentially variable across relationships and utilizes a measurement tool that measures relationship-specific attachment (i.e., the ECR-RS) to examine attachment predictors of relationship satisfaction.

Attachment style has been included as an additional variable for examination within the current study because of the richness of attachment theory and numerous research findings pertaining to linkages between attachment security and relationship satisfaction [for a review, see Mikulincer and Shaver (2007), Chapter 10]. Overall, numerous findings reviewed by Mikulincer and Shaver (2007) have suggested that secure attachment functions as a “psychological resource” that buffers individuals from stressors that might otherwise cause deteriorations in relationship satisfaction; conversely, those with insecure attachments are at much greater risk of relationship deterioration during stressful times in the absence of interventions to sustain relationship stability. One of the first studies examining linkages between attachment security and relationship satisfaction was conducted by Hazan and Shaver (1987) who found that individuals who were identified as secure partners within a relationship (versus avoidant or anxious/ambivalent partners) tended to endorse higher levels of happiness, were more trusting, were friendlier and more supportive towards their partners, and their relationships also tended to
last longer. In general, research conducted since Hazan and Shaver’s initial work has confirmed, at least among cisgender adults, that there are also no meaningful gender differences in the association between attachment style and relationship satisfaction. Several researchers have confirmed a link between attachment insecurities and relationship dissatisfaction in both cisgender heterosexual dating couples (e.g., Cozzarelli, Hoekstra, & Bylsma, 2000; Frei & Shaver, 2002; Kobak, Ruckdeschel, & Hazan, 1994; Shi, 2003; Williams & Riskind, 2004), heterosexual married couples (e.g., Birnbaum, 2007; Carnelley, Pietromonaco, & Jaffe, 1996; DiFilippo & Overholser, 2002; Feeney, 1994; Feeney, Alexander, Noller, & Hohaus, 2003), and gay/lesbian couples (e.g., Kurdek, 2002; Peplau & Spalding, 2003; Ridge & Feeney, 1998). To date, however, the large majority of research on the relationship between attachment styles and relationship satisfaction has focused on samples of cisgender, heterosexual adults (Mohr, 2008).

In addition, a small number of relationship studies have sought to incorporate both attachment and love styles as predictors of relationship satisfaction (Fricker & Moore, 2002; Levy & Davis, 1988). These studies are important because they lend further support to the conceptualization of love styles and attachment styles as constructs that are essential but unique contributors to relationship satisfaction. This highlights the importance of including both attachment and love styles in developing a comprehensive understanding of relationship satisfaction among diverse samples of individuals endorsing various sexual orientations and gender identities. Using presumably cisgender heterosexual samples, Levy and Davis (1988) sought to investigate the relative ability of constructs measured using the long-form LAS and Hazan and Shaver’s (1987) Adult Attachment Questionnaire (a measure of adult attachment that yields subscale scores for secure, anxious/resistant and avoidant attachment) to predict various relationship characteristics among unmarried dating couples. One such relationship characteristic examined as a dependent variable was that of relationship satisfaction, a component of the
The Relationship Rating Form (RRF) was developed by Davis and Todd (1982, 1985). The RRF includes a subscale referred to as the “General Satisfaction Cluster” whereby individuals rate feelings of happiness and enjoyment within the context of a specific relationship using a nine-point scale. The researchers gathered data from 388 undergraduate student participants ranging in age from 17 and 25 years, approximately 84% of whom were Caucasian. This research resulted in a number of important findings. First, significant correlations were found between love styles and attachment. Attachment security was found to correlate positively with Eros and Agape and negatively with Ludus. Attachment avoidance was negatively correlated with Eros and Agape and positively correlated with Ludus. Attachment anxiety was positively correlated with Mania. Another important finding by these researchers relates to their examination of the relative ability of the love and adult attachment styles to predict various concurrent relationship characteristics, including relationship satisfaction (Levy & Davis, 1988). Beginning with correlational analyses, the researchers found that Eros, Agape, and secure attachment were positively related and Ludus, avoidant attachment and anxious/ambivalent attachment were negatively related to relationship satisfaction. In addition to the correlations between the love and attachment styles and between each with relationship satisfaction, a principal components factor analysis was also conducted to determine if there was empirical overlap between the two theories. Four factors were found that were defined by (1) the contrast between Secure and Avoidant attachment styles with Eros also loading positively; (2) the contrast between Agape and Ludus with Storge and Eros loading positively; (3) positive loadings of Mania and Anxious/Ambivalent attachments with Storge also loading positively; and (4) primarily Pragma, with no attachment styles making a significant contribution (Levy & Davis, 1988). The authors concluded that although there was some overlap in terms of the factors, neither theory was complete on its own and that including both attachment and love styles allows for a more adequate account of personal attitudes and
behaviours that contribute to relationship development and the achievement of various relationship characteristics, including relationship satisfaction. The implication of this work is that love styles and attachment styles constitute distinct factors linked to relationship satisfaction. As such, this study incorporates both models by measuring love styles and attachment in studying predictors of relationship satisfaction.

In another study examining the ability of attachment and love styles to predict relationship satisfaction, Fricker and Moore (2002) examined sexual satisfaction as a potential mediating variable. The authors referred to attachment styles and love styles as cognitive schemas, yet also implied that they viewed each as functionally different by characterizing attachment styles as precursor “building blocks” of interpersonal relationships and love styles as a “mirror [of the] the many beliefs and attitudes about love that result” (p. 185). As a result of these two differing conceptualizations, the authors stated that the objective of their study was to obtain a better understanding of romantic relationship satisfaction by combining both perspectives to determine whether attachment styles or love styles (or a combination of both) predict relationship satisfaction. The researchers used the Adult Attachment Questionnaire designed by Hazan and Shaver (1987), yielding subscale scores for secure, anxious/resistant and avoidant attachment respectively, the LAS-SF by Hendrick and Hendrick (1990), and the Global Measure of Relationship Satisfaction (GMREL) measured by a response to the question, “In general, how would you describe your overall relationship with your partner?” using five 7-point bipolar scales (e.g., good/bad, positive/negative, valuable/worthless, satisfying/unsatisfying, etc.). Results indicated that the secure attachment style was associated with Eros, the anxious attachment style was associated with Mania, and no significant correlations were found between Ludus and avoidant attachment or Agape and secure attachment. There was also a negative correlation between avoidant attachment and Eros. However, using a categorical measure of
attachment in which people were asked to endorse which attachment style best described them, avoidant individuals scored significantly higher on Ludus as compared to those endorsing the secure or anxious attachment. Regression analyses indicated that the attachment and love style variables predicted 67% of the variance in relationship satisfaction, with the mediating variable of sexual satisfaction adding another 7%. Specifically, Eros and Agape represented positive predictors of relationship satisfaction, while negative predictors included avoidant attachment and Ludus, regardless of whether sexual satisfaction was included as a predictor variable (Fricker & Moore, 2002). Some empirical overlap was found between secure attachment and Eros, anxious attachment and Mania, and Ludus and avoidant attachment, although the correlations were weak. Overall, the authors concluded that their findings suggest love and adult attachment styles overlap somewhat conceptually, but the weak correlations suggested each model offered a unique perspective in terms of love and relationship satisfaction. These findings by Fricker and Moore (2002) were consistent with findings of Levy and Davis (1988) described above in that both studies indicated that love styles and attachment styles are important constructs in relation to intimate relationship satisfaction; thus, this study incorporates both models.

There are few empirical studies examining the application of attachment theory to same-sex romantic relationships (Mohr, 2008). One of the first works in this area was that of Ridge and Feeney (1998), whose main goal was to replicate basic attachment findings among heterosexual adults to that of sexual orientation minorities in dating relationships (Mohr, 2008). Specifically, a consistent finding among actual or presumed heterosexual samples across a number of empirical studies has been that securely attached adults are more likely to experience higher relationship satisfaction and higher quality relationships than those who are insecurely attached (e.g., Babcock, Jacobson, Gottman, & Yerington, 2000; Crowell et al., 2002). Overall, the findings of Ridge and Feeney (1998) were consistent with findings based on heterosexual
samples that attachment security is positively associated with current romantic relationship satisfaction. Consistent with the idea of anxious attachment representing “hyperactivation of the attachment system”, preoccupied attachment was related to a reported history of intense love experiences (Mohr, 2008, p. 488). In contrast, in line with findings among cisgender heterosexual individuals, those who endorsed avoidant attachment were most likely to endorse casual sex and to view sex solely in terms of its physical rewards (Mohr, 2008).

Adding further to the literature on attachment style correlates of relationship satisfaction among sexual orientation minorities, Ramirez and Brown (2010) examined open versus closed relationships among gay men. No significant differences were found between groups in levels of satisfaction or attachment styles, similar to others studies (e.g., Kurdek, 1995; Peplau & Spalding, 2003). However, results indicated that gay men in open relationships with explicit rules about sex outside of the primary relationship had significantly higher relationship satisfaction than gay men without such rules (Ramirez & Brown, 2010). This finding is quite striking given previous research regarding sexual exclusivity among heterosexual individuals. Studies have found gender differences between heterosexual men and women such that men have tended to be more interested in casual sexual encounters than women (Buss, 2003; Simpson & Gangestad, 1991). Also, heterosexual men with higher interest in casual sex compared to those with lower interest have tended to be less committed and experienced less love for their current partners and tended to experience reduced relationship satisfaction (Klusman, 2001; Seal, Agostinelli, & Hannett, 1994). Although no differences have been found between gay and heterosexual men in terms of interest in casual sex (Schmitt, 2006), Ramirez and Brown’s (2010) results indicated that negotiation between partners about specific rules about sex outside a primary relationship moderated the relationship with interpersonal relationship satisfaction among gay men. Thus, it appears that relationship satisfaction may not be negatively impacted
when non-monogamy is negotiated between gay male partners; in fact, relationship satisfaction may actually increase.

A recent study by Zamora et al. (2013) examined love styles (using the LAS-SF) as predictors of attachment style (using the ECR-R) among gay men. This study involved a sample of 72 self-identified gay men who participated online from various parts of the United States, and ranged in age from 18 to 71 years. A large percentage of the sample was Caucasian (over 86%) and the majority was highly educated, with 32% of the sample possessing a graduate degree and less than 6% completing a high school diploma or equivalent. With respect to attachment anxiety, results indicated that Eros was a positive predictor and Mania was a negative predictor. It was noted by the researchers that these results seemed divergent with previous research (i.e., Fricker & Moore, 2002; Levy & Davis, 1988) among heterosexual samples in which an opposite pattern was found. In addition, bivariate correlational analyses indicated results divergent with past research in that Ludus was negatively associated with attachment avoidance, which is the opposite pattern found by Fricker and Moore (2002) and Levy and Davis (1988) among undergraduate heterosexual adults (discussed in more detail earlier in this document). Little speculation was offered for these findings, although possible contributing factors were noted such as those that might limit the generalizability of the results (i.e., small sample size, lack of racial diversity, and the tendency for participants to be highly educated). The authors concluded that further work was needed to explore experiences of love and attachment styles among gay men and other sexual orientation minority groups.

Although research among heterosexual samples has linked attachment security to sexual exclusivity, it has been suggested that this connection is not as strong for gay men (Mohr, 2008). Gay men have been found to have a significantly higher incidence of sexual activities outside of
primary couple relationships (Mohr, 2008) and lesbian women have been found to be more sexually exclusive than gay men (Kurdek, 1995); thus, sexual exclusivity is potentially an important factor for possible consideration in the present research. Non-monogamy has been hypothesized as a possible contributor to higher levels of attachment anxiety, as some studies have shown that gay and bisexual men have tended to have higher attachment anxiety than lesbian and bisexual women (Mohr & Fassinger, 2003; Ridge & Feeney, 1998). Also, at least among heterosexual men, higher interest in casual sex outside a primary relationship has been found to have a negative relationship with interpersonal relationship satisfaction (Klusman, 2001; Seal et al., 1994). As a result of potential differences in sexual exclusivity among individuals of diverse sexual orientations and differences in the potential influence of this variable on relationship satisfaction by sexual orientation, it has been included in the study as part of establishing demographic characteristics of the sample. Sexual exclusivity will also be examined as a potential confound with respect to relationship satisfaction and included as a variable if necessary when examining the other proposed predictors of relationship satisfaction.

**Exchange and Communal Relationships Theory**

Another factor thought to be important to relationship satisfaction is that of Clark and Mills’ (1979) theory of exchange and communal relationships. Hughes and Snell (1990) extended the theory of Clark and Mills to include two approaches to sexual relationships: (a) **communal approaches**, representing a sense of responsibility, attunement and monitoring of one’s partners’ needs, and involvement in one’s partners’ sexual satisfaction for the purposes of providing pleasure; and (b) **exchange approaches**, representing a provision of sexual pleasure in response to previously received or future expected sexual benefits from one’s partner, with the focus being a monitoring of potential past or future sexual obligations to ensure fairness or
equity. On the basis of two instruments developed by Clark and various other colleagues [i.e., the Communal Orientation Scale developed by Clark, Ouellette, Powell, and Millberg (1987) and the Exchange Orientation Scale developed by Clark, Taraban, Ho, and Wesner (1989)], Hughes and Snell (1990) developed a self-report measure of approaches to sexual relationships called the Sexual Relationships Scale (SRS) using a five-point Likert scale. Using a sample of 158 presumably cisgender heterosexual undergraduate students (103 females and 55 males) completing an introductory psychology course at a small Midwestern university, factor analyses using Oblique rotations were performed separately for females and males. For the female participants, two subscales were revealed with factor loadings ranging from .43 to .81 on the Sexual Communion subscale and .43 to .61 on the Sexual Exchange subscale. The results for the males were described as less clear, which the authors attributed to a small sample size for this group. Factor loadings for the males were not specified. Internal consistency analyses run separately for females and males determined by computing Cronbach’s alpha coefficients were reportedly .77 for males and .79 for females for the Sexual Communion subscale and .59 for males and .67 for females for the Sexual Exchange subscale. A number of authors have suggested that Cronbach’s alphas above .70 indicate acceptable internal reliability (Cronbach, 1951; Field, 2011; Kline, 1999) and values below this indicate an unreliable scale; however, Cortina (1993) noted that this guideline should be used with caution because the value of alpha depends on the number of items in the scale (i.e., lower alphas can still represent reliable scales). The authors of the SRS interpreted their alpha levels such that they believed the results indicated “reasonably strong internal consistencies for the two SRS scales” (Hughes & Snell, 1990, p. 158).

Using their Sexual Relationships Scale (SRS), Hughes and Snell’s (1990) research explored gender differences on the SRS subscales and correlations between approaches to sexual
relationships (i.e., communal versus exchange orientation to sexual relationships) and relationship satisfaction using Hendrick’s (1988) original RAS. In order to examine potential differences between females and males in terms of approaches to sexual relationships, a multivariate analysis of variance was conducted for each subscale. Results indicated that males reported significantly higher scores than females on the Sexual Exchange subscale; however, no significant differences were found between females and males on the Sexual Communion subscale. With respect to relationship satisfaction, the authors hypothesized that individuals having an exchange approach to sexual relationships would be less satisfied and those with a communal approach would be more satisfied in their relationships. These findings were confirmed for males in that a negative relationship was found between an exchange approach to sexual relationships and relationship satisfaction; however, no relationship was found with respect to these variables for females. A positive relationship was found between communal approaches and relationship satisfaction for females; however, no relationship was found for these variables among the men. The sample size in this study was quite small and the authors did not report ranges of scores, which might reveal sources of the non-significant findings.

In an effort to extend previous findings of Hughes and Snell (1990) with respect to approaches to sexual relationships, my previous master’s research sought to examine sexual relationships using a sample of 494 participants who completed an online survey (Couperthwaite, 2005). The sample was diverse in terms of sexual orientations and gender identities, with 38% self-identifying as cisgender heterosexual, 33% self-identifying as cisgender gay/lesbian, 18% self-identifying as cisgender bisexual, and 11% self-identifying as transgender people of various sexual orientations. This research was unable to replicate Hughes and Snell’s (1990) findings in that no significant gender differences were found between cisgender heterosexual men and women, cisgender gay/lesbians, cisgender bisexual men and women or
transgender/transsexual men and women. However, among the cisgender participants, sexual orientation proved to be an important variable in that bisexual women exhibited significantly higher communal scores than bisexual men, and gay men were found to have significantly higher exchange scores relative to lesbian women. Beyond the scope of this research was an examination of exchange and communal approaches to sexual relationships as predictors of relationship satisfaction, which is one of the aims of the current research. The implication of the results of Couperthwaite (2005) for the current study is that differences were found in terms of gender and sexual orientation, which justifies further exploration of these variables in terms of potential differences in predictors of relationship satisfaction.

In addition, although the psychometric properties of the SRS among cisgender heterosexual adults reported by Hughes and Snell (1990) are somewhat questionable (e.g., no coherent factor structure could be obtained for the men in the original scale development study; Cronbach’s alpha for the Sexual Exchange subscale were .59 for males and .67 for females; Cronbach’s alpha for the Sexual Communion subscale were .77 for males and .79 for females), this is likely due to small sample sizes in the original scale development study, particularly among cisgender heterosexual males. Despite these concerns with the measure, it is included in the current study because, (a) it is believed that the measure has promise from a psychometric standpoint for examining important qualities of sexual relationships; and (b) the measure is based on strong theoretical linkages to Blau’s (1964) exchange theory of love, Clarke and Mills’ (1979) exchange and communal approaches to relationships, and represents an interesting attempt to extend these theories to sexual relationships. Therefore, there is an opportunity within the current study using a diverse sample to further explore the factor structure and internal reliability of the SRS and provide additional evidence for the applicability of communal and exchange theory beyond heterosexual samples.
Statement of the Problem

Historically, the most studied type of personal relationship with respect to relationship satisfaction is that of marital relationships, primarily using North American samples (Fincham & Beach, 2006). Given that it is only relatively recently that the marriage equality movement has resulted in more widespread, legally sanctioned same-sex marriages in Canada and parts of Mexico and the United States, much of this research has therefore focused on cisgender heterosexual men and women. The emergence of empirical interest in relationship satisfaction is said to have resulted from a growing interest in understanding and remediating family problems (Fincham & Beach, 2006). Therefore, the interest in the area also emerged within a cisgender-heteronormative context. Over time, research on relationships has included cohabitating and dating relationships and individuals in various cultures. With a diversification of the definition of family in this modern era, there is a need for research that acknowledges this diversity within the intimate relationships from which families are increasingly formed.

Research examining relationship satisfaction has been widening in scope over time to include the close relationships of non-heterosexual and gender-variant individuals (e.g., Beals et al., 2002; Kins et al., 2008; Kurdek, 1998; Meier et al., 2013; Ramirez & Brown, 2010; Riggle, Rostosky, & Horne, 2010; Testa, Kinder, & Ironson, 1987). Research on same-sex relationships has burgeoned in recent years, likely due, at least in part, to increasingly legalized same-sex marriage and other forms of legalized same-sex relationships, such as civil unions, in many parts of North America. Previously, the absence of legalized relationships as a marker resulted in many researchers studying same-sex couples to define what constituted commitment, resulting in differing criteria across studies (Balsam, Beauchaine, Rothblum, & Solomon, 2008). Examination of potential differences between cisgender individuals in opposite-sex versus same-
sex relationships in terms of relationship satisfaction has been important in light of common societal stereotypes that same-sex relationships are not as healthy or secure as heterosexual relationships. Although psychological literature focusing on individuals with non-heterosexual sexual identities has a long history, research specifically devoted to examining non-heterosexual relationships is relatively scarce (Roisman, Clausell, Holland, Fortuna, & Elieff, 2008). Most of the research that does exist has focused on gay and lesbian relationships among cisgender individuals, and the majority has been based on predominantly Caucasian Western samples (Peplau & Spalding, 2000).

It has been established by a number of researchers that samples of cisgender males and females in same-sex relationships report similar levels of relationship satisfaction as matched cisgender heterosexual samples (e.g., Duffy & Rusbult, 1986; Kurdek & Schmitt, 1987; Peplau & Cochran, 1980; Peplau et al., 1982; Roisman et al., 2008). For example, a longitudinal study of committed married heterosexual and cohabitating homosexual couples by Kurdek (1998) found that, in addition to similar levels of relationship satisfaction across groups (while controlling for age, education, income, and duration of cohabitation), similar patterns in relationship satisfaction were found after five years in that all couple types tended to experience decreased relationship satisfaction over time and at a similar rate across groups. Some differences were also found in that both lesbian and gay couples reported higher levels of autonomy (e.g., independent decision-making, important interests and friends outside the relationship, and a sense of individuality) than heterosexual partners, although no differences in relationship satisfaction were found (Kurdek, 1998).

Other research examining same-sex relationships versus heterosexual pairings among cisgender persons has revealed similarities in relationship satisfaction, while also discovering
some important differences. For example, in a study by Roisman et al. (2008), presumed cisgender participants involved in committed relationships were divided into groups as follows: 30 committed gay male couples, 30 committed lesbian couples, 109 heterosexual dating couples (with no expectation of long-term commitment), 50 younger engaged couples (aged 18 to 30 years) and 40 older married couples (age 50 or older and married at least 15 years). First, researchers found that all couples viewed their relationships positively but the more committed gay and heterosexual couples were better at resolving conflict than the heterosexual dating couples. Second, in terms of a global measure of attachment, no attachment differences were found between gay men and women and their heterosexual counterparts and the authors emphasized the importance of this key finding stating that, in fact, “gay males and lesbians proved to be among the most secure adults we have interviewed in our laboratory” (Roisman et al., 2008, p. 99). Third, no differences were found on relationship satisfaction when comparing committed gay and lesbian couples and committed heterosexual couples who were either engaged or married. Fourth, statistical analyses of laboratory observations of a conflict interaction task resulted in the finding that the committed gay male and heterosexual couples were not significantly different from one another in terms of resolving conflict; however the lesbian couples were superior to both heterosexual and gay male couples. This finding was considered a partial replication of Gottman et al.’s (2003) empirical conclusions that same-sex couples in general are more skilled in working harmoniously in resolving conflict.

Among cisgender individuals, another difference between opposite-sex and same-sex relationships is that even among those in committed relationships, same-sex couples tend to terminate their relationships sooner on average than heterosexual married couples and that this difference is more pronounced in comparison to heterosexual married couples with children (Kurdek, 2004). Although Kurdek (2004) stated that this information has sometimes erroneously
been interpreted as same-sex partnerships being less committed than heterosexual partnerships, Balsam et al. (2008) found evidence that this difference has likely been a result of a relative lack of formal barriers (e.g., legalized marriage) and not a result of same-sex couples being less satisfied in their relationships than heterosexual dyads. Specifically, the researchers compared 65 male and 138 female same-sex couples in civil unions, 23 male and 61 female same sex couples not in civil unions, and 55 married heterosexual couples and found that the same-sex couples not bound by civil unions were more likely to end their relationships after a three-year follow-up than both the same-sex civil spouses and heterosexual married spouses. In terms of longitudinal indicators of relationship quality after three years, it was found that both types of same sex couples expressed more relationship satisfaction and positive feelings towards their partners and less conflict as compared to the heterosexual married couples.

Although the research examining relationships of cisgender sexual minorities is growing, there are still fewer studies compared to the vast research examining heterosexual intimate relationships. Even more sparse are studies examining the relationships of gender identity minorities. Although research in this area is emerging, relatively little is known about the intimate romantic relationships of transgender/transsexual individuals (Brown, 2010; Kins et al., 2008; Meier, Sharp, Michonski, Babcock, & Fitzgerald, 2013). The majority of research that has been conducted has been qualitative and no known quantitative studies have examined relationship satisfaction or predictors of relationships satisfaction among trans-spectrum minorities. Based on the few studies that have been conducted, it appears that those who are transmasculine versus transfeminine have tended to report proportionally more stable relationships (Kockott & Fahrer, 1988). It has been hypothesized that this difference may be a result of gender socialization in early life for females elevating the importance of affective bonds within interpersonal relationships (Lewins, 2002). Evidence of satisfying relationships among
transmasculine adults has emerged from a study by Kins et al. (2008) in which the researchers examined and compared nine stable relationships between female-to-male (FTM) transsexuals and cisgender female partners to nine stable cisgender heterosexual relationships. Relationship satisfaction (measured using 10 items of the Maudsley Marital Questionnaire, or MMQ) revealed no significant between-group differences (Kins et al., 2008).

Despite the often long transition process of FTM transgender men, Meier et al. (2013) reported that among 593 FTM participants who were in a relationship before deciding to transition, approximately half continued the relationship following their transition. An important finding was that support from a romantic partner was found to moderate symptoms of depression and anxiety (Meier et al., 2013). It has been established that transgender individuals tend to suffer from mental health issues at higher rates than cisgender individuals, given the effects of a number of stressors and the stigmas associated with being transgender and the process of transitioning (McDermott, Roen, & Scourfield, 2008). Meier et al. (2013) cited various reasons for why this may be so, such as depression and anxiety in response to loss of employment and important relationships, financial barriers to accessing medical interventions for transition, and so on. It is well established that satisfying relationships help buffer and act as protective factors with respect to a variety of stressors. For these reasons, an examination of predictors of relationship satisfaction among trans-spectrum minority individuals may have particularly important clinical implications for psychologists and counsellors who work with this population.

**Summary**

It has been established through a number of empirical studies that intimate relationship factors of love styles, adult attachment and approaches to sexual relationships are important predictors of relationship satisfaction among cisgender heterosexual individuals, which has built
upon existing love style, attachment and exchange theories in relation to intimate relationships. The relative ability of such factors to predict relationship satisfaction (using measurement approaches that to date have been established almost exclusively with presumed heterosexual individuals) within a diverse sample including sexual and gender identity minorities has yet to be examined. The study of predictors of interpersonal relationship satisfaction has important clinical implications given its relationship to psychosocial adjustment and well-being (Hendrick, 1995; Hendrick & Hendrick, 1997).

**Purpose of the Study**

The purpose of this study is to empirically explore the relative abilities of Hendrick, Hendrick, et al.’s (1998) LAS-SF measure of Lee’s (1973) love styles, Fraley et al.’s (2011) ECR-RS relationship specific measure of attachment anxiety and avoidance, and Hughes and Snell’s (1990) SRS measure of Clark and Mills’ (1979) exchange and communal relationships to predict concurrent relationship satisfaction among sexual and gender minorities. Peplau and Spalding (2000) argued that empirical research on sexual minorities has a number of advantages, including the potential to provide more accurate descriptions of individuals involved in non-heteronormative relationships, insight into the influence of gender and social roles by comparing heterosexual to nonheterosexual couples, and information that can extend the generalizability of current relationship theories, many of which have been developed and tested with heterosexual samples. This study also aims to fulfill these purposes; in particular, extending existing theories of love styles, adult attachment and exchange/communal approaches to sexual relationships and their impact on relationship satisfaction that is inclusive of more diverse relationships. This study will also explore the psychometric properties of various well-validated measures used primarily with cisgender heterosexual populations to date.
Rationale

The proposed research is important for a number of reasons. Although I previously (Couperthwaite, 2005, 2011) examined patterns of love styles and approaches to sexual relationships using a diverse sample of sexual and gender minorities, the current research will extend my previous research in this area by examining love styles, attachment styles, and exchange/communal approaches to sexual relationships as potential predictors of relationship satisfaction among a diverse population inclusive of gay, lesbian, bisexual and trans-identified individuals.

In terms of a rationale for studying sexual and gender minority groups in intimate relationships research in general, Peplau (1982) argued that research with individuals involved in such relationships has the potential to inform several audiences, not only about homosexuality but also general knowledge about close human relationships. First, she pointed to the potential for studies of gay/lesbian relationships to address various myths about gay men and women by providing factual descriptions of such relationships. Second, she argued that such research allows those in sexual orientation minority communities to situate “one’s own relationship experiences in the context of a spectrum of possible relationships” (Peplau, 1982, p. 7). Finally, she argued that such studies provide an opportunity to test the generality of social science theories derived from heterosexual models and tested on heterosexual samples.

In line with this reasoning, the proposed research has similar advantages through its inclusion of gender minorities. Hines (2006) argued that the intimate relationships of transgender people within gender research has been largely invisible, rendering absent the lives and experiences of transgender people from various analytical frameworks that rely on a binary gender model. Hines (2006) concluded that “studies of same-sex intimacy and analyses of gender
relations have yet to take account of the specificities of transgender” (p. 355) and that this results in a relative absence in the literature of relationship experiences of trans people and their partners. Weeks, Heaphy, and Donovan (2001) pointed to the study of intimate relationships of transgender individuals as allowing for an “increasing flexibility in intimate life, which stretches across the heterosexual-homosexual divide” (p. 20). Hines (2006) concluded that these sorts of developments can lead to the forming of political alliances for advocacy among diverse groups of non-traditional partnering (p. 355). Studying the potential relationship satisfaction correlates of love, attachment and sexuality within the context of the proposed diverse sample of participants represents an important contribution to an extension of the romantic love literature.

**Research Questions**

The aim of this study is two-fold. First, the study seeks to demonstrate the psychometric properties of four relationship measures across diverse continuums of sexual orientation and gender identity, including: (1) the Love Attitudes Scale, Short Form (LAS-SF; Hendrick, Hendrick, et al., 1998); (2) the Experiences in Close Relationships – Relationship Structures (ECR-RS; Fraley et al., 2011); (3) the Sexual Relationship Scale (SRS; Hughes & Snell, 1990); and (4) the Relationship Assessment Scale (RAS; Hendrick, Dicke, et al., 1998). It is anticipated that factor analyses and internal reliability analyses will demonstrate that the properties of the measures among a diverse sample will resemble the psychometric properties of the instruments as demonstrated in the literature. However, because the scales were developed using primarily heterosexual samples and heterosexuality of the samples was presumed, some items may not represent the experiences of a more diverse sample of participants. Thus, exploratory factor analyses will be utilized over confirmatory analyses so that any items that do not fit into the model can be further explored.
The second aim of this research is to examine the relationship between interpersonal relationship satisfaction and love styles, adult attachment styles, and approaches to sexual relationships. The literature would suggest that Eros and Agape love styles will be positively associated and Ludus will be negatively associated with relationship satisfaction. Also, it is expected that lower scores on attachment anxiety and avoidance will be associated with higher relationship satisfaction. Given the personal attributes that communal versus exchange orientations to relationships espouse, it is expected that communal approaches to sexual relationships will be positively associated with relationship satisfaction and exchange approaches to sexual relationships will be negatively associated with relationship satisfaction. In considering the relationship between love styles, approaches to sexual relationships, attachment styles, and relationship satisfaction, this study aims to determine the relative contribution of love and attachment styles to relationship satisfaction among individuals of diverse sexual orientations and gender identities. In other words, an answer to the following question is sought: Are love and attachment styles associated with relationship satisfaction and, if so, do these variables operate in the same way for males and females, across a continuum of sexual orientation and gender identity?

It is also anticipated that certain demographic variables have the potential to influence the answer to these questions. For example, the literature has demonstrated that culture, genetic sex, age, and sexual exclusivity may be related to differences in love styles and relationship satisfaction as previously noted. As a result, differences in demographic variables will be explored due to the potentially confounding effects on relationship satisfaction.
CHAPTER 2: METHODOLOGY

Recruitment

Participants were recruited via online advertisements posted using a variety of online mechanisms including North American and English European blogs, classified advertising, forum posts, social networking sites, LISTSERVs, and so on. The intention was to make the research both timely and relevant such that a large cross section of straight, gay/lesbian, bisexual and transgender individuals across a large geographic area could be targeted for participation. Of particular concern to this study was the effective recruitment of individuals in the sexual orientation and gender minority groups. Thus, online recruitment was utilized because, as Rosser, Oakes, Bockting, and Miner (2007) argued, the Internet provides access to significant numbers of sexual orientation and gender minority people, who tend to be drawn together through this media by virtue of their common identity and interests.

Participants were recruited from a wide variety of primarily North American and English European Internet sources to ensure heterogeneity of the sample in terms of age, gender, sexual orientation, socio-economic status, education, and so on. The intent was to obtain a broad-spectrum sample in order to increase the potential generalizability of the results. According to Birnbaum (2000), online sampling and data collection is practical, timely, cost effective, and tends to result in more representative samples without sacrificing (and perhaps even enhancing) psychometric properties. Similarly, Gossling, Vazire, Srivastava, and John (2004) have shown that online samples have the potential to be quite diverse with respect to a number of variables, including age, sex, socioeconomic status and geography. While recruitment from the Internet has the potential to result in increased diversity compared with samples acquired by other methods, some authors have identified challenges in recruiting diverse samples from the Internet in terms
of income and race. For example, McConnaughey, Everette, Reynolds, and Lader (1999) found that urban households with incomes of greater than $75,000 were more than twenty times more likely to have access to the Internet than rural households at the lowest incomes and nine times as likely to have a computer at home. These authors also found that Caucasians were more likely to have access to the Internet from any location than Blacks, Hispanics, Asian/Pacific Islanders. Black and Hispanic households were about 67% less likely than households of Asian/Pacific Islander descent to have Internet access and 60% less likely than Caucasian households (McConnaughey et al., 1999). As a result of this tendency for reduced access to the Internet for certain racial groups, targeted efforts to increase the diversity of the sample were undertaken, such as seeking racial minority LGBTTIQ2SA groups and other groups geared to various racial minorities.

Sexual orientation and gender minority sub-samples were first targeted for recruitment via online advertisements specifically targeting individuals from the various sexual orientation and gender minority groups, including LGBTQ-oriented blogs, classified advertising, forum posts, social networking sites, and email LISTSERVs relating to community/advocacy/news organizations geared to the LGBTQ community (e.g., Bisexual Network, EGALE Canada, PFLAG, LGBT Parenting Network). Permission was sought from the owners/moderators of such online mechanisms, who were contacted via email and asked to post the advertisement. When possible, advertisements were posted directly to websites. A copy of a sample email and advertisement is included in Appendix C.

Given the small relative size of the transgender and transsexual population, it was anticipated that these groups would be more difficult to recruit for study participation. To ensure that individuals from these groups were adequately represented in the study, transgender
advocacy groups (e.g., National Center for Transgender Equality, National Transgender Advocacy Coalition, specific www.meetup.com and Facebook groups/pages geared to the trans community) were contacted and permission was sought to announce the study. Due to anticipation that these groups may be more reluctant to provide access to their members, a detailed letter was provided to aid in their decisions to provide assistance. The letters included a copy of the advertisement as well as a copy of the informed consent letter (please see Appendix D). Permission was sought to post the recruitment advertisement electronically on the advocacy groups’ website and/or LISTSERV. When possible, advertisements were posted directly to websites. For those websites that required administrative permission for posting the study (i.e., some trans-oriented and/or LGBTQ-oriented organizations), the requests were positively received and no concerns were raised.

Participants were also recruited by posting advertisements online using a variety of online mechanisms that did not specifically target the LGBTQ community (e.g., various groups on meetup.com, Canadian Psychological Association research portal website, Facebook, Social Psychology Network, Craig’s List website) with the intention of recruiting primarily heterosexual men and women; however, additional participants from the various sexual and gender minority groups may have also come across the advertisement. Permission to post advertisements was sought by contacting owners of various online mechanisms that were not specifically LGBTQ-oriented, including blogs, classified advertising, forum posts and social networking sites (please see Appendix E) or advertisements were posted directly to websites when possible. Requests to post these advertisements were also positively received. A list containing online recruitment mechanisms is presented in Appendix F.
Procedure

Individuals interested in participating in the study were directed from posted online advertisements to the study website (www.qualtrics.com) by way of a hyperlink. The website prompted participants to first confirm that they were over the age of 18 and that they have dated, been in love, been sexually active and/or been involved in a romantic relationship(s) at some point in their life. If participants did not meet these criteria, they were unable to proceed with the survey, and were redirected to a letter providing an explanation and thanking them for their interest. However, all participants met inclusion criteria and proceeded to the online survey.

Once eligibility was confirmed, participants were directed to an Introduction Page (see Appendix G). To thank participants and provide some incentive to complete the study questionnaires, participants had the opportunity to receive their love and attachment style scores by contacting the researcher via telephone or email and identifying their data using a unique code. Approximately 25% of the final sample did so. No other compensation or incentives were provided. Participants were asked to retain the consent form in case they later wished to withdraw their data. Once participants read the letter, they were prompted to click on a button indicating their consent and were then directed to the study measures.

Following the introduction page, participants were led through a battery of five self-report measures: (1) a demographic questionnaire designed by the researcher (see Appendix H); (2) the Love Attitudes Scale: Short Form (LAS-SF; see Appendix I); (3) the Experiences in Close Relationships – Relationship Structures Questionnaire (ECR-RS; see Appendix J); (4) the Sexual Relationship Scale (SRS; see Appendix K); and (5) the Relationship Assessment Scale (RAS; see Appendix L). These measures are described in the Measures section below. In terms of ordering, the demographic questionnaire always followed the introduction page; however, to
counterbalance the ordering of questionnaires across participants, the remaining scales were presented one-by-one in random order.

Following completion of the battery of questionnaires, participants were directed to a final page that thanked them for their participation in the study. They were also reminded that they could contact the researcher by email or telephone to obtain individualized feedback via email regarding their love and attachment style results. One of the advantages of conducting this type of research online is that it is possible to provide participants with this type of feedback, which provides an incentive to participate (Fraley, 2004).

Measures

Demographic information

Demographic information was collected with items designed by the investigator (see Appendix H) to gather information on participant characteristics (e.g., age, race, education, assumed gender at birth, current gender identity, sexual orientation) and other relationship factors (e.g., whether the participant has ever been in love, current relationship status, living arrangements, sexual exclusivity). This questionnaire was utilized to assign participants into groups based on gender identity, referencing the subject, and sexuality groups, referencing the preferred love object(s) (e.g., attracted to females, attracted to males, bisexual, pansexual, queer, unsure/questioning). A final question prompted each participant to create their own unique code that they could use to obtain an individualized love and attachment style report or to withdraw their data from the study.

With respect to gender, participants were classified into the following groups, based on their responses to the demographic questionnaire: cisgender female, cisgender male, intersex,
transmasculine spectrum (e.g., genetic females who endorsed being genderqueer, transgender, transsexual, FTM, etc.), and transfeminine spectrum (e.g., genetic males who endorsed being genderqueer, transgender, transsexual, MTF, etc.). In terms of sexual orientation, binary specifiers of sexual orientation (e.g., use of the term lesbian refers both to the gender of the subject as well as object of attraction) were used in various ways, particularly among the trans-identified participants. Some trans participants referenced their genetic sex whereas others referenced their current gender identity when designating their sexual orientation. For example, among transfeminine participants attracted to women, some of these participants self-identified as lesbian and others self-identified as heterosexual. To reduce confusion and ensure uniformity, data pertaining to sexual orientation of heterosexual, gay/homosexual, and lesbian participants were recoded to identify each participant’s preferred object of attraction without attributing a sex assignment or gender identity to the subject; namely, attracted to females and attracted to males. Endorsements of bisexual, pansexual/queer, unsure/questioning did not make any such assignations to the subject and therefore did not require recoding. In sum, sexual orientation was delineated into the following categories: attracted to females, attracted to males, bisexual, pansexual/queer, unsure/questioning, and other.

**Intimate relationship factors: Love, attachment and sexuality**

**Love Attitudes Scale: Short Form. (LAS-SF; Hendrick, Hendrick, et al., 1998).**

The LAS-SF is a 24-item self-report questionnaire that measures Lee’s six love styles (see Appendix I). Participants rate each item using a five-point Likert type format, with responses ranging from *strongly agree* (4) to *strongly disagree* (0). The LAS-SF is comprised of six subscales, with each subscale corresponding to one of the six love styles (Eros, Ludus, Storge, Mania, Pragma and Agape). Levy and Davis (1988) summarized Hendrick and
Hendrick’s (1986) findings (for which no reference to sexual orientation and gender identity are explicitly provided, yet the authors assume consists of a heterosexual cisgender population), reported that alpha coefficients for the long-version of the measure ranged from the .60’s to the .80’s, with similar ranges for test-retest reliability. The six factors of the short form (LAS-SF) have demonstrated better internal consistency with alphas ranging from .75 to .88 (Fischer & Corcoran, 2007). The LAS-SF has also demonstrated good seven-week stability, with test-retest correlations ranging from .70 to .82 (Fischer & Corcoran, 2007). The LAS-SF was selected for this study because it has been shown to have better psychometric properties than the original scale (Hendrick, Hendrick, et al., 1998) and because a brief love style scale was needed to minimize the amount of time required by participants. The measure takes approximately five to ten minutes to complete. For the purposes of the present study, participants were asked to rate the extent to which each of four statements within each subscale described their attitudes or behaviours as they related to a specific love relationship (their current or most recent primary dating or partnered/marital relationship). An average of each of the four items per subscale was taken, resulting in each participant receiving a score ranging from 0 to 4 for each of the six love styles. No specific cutoffs have been established for the LAS-SF; rather, higher subscale scores indicate greater endorsement of a particular love style or set of love styles.

**Experiences in Close Relationships – Relationship Structures. (ECR-RS; Fraley et al., 2011).**

The ECR-RS is a nine-item contextual self-report measure of adult attachment (see Appendix J). It is designed assess anxiety and avoidance across several distinct relationships, such as relationships with parents, partners, and friends, or it can be used as a relatively short measure for investigators who wish to target specific relationships (Fraley et al., 2011).
Participants are asked to rate the extent to which they agree or disagree with statements about how they relate to others on a seven-point Likert scale (i.e., 7 = strongly disagree; 1 = strongly agree, with some items reverse-scored). The ECR-RS is a modification of the 36-item Experiences in Close Relationships – Revised (ECR-R) Questionnaire, a self-report measure that does not precisely specify the target relationship. The ECR-R was constructed via factor analysis of homologous clusters of major attachment-related items from the literature followed by item response theory analysis. The test authors selected those items with the highest discrimination values, which demonstrated very high test-retest correlations on simulated reliability assessment. The ECR-R has shown good reliability and validity (Sibley, Fischer, & Liu, 2005; Sibley & Liu, 2004), with internal consistency greater than .90 for the two ECR-R scales (Fraley et al., 2000).

Similar to the ECR-R, the ECR-RS yields two relatively orthogonal underlying dimensions: attachment-related anxiety and attachment-related avoidance, with higher subscale scores representing higher attachment anxiety and avoidance respectively. One advantage to using the ECR-RS is that it has been validated using an Internet sample of over 210,000 individuals who completed the measure online. The ECR-RS demonstrated strong reliability with this sample, with a structure similar to other well-established measures, such as the ECR-R (Fraley et al., 2011). Fraley et al. (2011) found that the 30-day test-retest reliability of the individual scales were approximately .65 for the domain of romantic relationships, including individuals who experienced a breakup during that time period. Alpha coefficients were .83 for the anxiety subscale and .81 for the avoidance subscale among romantic partners (Fraley et al., 2011). Although this is lower than the typical ECR-R alpha coefficients, the internal reliability for the short scale is still above the acceptable range. The ECR-RS was selected for this study due to its brevity, its good psychometric properties, and because it has been shown that relationship-specific measures of attachment generally predict intra- and interpersonal outcomes.
(i.e., relationship satisfaction) better than broader attachment measures (Fraley et al., 2011). The measure takes approximately three to five minutes to complete. In the present study, participants were asked to respond to the questions with their current or most recent primary dating or partnered/marital relationship in mind. The Attachment Avoidance subscale score consisted of an average of four scores from items 1, 2 3, and 4, which are all positively worded and reverse scored. The Attachment Anxiety subscale score consisted of an average of three scores from items 7, 8, and 9. Thus, each participant received a score on Attachment Avoidance and Attachment Anxiety, each ranging from 1 to 7. In general, scores less than 4 for both attachment anxiety and avoidance are considered to represent secure attachment, although the current study involved using the continuous subscale scores.

**Sexual Relationship Scale (SRS; Hughes & Snell, 1990).**

The SRS is a 24-item self-report measure of approaches to sexual relationships, with responses rated using a five-point Likert format (i.e., 0 = *not at all characteristic of me*; 4 = *very characteristic of me*) yielding two dimensions: Communal Orientation and Exchange Orientation (see Appendix K). The SRS was based on the Communal Orientation Scale developed by Clark et al. (1987) and the Exchange Orientation Scale developed by Clark et al. (1989), and was intended to represent an extension of their ideas. Among presumed cisgender heterosexual men and women, factor analyses indicated a two-factor structure for female participants creating subscales representing sexual communion and sexual exchange; however, the results for males were unclear and were attributed to a small sample size (Hughes & Snell, 1990). Cronbach alpha coefficients for each gender were .77 for males and .79 for females for the Sexual Communion subscale and .59 for males and .67 for females for the Sexual Exchange subscale (Hughes & Snell, 1990). Although this scale’s psychometric properties among cisgender heterosexual adults
reported by the original authors are somewhat questionable (particularly among male adults), the measure was included in the current research because, (a) it is believed that the measure has promise from a psychometric standpoint; and (b) the measure is based on strong theoretical linkages to Blau’s (1964) exchange theory of love, Clarke and Mills’ (1979) exchange and communal approaches to relationships, and represented an interesting attempt at extending these theories to sexual relationships. This measure takes approximately five to ten minutes to complete. For the present study, participants were asked to respond with their current or most recent primary dating or partnered/marital relationship in mind. Each participant received a Communal Orientation subscale score by summing items 2, 6, 8, 10, 12, 14, 16, and 18 (items 6, 8, 10, and 18 are negatively worded and were reverse scored). Each participant also received an Exchange Orientation subscale score by summing items 1, 3, 4, 9, 13, 15, 21, and 24. Each subscale score ranged from 0 to 32. No cutoffs have been established for the subscale scores on this measure.

**Relationship Satisfaction**

**Relationship Assessment Scale (RAS; Hendrick, Dicke, et al., 1998).**

The RAS is a seven-item self-report single factor measure of relationship satisfaction with a reported mean inter-item correlation of .49 and alpha of .86 (Hendrick, Dicke, et al., 1998). The authors further noted that the scale has a correlation of .80 with the full Dyadic Adjustment Scale (DAS: Spanier, 1976). Hendrick, Dicke, et al. (1998) indicated that the RAS is useful because it is brief, has been shown to have good internal reliability, and is an appropriate measure for the wide range of relationships that currently form the subject of modern day research. This measure contains seven items in which the participant is asked to rate on a seven-point Likert scale the extent to which they are satisfied with various aspects of their relationship,
including how well their needs are met, how the relationship compares to others, regrets about
the relationship, whether expectations have been met, love for their partner and the extent of
problems in the relationship (i.e., 1 = not at all; 7 = extremely). Two items are negatively worded
and reverse scored. Dinkel and Balck (2005) indicated that occasionally authors have used the
summary score; however standard procedure is to compute a mean score. Hendrick, Dicke, et al.
(1998) argued that the RAS is desirable for both clinical and research uses. Scores over 4.0
indicate non-distressed partners, with scores closer to 3.5 for men and between 3.5 and 3.0 for
women indicating greater relationship distress/dissatisfaction (Hendrick, Dicke, et al., 1998). For
the present study, participants were asked to respond with their current or most recent primary
dating or partnered/marital relationship in mind. Items 4 and 7 are negatively worded and were
reverse scored. Each participant received an average score of all items, yielding subscale scores
ranging from 1 to 7.

**Sample Selection**

Participants were recruited and participated via the Internet from January through August
2012. In total, there were 1,374 hits to the survey website and 1,315 participants provided
consent to participate. However, 242 of these did not continue and were deleted from the dataset.
Individuals indicating that they had taken the survey before (n = 9) were also discarded to
eliminate potential duplicate responses, resulting in a final sample of 1,064.

**Missing Data**

Prior to examining descriptive statistics for the sample, preliminary analyses were
conducted to explore missing data. For calculating subscale scores, if a participant had missing
data for less than 25% of the items in a scale, then the total score was prorated (using a mean
subscale substitution) based on the available data. Less than 1% of missing data could be prorated for each subscale. Regarding the LAS-SF, proration occurred for one of four items on each of the following subscales: Eros ($n = 1$), Ludus ($n = 9$), Storge ($n = 5$), Pragma ($n = 4$), and Mania ($n = 3$). No items required proration on Agape. Regarding the ECR-RS, proration occurred on the Avoidance subscale ($n = 1$), but not on the Anxiety subscale. With respect to the SRS, proration occurred on the Exchange subscale for one item for eight participants and two items for two participants, as well as one item for one participant and two items for two participants. No proration was possible for any items on the Communal subscale. On the RAS, proration occurred for one item each for five participants.

After the prorated scores were established, the overall completion rates for the sample were examined and three groups of participants were identified: participants who completed the demographic questionnaires and all independent and dependent measures ($n = 870$; 82% of the sample), participants who completed the demographic questions and some of the other measures ($n = 89$; 8% of the total sample), and those who completed the demographic questionnaires only ($n = 105$; 10% of participants).

To better understand the reasons for participant non-completion, a series of comparisons were conducted to examine differences between the group with complete data ($n = 870$) and the group who completed the demographic measures only ($n = 105$). Chi-square tests of independence were used for categorical demographic variables and independent-samples t-tests were used for continuous demographic variables. There were no significant differences between the two groups in terms of age, length of most recent relationship, and the number of times participants reported being “in love”. In addition, there were no significant differences in terms of geographic location, gender identity, genetic sex, sexual orientation, income, race, ethnicity,
marital status, sexual exclusivity with most recent partner, or living arrangements with respect to their most recent partner. The two groups did differ in level of education and partner involvement. Specifically, those who completed demographics and all subscales tended to be more educated ($p < .01$), were more likely to be involved emotionally and sexually with their most recent partner ($p < .01$), and were more likely to endorse currently being in love ($p < .01$). Following these analyses, those who completed only the demographic items were removed from the dataset.

Next, a series of independent samples t-tests was conducted to compare those who completed demographic questions plus some, but not all, of the primary measures ($n = 89, 8\%$) and those who completed demographics measures and all subscales ($n = 870, 82\%$). These analyses yielded no significant differences between groups in terms of length of most recent relationship and the number of times in love. Those who completed demographics only tended to be younger ($M = 30.84, SD = 12.51$) than those with complete data ($M = 35.53, SD = 13.00$), $t(956) = 3.25 (p < .001)$. Chi-square tests of independence comparing the same two groups revealed no significant differences in terms of geographic location, genetic sex, sexual orientation, income, educational attainment, race, ethnicity, sexual exclusivity with most recent partner, or living arrangements with respect to their most recent partner. The two groups did differ on gender identity, wherein those who completed demographic items and all subscales were more likely to be cisgender females (48\%) and less likely to be cisgender males (27\%) ($p < .05$). Those who completed the demographic items and all other variables were more likely to be involved in a committed relationship (i.e., married, living common law, or dating; 74\%) compared to being single and not dating (26\%) ($p < .001$), and were more likely to be both emotionally and sexually involved with their most recent partner (90\%; $p < .01$) and endorse currently being in love (61\%; $p < .001$).
The next step involved handling missing subscale scores on the primary variables of interest (i.e., relationship satisfaction, love styles, attachment styles, and approaches to sexual relationships) for the group of participants who completed the demographic items but only some subscales and not others in terms of the primary variables of interest. A decision was made to retain those participants in the dataset who had no more than 6 of the 11 subscale scores missing (no more than 50% of subscale scores missing; \( n = 47 \) or 4% of the sample) and to discard data for participants missing 7 or more of the 11 subscale scores (\( n = 42 \)). This cut-point was chosen in line with Graham’s (2009) suggestion that when 5% of a sample contain no more than 50% missing values that multiple imputation results in a negligible loss of statistical power (e.g., less than 1%). Imputation of missing values (when the proportion of missing data is small) has been increasingly used in research because it “has the power to dramatically reduce bias and increase statistical power relative to crude approaches of case wise deletion” (Baguley, 2012, p. 29). For the purpose of maximizing data used in the analyses addressing the main research questions for this study, imputations were performed for missing subscale scores using a regression method where all available information were used as predictors and the variables with missing data were used as outcomes. The imputation was repeated five times and the pooled imputed dataset was created by averaging the five imputed datasets. This pooled dataset with complete data for 917 participants was used in further analyses. Therefore, the final sample size used for this study is \( N = 917 \).

**Participants**

The final sample contained 917 participants. The majority of participants were cisgender females (\( n = 430; \) 46.89%), followed by cisgender males (\( n = 253; \) 27.59%), individuals whose
endorsements indicated they were either in the transmasculine spectrum \( (n = 117; 12.90\%) \) or the transfeminine spectrum \( (n = 107; 11.80\%) \), and intersex \( (n = 10; 1.09\%) \).

Participants ranged in age from 18 to 79 years \( (M = 35.22, SD = 12.99) \). The majority of participants had received undergraduate or graduate degrees \( (56.2\%) \) or received some post-secondary or college education \( (36.5\%) \). The majority of participants were located in the United States \( (51.8\%) \), with Canada being the second-most represented country \( (34.5\%) \). The remainder of participants reported residence in various European countries \( (7.9\%) \), Australia \( (2.4\%) \), and other countries \( (3.5\%) \). In terms of race, the majority identified their racial background as White/Caucasian \( (75\%) \), with a small percentage of participants self-identifying as Mixed Race \( (8.7\%) \), Black \( (4.3\%) \), Asian \( (3.9\%) \), South Asian \( (2.8\%) \), Hispanic \( (2.6\%) \), Aboriginal/Native \( (0.7\%) \), and “other” \( (1.8\%) \).

In terms of relationship variables, most respondents \( (72.9\%) \) indicated that they were in a relationship; 22.1% of participants reported that they were married, 21.92% were in a common-law relationship, and 28.9% were dating or in a relationship. The remainder indicated that they were single and not dating \( (27\%) \) or preferred not to specify \( (7.9\%) \). In reference to their most recent relationship, the relationship length ranged from 7 days to 47 years \( (M = 6.16 \text{ years}, SD = 8.37 \text{ years}) \). The pattern of endorsements was such that the majority of relationships tended to be fairly short in duration (i.e., 90% were between 1 week up to 4 years); however, in each of the three groups were extreme scores reaching 10 or more years in relationship \( (4\%) \). The number of times in love ranged from 0 to 30 \( (M = 3.28, SD = 2.97) \), with the majority of participants having been in love anywhere from zero to seven times \( (94\%) \). Living arrangements were almost evenly split between living with a partner \( (47.9\%) \) and not living with a partner \( (41.2\%) \), with the remainder preferring not to respond. The majority of participants reported being both
emotionally and sexually involved with their most recent partner (89.1%). The majority of participants (59.7%) endorsed that they were in love at the time that they took part in the study, with the remainder being either unsure (15.3%) or not in love (25%).

Using a subset of 907 participants (excluding intersex participants due to small sample size), a cross-tabulation of gender identity by object of attraction resulted in 28 cells. Object of attraction is a binary specifier of sexual orientation targeting the love object, with participants categorized into the following groups: attracted to females, attracted to males, bisexual, pansexual/queer, unsure/questioning, and “other” (i.e., endorsement of asexuality, autosexuality, or transsensual). Gender identity was classified as follows: cisgender female, cisgender male, transmasculine spectrum (i.e., female-to-male transsexual/transgender, genetic females endorsing queer or two-spirit in response to the demographic question about gender identity), and transfeminine spectrum (i.e., male-to-female transsexual/transgender, genetic males endorsing queer or two-spirit in response to the demographic question about gender identity). The distribution of participants within each of these cells can be seen in Table 1.
<table>
<thead>
<tr>
<th>Gender Identity</th>
<th>Attracted to F</th>
<th>Attracted to M</th>
<th>Bisexual</th>
<th>Pansexual/Queer</th>
<th>Unsure/Quest.</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cis F</td>
<td>121 (13.34%)</td>
<td>139 (15.33%)</td>
<td>91 (10.03%)</td>
<td>67 (7.39%)</td>
<td>8 (0.88%)</td>
<td>4 (0.44%)</td>
<td>430 (47.41%)</td>
</tr>
<tr>
<td>Cis M</td>
<td>75 (8.27%)</td>
<td>84 (9.27%)</td>
<td>71 (7.83%)</td>
<td>19 (2.09%)</td>
<td>1 (0.11%)</td>
<td>3 (0.33%)</td>
<td>253 (27.89%)</td>
</tr>
<tr>
<td>Trans M Spec</td>
<td>17 (1.87%)</td>
<td>2 (0.22%)</td>
<td>11 (1.21%)</td>
<td>85 (9.37%)</td>
<td>1 (0.11%)</td>
<td>1 (0.11%)</td>
<td>117 (12.90%)</td>
</tr>
<tr>
<td>Trans F Spec</td>
<td>35 (3.86%)</td>
<td>4 (0.44%)</td>
<td>28 (3.09%)</td>
<td>28 (3.09%)</td>
<td>5 (0.55%)</td>
<td>7 (0.77%)</td>
<td>107 (11.80%)</td>
</tr>
<tr>
<td>Total</td>
<td>248 (27.34%)</td>
<td>229 (25.25%)</td>
<td>201 (22.16%)</td>
<td>199 (21.94%)</td>
<td>15 (1.65%)</td>
<td>15 (1.65%)</td>
<td>907 (100%)</td>
</tr>
</tbody>
</table>

*Note.* Object of Attraction is a binary specifier of sexual orientation, targeting the love object: Attracted to F = Attracted to females; Attracted to M = Attracted to males; Unsure/Quest. = Unsure or questioning; Other = Endorsement of asexuality, autosexuality, or transsensual (i.e., attracted to transgender/transsexual individuals). Gender Identity: Cis F = Cisgender female; Cis M = Cisgender male; Trans M Spec = Transmasculine spectrum (i.e., female-to-male transsexual/transgender, genetic females endorsing queer or two-spirit); Trans F Spec = Transfeminine Spectrum (i.e., male-to-female transsexual/transgender, genetic males endorsing queer or two-spirit). Ten participants were removed due to the small number of intersex participants.
As displayed in Table 1, approximately 75% (n = 683) of the participants indicated that they identified as cisgender and about 25% (n = 224) indicated a gender identity within a transgender spectrum (i.e., genderqueer, gender identity of two-spirit, transgender or transsexual). Almost half of the participants were cisgender females (n = 430; 47%). The distribution of the remaining participants included 28% (n = 253) cisgender males, 13% (n = 117) transmasculine spectrum, and 12% (n = 107) transfeminine spectrum. In terms of participants’ self-identified sexual orientation, 50% (n = 113) of the trans-spectrum participants (73% of transmasculine and 26% of transfeminine participants) endorsed being pansexual or queer as compared to only 13% (n = 86) of the cisgender participants (8% of cisgender males and 16% of cisgender females). In terms of primary attraction to males, primary attraction to females and endorsements indicating a bisexual sexual orientation, certain cells contained small numbers of trans-spectrum participants. For example, only 3% (n = 6) of transgender participants in this study endorsed a primary attraction to men (2% of transmasculine and 4% of transfeminine participants). Also, although 17% (n = 39) of trans-spectrum participants endorsed bisexual to denote their sexual orientation (compared with 24% or n = 162 cisgender participants), of this only 9% (n = 11) of transmasculine participants endorsed this term as compared to 26% (n = 28) of transfeminine participants. Within each of the categories of cisgender and trans-spectrum males and females, less than 1% endorsed either unsure/questioning or other with respect to sexual orientation.

This study originally sought to obtain sufficient participants to conduct analyses across various sexual orientation groups among the trans-spectrum participants. Unfortunately the data was limited in creating groups to reflect heterosexual versus sexual minority trans-spectrum participants. Because, in some cases, the distribution of the data yielded small sample sizes,
particularly among the transgender spectrum participants across the object of attraction (e.g., transmasculine spectrum with primary attraction to men, \( n = 2 \); transfeminine spectrum with primary attraction to men, \( n = 4 \); etc.) a decision was made to collapse the cells and categorize participants into three groups (henceforth referred to as \( \textit{groups} \)). The term \textit{minority} is used to refer to those who are either a minority by way of their sexual orientation or gender identity as compared with the cisgender heterosexual majority. The three groups are as follows: (1) Cisgender Heterosexual Majority (i.e., cisgender females attracted to males, cisgender males attracted to females); (2) Cisgender Sexual Minority (i.e., cisgender non-heterosexual participants, including same-sex attracted, bisexual, pansexual/queer, unsure/questioning, and other, which included those who endorsed their sexual orientation as asexual, autosexual or transsensual); and (3) Trans-Spectrum Minority (i.e., all transmasculine and transfeminine spectrum participants of all sexual orientations). Thus, due to small sample sizes in some sexual orientation categories among the trans-spectrum participants, it was not possible to further categorize this group by heterosexual versus sexual minority categories as was possible with the cisgender participants. The distribution of participants within these groups can be found in Table 2.
Table 2

Frequencies (Percentages) for Sexual Orientation Minority and Gender Identity Groups (N = 907)

<table>
<thead>
<tr>
<th>Groups</th>
<th>Frequencies (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisgender Heterosexual Majority</td>
<td></td>
</tr>
<tr>
<td>Cis F Attracted to M</td>
<td>139</td>
</tr>
<tr>
<td>Cis M Attracted to F</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>214 (23.59%)</td>
</tr>
<tr>
<td>Cisgender Sexual Minority</td>
<td></td>
</tr>
<tr>
<td>Cis F Attracted to F</td>
<td>121</td>
</tr>
<tr>
<td>Cis M Attracted to M</td>
<td>84</td>
</tr>
<tr>
<td>Cis F Bisexual</td>
<td>91</td>
</tr>
<tr>
<td>Cis M Bisexual</td>
<td>71</td>
</tr>
<tr>
<td>Cis F Pansexual/Queer</td>
<td>67</td>
</tr>
<tr>
<td>Cis M Pansexual/Queer</td>
<td>19</td>
</tr>
<tr>
<td>Cis F Unsure/Quest.</td>
<td>8</td>
</tr>
<tr>
<td>Cis M Unsure/Quest.</td>
<td>1</td>
</tr>
<tr>
<td>Cis F Other</td>
<td>4</td>
</tr>
<tr>
<td>Cis M Other</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>469 (51.71%)</td>
</tr>
<tr>
<td>Trans-Spectrum Minority</td>
<td></td>
</tr>
<tr>
<td>Transmasculine Spectrum</td>
<td>117</td>
</tr>
<tr>
<td>Transfeminine Spectrum</td>
<td>107</td>
</tr>
<tr>
<td>Total</td>
<td>224 (24.70%)</td>
</tr>
</tbody>
</table>

Note. Cis F = Cisgender female; Cis M = Cisgender male; Attracted to F = Attracted to females; Attracted to M = Attracted to males; Unsure/Quest. = Unsure or questioning; Other = Endorsement of asexuality, autosexuality, or transsensual (i.e., attracted to transgender/transsexual individuals); Transmasculine Spectrum includes female-to-male transsexual/transgender, genetic females endorsing queer or two-spirit with respect to their gender identity; Transfeminine Spectrum includes male-to-female transsexual/transgender, genetic males endorsing queer or two-spirit with respect to their gender identity. Ten participants were removed due to the small number of intersex participants.

As an alternative to the three-group categorization displayed in Table 2, one option that was considered was to re-code the sexual orientation variable in order to achieve a four-group structure (i.e., a two-by-two structure consisting of cisgender heterosexual, cisgender sexual minority, trans-spectrum heterosexual, and trans-spectrum sexual minority); however, this would have required relying upon behavioural data for determining sexual orientation (i.e., see questions 6, 7, and 8 of Appendix H) and may not have reflected or honored participants’ self-
identified sexual orientation. In addition, the behavioural data was limited and this approach may have resulted in an invalid determination of sexual orientation and, as a result, was not considered methodologically sound. As a result of these limitations, the trans-spectrum group was collapsed across sexual orientation categories and it was not possible to conduct analyses in terms of the trans-spectrum participants’ sexual orientations separately. However, despite this limitation, this research makes an important contribution in that it is the first to examine love and attachment style predictors of relationship satisfaction among a community sample of trans-spectrum participants. It is important to note that the decision to collapse the sexual orientation categories such that the trans-spectrum participants were included in a single group was not intended to reflect or endorse an idea that trans-spectrum individuals are homogenous in terms of sexual orientation or that the author of this study is confounding gender identity and sexual orientation in the analyses. Rather than attempting to impose a four-group structure that the data would not support, the three-group structure is a reflection of limitations of the data.

Data Screening

Prior to running the main statistical analyses in this study, the distribution of all continuous variables for the three groups (i.e., cisgender heterosexual, cisgender sexual minority, and trans-spectrum minority) was investigated using boxplots to identify potential outliers. The nature of the online survey was such that the majority of items were forced-choice; however, for some items such as age, relationship length, and number of times in love, participants were required to freely enter numbers as responses and it was feasible that impossible values could have been submitted (e.g., for age, it is possible that any number up to 999 could have been entered). When outliers were detected on these variables, the values were evaluated to determine whether they were valid or data errors (i.e., impossible values). Few extreme values were found
with respect to age, relationship length, and number of times in love. None were considered for removal since none of this data represented impossible values and any outliers were equally distributed between all three groups.

In terms of the love styles, the distribution of Eros scores was negatively skewed for all three groups, meaning that most participants had high ratings with respect to erotic styles of loving in their current or most recent romantic relationship. There were few outliers and these were not extreme and therefore not considered for removal. The distribution of Ludus scores was positively skewed (meaning most participants tended not to endorse game-playing styles of loving), with few non-extreme outliers that were not considered for removal. In terms of Pragma, the distribution was positively skewed, particularly among the cisgender sexual minorities and trans-spectrum minorities. Thus, overall, participants tended not to endorse highly pragmatic “shopping list” styles of loving and this was even more pronounced among the minority participants. Extreme scores were still within the range of the cisgender heterosexual group and therefore were not considered for removal. For Mania, the distribution was also positively skewed, with few non-extreme outliers in the cisgender sexual minority group which were still within the range of the majority group. Storge and Agape were normally distributed.

With respect to the attachment styles, the distribution of Attachment Anxiety was positively skewed for all three groups (meaning that most participants in the study tended to be low on Attachment Anxiety), with no extreme outliers considered for removal. Attachment Avoidance was also positively skewed among participants across all three groups, all with medians of approximately two and maximum scores (not considered outliers) at five. Extreme values were found between scores of five to seven. Because these were present across all three groupings of participants, they were not considered for removal. In sum, overall, participants
tended to be low on both Attachment Anxiety and Attachment Avoidance with some extreme values on Attachment Avoidance that were evenly distributed across all three groups.

Lastly, with respect to Relationship Satisfaction, the distribution of scores was highly negatively skewed, meaning that the majority of participants in this study tended to be highly satisfied in their current or most recent relationships. There were few extreme scores noted within all three groups and were therefore not considered for removal.

**Statistical Analyses**

In order to demonstrate the psychometric properties of the relationship measures used in this study across diverse continuums of sexual orientation and gender identity, exploratory factor analyses and internal consistency analyses were conducted. Exploratory factor analyses were chosen over confirmatory factor analyses because the latter would determine only if the data fits the pre-specified model (i.e., the factor structures of the measures as specified by the authors of the scales). The exploratory factor analysis tends to be more informative in that it allows for diagnostics of items that do not fit into the model and also provides indices to judge the fit of each item in the form of communalities and factor loadings (Field, 2013; Green & Salkind, 2011). Exploratory factor analyses were performed using the Principal Axis Factoring extraction method and an oblique Promax rotation for each of the subscales from the LAS-SF, ECR-RS, RAS, and SRS. The oblique Promax rotation was chosen for improved interpretability and to account for possible correlations between extracted factors (Field, 2011, 2013). Using Kaiser’s (1960) rule, the number of eigenvalues greater than one (1) was used as a criterion for the number of extracted factors and compared with the factor structures reported by the original authors. In terms of factor loadings, researchers typically consider factor loadings greater than .30 to be important (Field, 2011). However, Stevens (2002) stated that in very large samples,
even small loadings can be considered statistically meaningful and provides tables of critical values against which loadings can be compared by sample size. As a result of the large sample used in this study and guidelines provided by Stevens (2002), each item was attributed to a particular factor based on the highest factor loadings for each factor. Subsequently, reliability coefficients (i.e., internal consistencies, Cronbach’s alpha) for each of the three groups were calculated for each subscale of the relationship measures computed if Cronbach’s alpha for that scale was greater than 0.70.

A preliminary step prior to conducting the regression analyses was to determine if any systematic differences were present that could potentially confound the results. Chi-square tests of independence were used to examine differences across the three groups for categorical demographic variables (e.g., race, geographic location, educational attainment, and annual income) and categorical relationship variables (e.g., marital status, current relationship status, love status, sexual exclusivity). One-way analyses of variance were used to determine differences across the three groups for the continuous demographic and relationship variables (i.e., age, length of relationship, number of times in love). When homogeneity of variance was violated, a Welch test was used to determine whether significant differences were present and Dunnet’s C was used to determine the precise significant pairwise differences between groups. Indicators of strength of relationship differences in the form of Cramer’s V (for categorical variables) and eta squared ($\eta^2$; for continuous variables) were used to evaluate whether any significant findings were meaningful. Any potentially meaningful demographic variables identified were then considered for possible inclusion in the regression analysis. In terms of determining meaningful findings using Cramer’s V, the following thresholds describe the strength of association between categorical (i.e., nominal) variables: (1) .00 to .09 – negligible; (2) .10 to .19 = weak; (3) .20 to .39 = moderate; (3) .40 to .59 = relatively strong; (4) .60 to .79 =
strong; and (5) .80 to 1.00 = very strong (Glass & Hopkins, 1996; Hays, 1994; Rea & Parker, 1992). An accepted rule of thumb for interpreting eta squared is as follows: (1) below .10 = weak effect; (2) .10 to .29 = modest effect; (3) .30 to .49 = moderate effect; and (4) .50 or greater = strong effect (Cohen, 1988; Kotrlik & Williams, 2003). For the purpose of this study, given the large sample size in which the likelihood of statistical significance is high due to increased power (Cohen, 1962), moderate to strong effect sizes were considered meaningful for the purposes of determining demographic variables for consideration for inclusion in the regression analyses.

Next, examination of the bivariate correlations and magnitudes of the correlation coefficients were conducted by way of a bivariate correlation matrix to examine relationships between love and attachment styles and demographic variables identified for further exploration for possible inclusion in the regression analysis. Bivariate correlations were utilized to determine variables for entry into the regression models. If no relationship was found to relationship satisfaction, the variable was not considered for inclusion in the regression.

To allow for an examination of patterns regarding the predictors and relationship satisfaction by gender identification within each of the three groups, the groups were further subdivided by gender into six groups as follows: (1) Cisgender Heterosexual Males; (2) Cisgender Heterosexual Females; (3) Cisgender Sexual Minority Males; (4) Cisgender Sexual Minority Females; (5) Transmasculine Spectrum; and (6) Transfeminine Spectrum. As previously stated, limitations in the data prevented examination of the trans-spectrum groups by sexual orientation and therefore the trans-spectrum groups were collapsed across the various sexual orientation groupings. Multiple regression analyses were then conducted to determine the relative contribution of the predictor variables to relationship satisfaction, with separate analyses.
conducted for each of the six groups. The relative contribution of these predictors across
dimensions of sexual orientation (where possible) and gender identity were then conducted using
a hierarchical multiple regression analysis separately for each of the six subgroups.
CHAPTER 3: RESULTS

The study results are presented in three sections: instrument properties, examination of group differences, and regression analyses.

Instrument Properties

One of the primary goals of this study was to examine the factor structure of the love styles, attachment styles, relationship satisfaction, and approaches to sexual relationship scales among sexual orientation and gender identity minority groups. Given the paucity of research on the applicability of these measures to adults representing a range of sexual orientations and gender identities, exploratory factor analyses and internal consistency analyses were conducted for each of the relationship measures used in this study. The analyses were conducted using the above noted and described three groups (i.e., Cisgender Heterosexual, Cisgender Sexual Minority, Trans-Spectrum Minority). Exploratory Factor Analyses were first conducted to establish the factor structures of each of the subscales from the LAS-SF, ECR-RS, RAS and SRS. Subsequently, reliability coefficients (i.e., internal consistencies) were calculated for each subscale across the three groups.

Exploratory factor analyses were conducted using the principal axis factoring extraction method and the number of eigenvalues greater than one (1) as a criterion for the number of extracted factors. Oblique rotation (Promax) was applied to the factor solution for improved interpretability and was chosen to account for possible correlations between the extracted factors (Field, 2011, 2013). Once a factor solution was obtained for each measure, an internal consistency index (Cronbach’s alpha) was computed for the items that loaded on the same factor.
Below is a summary of the results for each scale. Full results with the tables of factor loadings are reported in Appendix M.

**Love Attitudes Scale, Short Form (LAS-SF; Hendrick, Hendrick, et al., 1998)**

Beginning with the Cisgender Heterosexual group, six factors were revealed and in combination explained 50.33% of the variance. For the Cisgender Sexual Minority group, six factors were also revealed and in combination explained 48.83% of the variance. Finally, with the Trans-Spectrum Minority group, six factors were again revealed and in combination explained 56.46% of the variance. Appendix M containing Tables M1, M2 and M3, show the factor loadings after rotation for each of the three groups. The factor loadings illustrated in these three tables indicate that the items load onto their original factors for all three groups, providing support for the original six-factor solution represented by Eros, Ludus, Storge,Pragma, Mania and Agape, consistent with the original scale.

The four items for each love style subscale were subjected to internal reliability analyses, separately for each of the three groups. Full results with Cronbach’s alphas are reported in Appendix M, Table M4. The LAS-SF demonstrated acceptable to excellent internal reliability across all three groups for the following subscales: Eros, Storge,Pragma, Mania, and Agape (Cline, 1999). Additionally, Cronbach’s alpha would not have improved by deleting any of the items on these subscales. With respect to the Ludus subscale, internal consistency was acceptable for the Trans-Spectrum Minority group (α = 0.75, n = 234), yet somewhat suboptimal with respect to the Cisgender Heterosexual (α = 0.63, n = 214) and Cisgender Sexual Minority (α = 0.69, n = 469) groups. For all three subsamples, deleting item #8 improved internal reliability to .65, .71, and .77 respectively. Thus, the Ludus subscale score for all subsequent analyses in this study contains the average of the three items #5, 6, and 7, rather than four items.
Experiences in Close Relationships – Relationship Structures (ECR-RS; Fraley et al., 2011)

For each of the three groups, two factors were revealed and in combination explained 66.87% of the variance for the Cisgender Heterosexual Majority group, 75.20% of the variance for the Cisgender Sexual Minority group, and 71.19% of the variance for the Trans-Spectrum Minority group. Appendix M, Table M5 shows the factor loadings after rotation. The items that cluster on the same components suggest that they represent a two-factor solution represented by Attachment Anxiety and Attachment Avoidance, consistent with the original scale.

The three and four items respectively for each of the Attachment Anxiety and Avoidance subscales were subjected to internal reliability analyses, separately for each of the three status subsamples. The ECR-RS demonstrated excellent internal reliability for both Attachment Anxiety (α’s ranging from .85 to .89) and Attachment Avoidance (α’s ranging from .86 to .91). Cronbach’s alpha would not have improved by deleting any of the items on either subscale. Full results with Cronbach’s alphas are included in Appendix M, Table M4.

Sexual Relationship Scale (SRS; Hughes & Snell, 1990)

For each of the three groups, a two-factor structure was not confirmed. Initially a four-factor structure was revealed for the Cisgender Sexual Minority and Trans-Spectrum Minority groups, which explained 34.23% and 35.26 % of the variance, respectively. For the Cisgender Heterosexual Majority group, a five-factor structure was revealed, which explained 40.40% of the variance across the three groups. However, in examining the items that loaded on the four and five-factor scales respectively, some of the items that were thought to represent different constructs were loading on the same factors. Next, the analysis was then re-run, enforcing a two-factor structure as proposed by the authors of the scale. For the Cisgender Sexual Minority and
Trans-Spectrum Minority groups’ communalities were below the recommended minimum of 0.30 for all but four of the sixteen items and the structure explained less than 25% of the variance with both groups. Similarly, with the Cisgender Heterosexual Majority group, communalities were below 0.30 for all but six of the sixteen items, and the structure explained 26.98% of the variance. Analyses were re-run to attempt to enforce three-, four-, and five-factor structures that similarly did not result in an improvement in the percentages of variances obtained. In sum, the two-factor structure proposed by the original authors of the scale did not hold well, neither with the cisgender heterosexual participants (which is the population the scale was originally normed on), nor with two minority groups (i.e., Cisgender Sexual Minority and Trans-Spectrum Minority groups). In addition, no other coherent factor structure could be obtained. Given that the psychometric properties of this scale did not hold for any of the three groups, the SRS was not considered for further analyses.

**Relationship Assessment Scale (RAS; Hendrick, Dicke, et al., 1998)**

For each of the three groups, one factor was revealed and in combination explained 58.07% of the variance for the Cisgender Heterosexual Majority group, 63.66% of the variance for the Cisgender Sexual Minority group, and 66.75% of the variance for the Trans-Spectrum Minority group. Appendix M, Table M6 shows the factor loadings after rotation. The analysis suggests that it represents a single factor scale of Relationship Satisfaction, consistent with the original scale.

The seven items were subjected to internal reliability analyses, separately for each of the three status subsamples. The RAS demonstrated excellent internal reliability (α’s ranging from .90 to .93). Cronbach’s alpha would not have improved by deleting any of the items on the scale. Full results with Cronbach’s alphas by groups are included in Appendix M, Table M4.
Examination of Group Differences

As a result of previous research that has identified race and geographic location as variables related to love style differences, group differences were examined to determine if any systematic differences were present that could confound the results. In addition, the literature is somewhat limited in terms of large samples of LGBTTIQQ2SA individuals drawn from the general community; thus, exploratory descriptive statistics were examined to better understand the demographic characteristics of this sample.

Differences in demographic variables between the three groups were explored to evaluate whether there were any systematic differences between groups that might affect the main analyses of this study. Single sample chi-square tests of independence were used to examine differences for categorical variables, including race, geographic location, educational attainment, and annual income. There was a significant difference between the groups in terms of race, \( \chi^2(14, N = 904) = 48.01, p < .001 \), wherein a greater proportion of the Cisgender Heterosexual Majority group were African and a greater proportion of the Cisgender Sexual Minority group were Asian. Despite the significant difference, the strength of these findings was weak, as indicated by a Cramer’s V of .16 (Cramer, 1999). There was also a significant difference between groups on geographic location, \( \chi^2(8, N = 907) = 61.27, p < .001 \). Specifically, a greater proportion of Trans-Spectrum Minority participants took part from the United States, a greater proportion of the Cisgender Sexual Minority participants took part from Canada, and a greater proportion of the Cisgender Heterosexual group participated from Europe. The overall strength of these findings was weak, as indicated by Cramer’s V of .18. In terms of education, there was a significant difference across the groups, \( \chi^2(14, N = 905) = 53.20, p < .001 \), although the strength of the relationship indicated by Cramer’s V was again weak at .17. Specifically, a greater
proportion of the Cisgender Heterosexual group endorsed having “some college or university” education than the Cisgender Sexual Minority group. With respect to income, there was a significant difference, \( \chi^2(16, N = 827) = 54.81, p < .001 \); however, the effect size indicated by Cramer’s V was weak at .18, in that a larger proportion of participants in the Cisgender Heterosexual group had an income below $20,000 compared to the Cisgender Sexual Minority group. A summary of the frequencies within each category across the three groups and further explanation of significant differences can be found in Table 3.
Table 3

*Categorical Variables: Frequencies (Percentage Within Groups) of Race, Geography, Educational Attainment, and Annual Income (N = 907)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cis Het Majority (n = 187-214)</th>
<th>Cis Sexual Minority (n = 429-469)</th>
<th>Trans Spec Minority (n = 211-224)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race (n = 904)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>143 (66.82%)</td>
<td>361 (77.14%)</td>
<td>180 (81.08%)</td>
</tr>
<tr>
<td>Mixed Race</td>
<td>20 (9.35%)</td>
<td>41 (8.76%)</td>
<td>19 (8.56%)</td>
</tr>
<tr>
<td>Black</td>
<td>18 (8.41%)</td>
<td>16 (3.42%)</td>
<td>4 (1.80%)</td>
</tr>
<tr>
<td>Asian</td>
<td>12 (5.61%)</td>
<td>20 (4.27%)</td>
<td>4 (1.80%)</td>
</tr>
<tr>
<td>South Asian</td>
<td>14 (6.54%)</td>
<td>7 (1.50%)</td>
<td>5 (2.25%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6 (2.80%)</td>
<td>14 (3.00%)</td>
<td>4 (1.80%)</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>1 (0.47%)</td>
<td>0 (0.00%)</td>
<td>4 (1.80%)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0.00%)</td>
<td>9 (1.92%)</td>
<td>2 (0.90%)</td>
</tr>
<tr>
<td>Geography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>105 (49.07%)</td>
<td>207 (44.14%)</td>
<td>158 (70.54%)</td>
</tr>
<tr>
<td>Canada</td>
<td>68 (31.78%)</td>
<td>201 (42.86%)</td>
<td>47 (20.98%)</td>
</tr>
<tr>
<td>Europe</td>
<td>27 (12.62%)</td>
<td>30 (6.40%)</td>
<td>12 (5.36%)</td>
</tr>
<tr>
<td>Australia</td>
<td>2 (0.93%)</td>
<td>15 (3.20%)</td>
<td>4 (1.79%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (5.61%)</td>
<td>16 (3.41%)</td>
<td>3 (1.34%)</td>
</tr>
<tr>
<td>Education (n = 905)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some High School</td>
<td>1 (0.47%)</td>
<td>4 (0.86%)</td>
<td>5 (2.23%)</td>
</tr>
<tr>
<td>High School Diploma</td>
<td>16 (7.48%)</td>
<td>19 (4.07%)</td>
<td>17 (7.59%)</td>
</tr>
<tr>
<td>Some College/University</td>
<td>83 (38.79%)</td>
<td>84 (17.99%)</td>
<td>49 (21.88%)</td>
</tr>
<tr>
<td>College Diploma</td>
<td>20 (9.35%)</td>
<td>62 (13.28%)</td>
<td>34 (15.18%)</td>
</tr>
<tr>
<td>Undergraduate Degree</td>
<td>43 (20.09%)</td>
<td>117 (25.05%)</td>
<td>40 (17.86%)</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>6 (2.80%)</td>
<td>14 (3.00%)</td>
<td>4 (1.79%)</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>1 (0.47%)</td>
<td>0 (0.00%)</td>
<td>4 (1.79%)</td>
</tr>
<tr>
<td>Professional Degree</td>
<td>0 (0.00%)</td>
<td>9 (1.93%)</td>
<td>2 (0.89%)</td>
</tr>
<tr>
<td>Annual Income (n = 827)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below $20,000</td>
<td>87 (46.52%)</td>
<td>112 (26.11%)</td>
<td>67 (31.75%)</td>
</tr>
<tr>
<td>$20,000 - $29,999</td>
<td>31 (16.58%)</td>
<td>47 (10.96%)</td>
<td>28 (13.27%)</td>
</tr>
<tr>
<td>$30,000 - $39,999</td>
<td>27 (14.44%)</td>
<td>44 (10.26%)</td>
<td>30 (14.22%)</td>
</tr>
<tr>
<td>$40,000 - $49,999</td>
<td>8 (4.28%)</td>
<td>36 (8.39%)</td>
<td>14 (6.64%)</td>
</tr>
<tr>
<td>$50,000 - $59,999</td>
<td>10 (5.35%)</td>
<td>49 (11.42%)</td>
<td>17 (8.06%)</td>
</tr>
<tr>
<td>$60,000 - $69,999</td>
<td>8 (4.28%)</td>
<td>36 (8.39%)</td>
<td>18 (8.53%)</td>
</tr>
<tr>
<td>$70,000 - $79,999</td>
<td>6 (3.21%)</td>
<td>23 (5.36%)</td>
<td>9 (4.27%)</td>
</tr>
<tr>
<td>$80,000 - $89,999</td>
<td>2 (1.07%)</td>
<td>22 (5.13%)</td>
<td>5 (2.37%)</td>
</tr>
<tr>
<td>$90,000 or more</td>
<td>8 (4.28%)</td>
<td>60 (13.99%)</td>
<td>23 (10.90%)</td>
</tr>
</tbody>
</table>

*Note.* Cis Het Majority = Cisgender Heterosexual Majority; Cis Sexual Minority = Cisgender Sexual Minority; Trans Spec Minority = Trans Spectrum Minority. Professional degree refers to things such as a law degree (i.e., LLB, JD) or medical degree (e.g., MD). Ranges in number of participants (n’s) by groups were provided as these varied due to missing data on these variables. Geography indicates participants’ geographic location at the time of their participation.

*ab* Values within rows that share superscripts differ from each other at $p < .001$. 

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Next, a one-way analysis of variance was planned to evaluate whether the three groups significantly differed with respect to age, number of times in love, and length of relationship, as displayed in Table 4. For all analyses in which the assumption of homogeneity of variance was violated, the Welch test was used to evaluate differences between groups. For age, there was a significant difference across groups, Welch \((2, 467.19) = 52.14, p < .001\) and follow-up tests using Dunnet’s C revealed significant differences between all three groups. Specifically, the Cisgender Heterosexual group was the youngest \((M = 28.66, SD = 10.26)\), followed by the Cisgender Sexual Minority group \((M = 35.98, SD = 12.34)\), and the Trans-Spectrum Minority group was the oldest \((M = 39.63, SD = 14.32)\). The overall strength of these findings was weak, as indicated by eta squared \(\eta^2 = .09\).

Table 4

Continuous Variables: Descriptives for Age, Number of Times in Love, and Relationship Length per Group \((N = 907)\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cis Het Majority</th>
<th>Cis Sexual Minority</th>
<th>Trans Spec Minority</th>
<th>Sig (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>Mean</td>
<td>SD</td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>28.66</td>
<td>10.26</td>
<td>18-68</td>
<td>35.98</td>
</tr>
<tr>
<td>No. in Love</td>
<td>2.50</td>
<td>2.77</td>
<td>0-25</td>
<td>3.30</td>
</tr>
<tr>
<td>Rel Length</td>
<td>54.87</td>
<td>78.86</td>
<td>.5-524</td>
<td>74.77</td>
</tr>
</tbody>
</table>

Note. Cis Het Majority = Cisgender Heterosexual Majority; Cis Sexual Minority = Cisgender Sexual Minority; Trans Spec Minority = Trans Spectrum Minority. No in Love = Number of times in love; Rel Length = Relationship length in months.  
** \(p < .01\); *** \(p < .001\).

With respect to the number of times in love, there was a significant difference across groups, Welch \((2, 442.48) = 12.94, p < .001\), and follow-up tests using Dunnet’s C revealed significant differences between all three groups. Namely, the Cisgender Heterosexual group were in love the fewest number of times \((M = 2.50, SD = 2.77)\), followed by the Cisgender Sexual Minority group \((M = 3.30, SD = 2.72)\), and the Trans-Spectrum Minority group reported the
greatest number of times in love ($M = 3.93, SD = 3.19$). The overall strength of these findings was also weak, as indicated by eta squared ($\eta^2 = .03$). Given that the participants who tended to endorse being in love the most times tended to be older and those who tended to endorse being in love the fewest number of times tended to be younger, it is possible these results may be a function of age.

Regarding length of most recent relationship, there was a significant difference across groups, Welch (2, 387.06) = 6.55, $p < .01$. Follow-up tests using Dunnet’s C revealed significant differences between all three groups such that the Cisgender Heterosexual group reported the shortest most recent relationship ($M = 54.87, SD = 78.86$), followed by the Cisgender Sexual Minority group ($M = 74.77, SD = 93.11$), and the Trans-Spectrum Minority group ($M = 91.22, SD = 128.84$). The overall strength of these findings was weak, as indicated by eta squared ($\eta^2 = .02$). Given that the participants endorsing longer relationships tended to be older and those endorsing shorter relationships tended to be younger, it is also possible these results may be a function of age.

Group differences in categorical relationship variables were examined using chi-square tests of independence, including variables pertaining to marital status, current relationship status (in current relationship – yes or no), love status (in love now – yes or no), and sexual exclusivity. No significant differences were found for current relationship or love status. For marital status, there was a significant difference across groups, $\chi^2(10, N = 907) = 19.93, p < .001$, although the strength of these findings was weak (Cramer’s $V = .11$). Specifically, a greater proportion of the Cisgender Heterosexual group reported that they were currently in a dating relationship compared to the Trans-Spectrum Minority group, who were more likely to endorse being in a partnered marital or common-law relationship. In regards to sexual exclusivity, there was a
significant difference across the three groups, $\chi^2(4, N = 809) = 45.86, p < .001$. Again, the strength of these findings was weak, as indicated by Cramer’s V of .17. Specifically, in reference to their current or most recent relationship, a greater proportion of the Cisgender Heterosexual group endorsed that the relationship was \textit{closed} (i.e., sexually exclusive), while a greater proportion of the Cisgender Sexual Minority and Trans-Spectrum Minority groups endorsed that it was \textit{open} (i.e., not sexually exclusive). A summary of the frequencies within each category and explanation of differences can be found in Table 5.

Table 5

\textit{Relationship Categorical Variables: Frequencies (Percentage Within Groups) of Marital Status, In Relationship, In Love Now, and Sexual Exclusivity (N = 907)}

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cis Het Majority $(n = 182 - 214)$</th>
<th>Cis Sexual Minority $(n = 430 - 469)$</th>
<th>Trans Spec Minority $(n = 197 - 224)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>43 (20.09%)</td>
<td>101 (21.54%)</td>
<td>56 (25.00%)</td>
</tr>
<tr>
<td>Common Law</td>
<td>34 (15.89%)</td>
<td>114 (24.31%)</td>
<td>52 (23.21%)</td>
</tr>
<tr>
<td>In a Relationship</td>
<td>80 (37.38%) a</td>
<td>133 (28.36%)</td>
<td>51 (22.77%) a</td>
</tr>
<tr>
<td>Single, Not Dating</td>
<td>50 (23.36%)</td>
<td>106 (22.60%)</td>
<td>54 (24.11%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>7 (3.27%)</td>
<td>12 (2.56%)</td>
<td>11 (4.91%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>0 (0.00%)</td>
<td>3 (0.63%)</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>In Current Relationship</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>157 (73.36%)</td>
<td>348 (74.20%)</td>
<td>159 (70.98%)</td>
</tr>
<tr>
<td>No</td>
<td>57 (26.64%)</td>
<td>121 (25.80%)</td>
<td>65 (29.02%)</td>
</tr>
<tr>
<td>In Love Now</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>126 (58.89%)</td>
<td>280 (59.83%)</td>
<td>138 (61.61%)</td>
</tr>
<tr>
<td>No</td>
<td>55 (25.70%)</td>
<td>110 (23.50%)</td>
<td>60 (26.79%)</td>
</tr>
<tr>
<td>Unsure</td>
<td>33 (15.42%)</td>
<td>78 (16.67%)</td>
<td>26 (11.61%)</td>
</tr>
<tr>
<td>Sexual Exclusivity ($n = 809$)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closed</td>
<td>158 (86.81%) b</td>
<td>265 (61.63%) b</td>
<td>120 (60.91%) b</td>
</tr>
<tr>
<td>Open</td>
<td>21 (11.54%)</td>
<td>162 (37.67%) b</td>
<td>73 (37.06%) b</td>
</tr>
<tr>
<td>Rel not sexual</td>
<td>3 (1.65%)</td>
<td>3 (0.70%)</td>
<td>4 (2.03%)</td>
</tr>
</tbody>
</table>

\textit{Note.} Cis Het Majority = Cisgender Heterosexual Majority; Cis Sexual Minority = Cisgender Sexual Minority; Trans Spec Minority = Trans Spectrum Minority. Closed = Relationship exclusive; Open = Relationship not exclusive (i.e., multiple sexual partners); Rel not sexual = Relationship of a romantic nature in the absence of sexual involvement. Ranges in number of participants (n’s) by groups were provided as these varied due to missing data on these variables.

\textit{a} Values within the row sharing this superscript differ from each other at $p < .05$; \textit{b} Values within the row that share this superscript differ from each other at $p < .001$.  

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Regression Analyses

Given past research on love styles that has identified love style differences for men and women, the three groups were further sub-divided by participants’ current gender self-identification, creating six subgroups as follows: (1) Cisgender Heterosexual Males; (2) Cisgender Heterosexual Females; (3) Cisgender Sexual Minority Males; (4) Cisgender Sexual Minority Females; (5) Transmasculine Spectrum; and (6) Transfeminine Spectrum. Subdividing in this way allowed for the possibility to examine patterns regarding the relationship between love styles, attachment styles, and relationship satisfaction by gender identification within each of the three groups. Limitations in the data prevented examination of the trans-spectrum groups by sexual orientation and therefore the trans-spectrum groups were collapsed across the various sexual orientation groupings. The distribution of participants within these six subgroups is listed in Table 6.

Table 6

Frequencies (Percentages) of Sexual Orientation and Gender Identity Groups by Current Gender Expression (N = 907)

<table>
<thead>
<tr>
<th>Groups</th>
<th>Frequencies (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisgender Heterosexual Majority</td>
<td></td>
</tr>
<tr>
<td>Cisgender Heterosexual Females</td>
<td>139 (15.33%)</td>
</tr>
<tr>
<td>Cisgender Heterosexual Males</td>
<td>75 (8.27%)</td>
</tr>
<tr>
<td>Total</td>
<td>214 (23.59%)</td>
</tr>
<tr>
<td>Cisgender Sexual Minority</td>
<td></td>
</tr>
<tr>
<td>Cisgender Sexual Minority Females</td>
<td>291 (32.08%)</td>
</tr>
<tr>
<td>Cisgender Sexual Minority Males</td>
<td>178 (19.69%)</td>
</tr>
<tr>
<td>Total</td>
<td>469 (51.71%)</td>
</tr>
<tr>
<td>Trans Spectrum Minority</td>
<td></td>
</tr>
<tr>
<td>Transfeminine Spectrum</td>
<td>107 (11.80%)</td>
</tr>
<tr>
<td>Transmasculine Spectrum</td>
<td>117 (12.90%)</td>
</tr>
<tr>
<td>Total</td>
<td>224 (24.70%)</td>
</tr>
</tbody>
</table>

Note. Cisgender Sexual Minority Females includes all cisgender non-heterosexual females; Cisgender Sexual Minority Males includes all cisgender non-heterosexual males; Transfeminine Spectrum includes male-to-female transsexual/transgender, genetic males endorsing queer or two-spirit with respect to their gender identity; Transmasculine Spectrum includes female-to-male transsexual/transgender, genetic females endorsing queer or two-spirit with respect to their gender identity.
To determine whether there were bivariate relationships among the variables of interest for the regression analyses, correlational analyses were conducted for the demographic, love style, attachment style and relationship satisfaction variables (see Table 7). In terms of demographic variables, age was chosen for inclusion in the correlational analyses for further exploration for several reasons: (1) significant differences between the three groups were found on age, such that the cisgender heterosexual group were the youngest, followed by the cisgender sexual minority group, with the trans-spectrum minority group being the oldest; (2) significant differences in terms of number of times in love corresponded with differences in age, such that the older group (trans-spectrum minority) reported being in love on average the most frequently and the youngest group (cisgender heterosexual majority) had been in love on average the least often; and (3) significant differences in educational attainment and income corresponded to differences in age, such that the older group had the highest average educational attainment and income on average and the youngest group had the lowest for both variables. Due to these findings that age was associated with differences in several demographic variables and was significantly different across the three groups, age was included in the correlational analyses for further consideration. Sexual exclusivity was also selected for inclusion in the correlational analyses due to significant differences between the three groups.
Table 7

Pearson Correlations between Relationship Satisfaction and Age, Sexual Exclusivity, Love Styles and Attachment Style

<table>
<thead>
<tr>
<th>Variable</th>
<th>Subgroups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cis Hetero Female</td>
</tr>
<tr>
<td>Age</td>
<td>-.03</td>
</tr>
<tr>
<td>Exclusivity</td>
<td>-.10</td>
</tr>
<tr>
<td>Love Styles</td>
<td></td>
</tr>
<tr>
<td>Eros</td>
<td>.70**</td>
</tr>
<tr>
<td>Ludus</td>
<td>-.31**</td>
</tr>
<tr>
<td>Storge</td>
<td>.25**</td>
</tr>
<tr>
<td>Pragma</td>
<td>-.13</td>
</tr>
<tr>
<td>Mania</td>
<td>-.15</td>
</tr>
<tr>
<td>Agape</td>
<td>.35**</td>
</tr>
<tr>
<td>Attachment Styles</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.42**</td>
</tr>
<tr>
<td>Avoidance</td>
<td>-.57**</td>
</tr>
</tbody>
</table>

Note. Cis Hetero = Cisgender Heterosexual; Cis Sexual Minority = Cisgender Sexual Minority; Exclusivity = Sexual Exclusivity; Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance. * p < .05; ** p < .01.

As illustrated in Table 7, examination of the bivariate correlations and magnitudes of the correlation coefficients indicates that for all six groups, the Eros love style was the most strongly positively correlated with relationship satisfaction. Attachment Avoidance was the most strongly negatively correlated with relationship satisfaction for all six groups. Attachment Anxiety was also found to be negatively correlated with relationship satisfaction for all six groups, with the strength of these correlations ranging from moderate to strong. Low to moderate positive correlations were found across all six groups with respect to Storge.

Negative correlations between relationship satisfaction and the love styles of Ludus were significant for five out of six groups, with the exception being the Transfeminine Spectrum.
group, for which the relationship was non-significant. Negative correlations between relationship satisfaction and Mania were significant for three out of the six groups (i.e., Cisgender Sexual Minority Males and Females, as well as those in the Transmasculine Spectrum group). Pragma was negatively correlated with relationship satisfaction for the Cisgender Sexual Minority Males only. Positive correlations between relationship satisfaction and Agape were found for three out of the six groups (i.e., Cisgender Heterosexual Females and Males, as well as the Transfeminine Spectrum group). In sum, the above-noted significant bivariate correlations found among the love styles and attachment styles were considered worthy of further analysis within the regression analyses.

To determine whether background variables should be included in the regression analyses, correlations between the demographic variables identified in the analysis of group differences (i.e., age and sexual exclusivity) and relationship satisfaction were examined. No significant correlations were found between age or sexual exclusivity with the dependent variable of relationship satisfaction across all six groups; therefore, these variables were not included in the subsequent regression analyses.

Regression analyses were conducted to determine the relative contribution of love and attachment styles to relationship satisfaction, with separate analyses conducted for each of the six groups. These analyses were conducted to answer the research question: Are love and attachment styles associated with relationship satisfaction and, if so, do these variables operate in the same way for males and females across each of the Cisgender Heterosexual, Cisgender Sexual Minority, and Trans-Spectrum Minority groups?

The first set of regression analyses explored the relationship between all six love styles, the two attachment styles and relationship satisfaction. Because it was already determined that
several of the primary variables violated assumptions of normality and linearity, the regression analyses included diagnostic tests and these were examined prior to interpreting the regression results. According to Cook (2009) and Field (2013), diagnostic tests in regression analyses include the following: (1) examination of the distribution of residuals with a P-P plot (short for probability-probability plot; a graph plotting the cumulative probability of relationship satisfaction against the cumulative probability of a normal distribution) and a histogram of the standardized residuals (to test the assumption of multivariate normality); and (2) examination of the relationship between standardized residuals and predicted outcome scores (to test assumptions of linearity and homoscedasticity). The P-P plot indicates a departure from the assumption of multivariate normality when regression residual scores substantially deviate from the diagonal line indicating a normal distribution. Osborne and Waters (2002) state that any obvious patterns on the scatterplot relating the standardized residuals to the predicted outcome values indicate departure from either homoscedasticity (as indicated by a funnel-like shape of the graph) or linearity (as indicated by a curvilinear trend) assumptions, or both (in the form of a curvilinear funnel-like shape). Conversely, if the scatterplot shows no clear pattern, then it can be assumed that the variance is constant (Field, 2011). The diagnostic tests indicated that these assumptions were violated for the regression model due to departures from the normal line observed on the P-P plot and a funnel-like shape of the graph. The reason for assumption violation was likely that the relationship satisfaction variable was significantly negatively skewed and an attempt was made to normalize the variable first by squaring it and then by cubing it, but these transformations did little to improve the shape of the distribution. Examination of outliers revealed several that were at the negative tail of the distribution, but removing them would have resulted in a substantial loss of participants (15% of participants). Thus, a decision was made to continue the analyses with the original skewed dependent variable.
It is important to note that the power of the model generated by the regression analysis may not be very high with those who score very low in interpersonal relationship satisfaction and the results will be much more accurate for those who are more satisfied in their relationship.

Further exploration of the love styles revealed that the assumption of normality of residuals was violated for five out of six groups: Cisgender Heterosexual Females, Cisgender Sexual Minority Females, Cisgender Sexual Minority Males, Transfeminine Spectrum, and Transmasculine Spectrum (i.e., the exception being the Cisgender Heterosexual Males). Minor deviations from the diagonal were noted on the normal P-P plots. On the residual scatter plots, the assumption of homoscedasticity was not met for one group as indicated by a funnel-like shape observed for the Cisgender Sexual Minority Females.

In the presence of violation of these assumptions, the confidence intervals and p-values around the regression coefficients may be unreliable. Field (2013) recommends using bootstrapping to generate robust confidence intervals and significance tests of the model parameters in these situations. Bootstrapping is a resampling technique that allows to conduct statistical analyses robustly and to estimate more accurate parameters, when the assumptions of statistical method are violated (Efron & Tibshirani, 1993; Field, 2011, 2013). Basically, during the bootstrapping process a statistical analysis is performed multiple times (usually 1,000) on subsamples randomly selected from the original data; following this, the parameter estimates from all analyses are aggregated and presented in the statistical output (Wright, London, & Field, 2011). Following Field’s (2011, 2013) suggestion and in order to obtain trustworthy robust parameter estimates, regression analyses for the six groups were run using bootstrapping with 1,000 samples per subgroup (i.e., 6,000 bootstrap samples total) and bias corrected and accelerated confidence intervals were examined. Confidence intervals are important for
estimating the effect of predictor variables in the population of interest and are traditionally reported with 95% confidence (Field, 2013).

The results of the regression analyses with bootstrapping are presented in Tables 8, 9 and 10. These tables contain unstandardized regression coefficients and their standard errors for each analysis. Confidence intervals are not reported as they can be easily derived from \( B \) and \( SE(B) \) using the formula \( B \pm 1.96 \times SE(B) \). The models explained between 67% and 74% of the variance in relationship satisfaction across the six groups. In summary, for all six groups, the Eros love style was the strongest positive predictor of relationship satisfaction. Mania and Agape love styles were significant but weak predictors of relationship satisfaction for cisgender females only, with Mania as a negative predictor and Agape as a positive predictor of relationship satisfaction. The Ludus love style was a weak negative predictor of relationship satisfaction for cisgender sexual minority males only. Storge and Pragma were not significant predictors of relationship satisfaction for any groups. In terms of attachment styles, Attachment Avoidance was a strong, negative predictor of relationship satisfaction across all six groups and Attachment Anxiety was a strong negative predictor for all groups except the transmasculine group.
Table 8

Summary of Regression Analyses Predicting Relationship Satisfaction from Love Styles and Attachment for Cisgender Heterosexual Males and Females

<table>
<thead>
<tr>
<th>Love Style Predictors</th>
<th>Cisgender Heterosexual Females</th>
<th>Cisgender Heterosexual Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b)</td>
<td>(SE)</td>
</tr>
<tr>
<td>Eros</td>
<td>.70</td>
<td>.12</td>
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<td>Ludus</td>
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<tr>
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<td>.08</td>
</tr>
<tr>
<td>Pragma</td>
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<td>.09</td>
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<tr>
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<td>.11</td>
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<tr>
<td>Agape</td>
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<td>Attachment Style</td>
<td>Predictors</td>
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<tr>
<td>Anxiety</td>
<td>-.18</td>
<td>.05</td>
</tr>
<tr>
<td>Avoidance</td>
<td>-.35</td>
<td>.09</td>
</tr>
</tbody>
</table>

\(R^2\)  .67 \(F\)  24.44***

Note. Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance. * \(p < .05\); ** \(p < .01\); *** \(p < .001\).

Table 9

Summary of Regression Analyses Predicting Relationship Satisfaction from Love Styles and Attachment for Cisgender Sexual Minority Males and Females

<table>
<thead>
<tr>
<th>Love Style Predictors</th>
<th>Cisgender Sexual Minority Females</th>
<th>Cisgender Sexual Minority Males</th>
</tr>
</thead>
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<tr>
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<td>(SE)</td>
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<tr>
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<td>.07</td>
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<tr>
<td>Ludus</td>
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<td>.05</td>
</tr>
<tr>
<td>Storge</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>Pragma</td>
<td>-.09</td>
<td>.07</td>
</tr>
<tr>
<td>Mania</td>
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<td>.07</td>
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<tr>
<td>Agape</td>
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<td>.06</td>
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<tr>
<td>Attachment Style</td>
<td>Predictors</td>
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</tr>
<tr>
<td>Anxiety</td>
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<td>.05</td>
</tr>
<tr>
<td>Avoidance</td>
<td>-.40</td>
<td>.06</td>
</tr>
</tbody>
</table>

\(R^2\)  .68 \(F\)  62.47***

Note. Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance. * \(p < .05\); ** \(p < .01\); *** \(p < .001\).
Table 10

Summary of Regression Analyses Predicting Relationship Satisfaction from Love Styles and Attachment for Transfeminine and Transmasculine Individuals

<table>
<thead>
<tr>
<th>Love Style Predictors</th>
<th>Transfeminine Spectrum Individuals</th>
<th>Transmasculine Spectrum Individuals</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
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</tr>
<tr>
<td>Eros</td>
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<td>.15</td>
</tr>
<tr>
<td>Ludus</td>
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<td>.10</td>
</tr>
<tr>
<td>Storge</td>
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<td>.11</td>
</tr>
<tr>
<td>Pragma</td>
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<td>.16</td>
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Attachment Style Predictors

<table>
<thead>
<tr>
<th></th>
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<th>$F$</th>
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<tbody>
<tr>
<td>Anxiety</td>
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<td>18.80***</td>
</tr>
<tr>
<td>Avoidance</td>
<td>.74</td>
<td>31.63***</td>
</tr>
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</table>

Note. Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance.

* $p < .05$; ** $p < .01$; *** $p < .001$.

To further explore the contribution of the six love styles and two attachment styles in explaining relationship satisfaction, a series of hierarchical regression analyses with bootstrapping was conducted for the six groups. The first set of predictors included those love styles and attachment styles where there was a consistent association with relationship satisfaction, as evidenced by both the bivariate relationships and multivariate relationships (i.e., regression models). This first step included Eros, Anxiety, and Avoidance. The second step of the analyses included those love styles that were less consistently associated with relationship satisfaction and included Ludus, Storge, Mania, and Agape. These analyses were conducted to determine whether those love styles that were identified as less consistent associates of relationship satisfaction were significant once the more consistent predictors were included in the models. Results from these hierarchical regression analyses are included in Tables 11, 12 and 13.
The first set of variables (Step 1) explained between 62% and 76% of the variance in relationship satisfaction across the six groups. The second set (Step 2) explained 4% of the variance for cisgender heterosexual females, 3% of the variance for cisgender sexual minority females, and 1% of the variance for cisgender sexual minority males. The second set was considered nonsignificant for the remaining three groups. The percentages of variance explained per step and parameter estimates by group are displayed in Tables 11, 12 and 13. In summary, across all six groups, the majority of the variance in the dependent variable relationship satisfaction is explained by the love style Eros and the two attachment styles of Attachment Anxiety and Attachment Avoidance. For cisgender females, the Agape love style was a significant positive predictor of relationship satisfaction. Furthermore, Mania was a significant negative predictor of relationship satisfaction for cisgender sexual minority females only. Of note, although Mania and Agape were significant predictors as described below, the effect of Agape for cisgender heterosexual females and the combined effect of Mania and Agape for cisgender sexual minority females only accounted for 3-4% of the overall variance in relationship satisfaction for these groups. Ludus was a significant negative predictor of relationship satisfaction for cisgender sexual minority males only, accounting for 1% of the overall variance. Ludus was otherwise unimportant for the remaining five groups. The effect of Storge was not significant for all groups.
Table 11

Summary of Hierarchical Regression Analyses Predicting Relationship Satisfaction from Love Styles and Attachment for Cisgender Heterosexual Males and Females

<table>
<thead>
<tr>
<th></th>
<th>Cisgender Heterosexual Females</th>
<th>Cisgender Heterosexual Males</th>
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<tbody>
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<tr>
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<td>.51</td>
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<tr>
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<tr>
<td>$F$ Change</td>
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</tr>
<tr>
<td>Step 2</td>
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<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>.65</td>
</tr>
<tr>
<td>Ludus</td>
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<td>.08</td>
</tr>
<tr>
<td>Storge</td>
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<td>.08</td>
</tr>
<tr>
<td>Mania</td>
<td>-.18</td>
<td>.11</td>
</tr>
<tr>
<td>Agape</td>
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<td>.08</td>
</tr>
<tr>
<td>$R^2$ Change</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>$F$ Change</td>
<td>3.03**</td>
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</tr>
</tbody>
</table>

Note. Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance.

* $p < .05$; ** $p < .01$; *** $p < .001$. 

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Table 12

Summary of Hierarchical Regression Analyses Predicting Relationship Satisfaction from Love Styles and Attachment for Cisgender Sexual Minority Males and Females

<table>
<thead>
<tr>
<th></th>
<th>Cisgender Sexual Minority Females</th>
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<th>Cisgender Sexual Minority Males</th>
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</tr>
</thead>
<tbody>
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<td>$\beta$</td>
<td>$b$</td>
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<tr>
<td>Step 1</td>
<td></td>
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<td></td>
<td></td>
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<td>.67</td>
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<td>Anxiety</td>
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<td>.03</td>
<td>-.32***</td>
<td>-.19</td>
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<td>Avoidance</td>
<td>-.35</td>
<td>.06</td>
<td>-.29***</td>
<td>-.41</td>
</tr>
<tr>
<td>$R^2$ Change</td>
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</tr>
<tr>
<td>$F$ Change</td>
<td>180.57***</td>
<td></td>
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<td>145.39***</td>
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<td>Ludus</td>
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<td>-.06</td>
<td>-.15</td>
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<tr>
<td>Storge</td>
<td>.06</td>
<td>.05</td>
<td>.05</td>
<td>.04</td>
</tr>
<tr>
<td>Mania</td>
<td>-.23</td>
<td>.07</td>
<td>-.14**</td>
<td>-.03</td>
</tr>
<tr>
<td>Agape</td>
<td>.16</td>
<td>.06</td>
<td>.10*</td>
<td>-.06</td>
</tr>
<tr>
<td>$R^2$ Change</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>$F$ Change</td>
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<td></td>
<td></td>
<td>1.74*</td>
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</tbody>
</table>

*Note.* Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance.

* $p < .05$; ** $p < .01$; *** $p < .001$. 
Table 13

Summary of Hierarchical Regression Analyses Predicting Relationship Satisfaction from Love Styles and Attachment for Transfeminine and Transmasculine Individuals

<table>
<thead>
<tr>
<th></th>
<th>Transfeminine Spectrum Individuals</th>
<th>Transmasculine Spectrum Individuals</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>SE $b$</td>
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<tr>
<td><strong>Step 1</strong></td>
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<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>.53</td>
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<tr>
<td>Eros</td>
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<tr>
<td>Anxiety</td>
<td>-.26</td>
<td>.05</td>
</tr>
<tr>
<td>Avoidance</td>
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<td>.07</td>
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<tr>
<td>$R^2$ Change</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>$F$ Change</td>
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<td><strong>Step 2</strong></td>
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<td>.66</td>
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<td>Ludus</td>
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<td>.09</td>
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<tr>
<td>Storge</td>
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<td>.11</td>
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<td>Agape</td>
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<tr>
<td>$F$ Change</td>
<td>.74</td>
<td></td>
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</tbody>
</table>

*Note. Anxiety = Attachment Anxiety; Avoidance = Attachment Avoidance.

* $p < .05$; ** $p < .01$; *** $p < .001$. 
CHAPTER 4: DISCUSSION

This study focuses on intimate relationships among adults within a wide variety of relationship formations, inclusive of a variety of sexual orientations and gender identities, including genderqueer and transgender individuals. The overarching objective of this study is to examine how interpersonal factors in the areas of love, attachment and sexuality contribute to relationship satisfaction. In meeting this objective, the goal of the study was to conduct this research to support the pursuit of a more comprehensive and inclusive literature on love relationships and relationship satisfaction that acknowledges the variety of experiences and promotes the well-being of individuals with a range of gender expressions and within diverse relationship compositions that is reflective of the adult intimate relationships of modern-day mainstream society. To achieve this goal, as well as to achieve the objectives of this research, composition of the study sample was critically important. What follows next is a general discussion of the main study objectives, followed by discussion regarding the sample composition for this research study, limitations and directions for future research, and strengths/significance of this research.

Discussion of Primary Study Objectives

The primary objectives of this study are two-fold. First, this study explores the psychometric properties of various well-validated intimate relationship measures (LAS-SF, ECR-RS, SRS and RAS) using a diverse sample inclusive of cisgender heterosexual and sexual minority and trans-spectrum minority adults. To date, these measures have been developed and applied primarily in the context of cisgender heterosexual populations. Thus, this study is the first to examine the viability of these measures using a diverse and inclusive sample and to extend existing theories among these diverse minorities. Second, this study explores the relative
abilities of love styles and relationship-specific adult attachment to predict concurrent
relationship satisfaction among heterosexual (i.e., majority) adults versus sexual and gender
minority adults. What follows is a discussion of findings with respect to each of these objectives.

**Objective #1: Psychometric Properties of Relationship Measures**

To date, there has been no research evaluating the psychometric properties of the
relationship measures used in this study beyond heterosexual adult samples. The first objective
of this study was to explore the factor structure and internal reliability of the love styles (LAS-
SF), relationship-specific attachment (ECR-RS), exchange/communal approaches to sexual
relationships (SRS), and relationship satisfaction (RAS) measures.

Results indicated that the original factor structures of the ECR-RS and RAS are
maintained across groups of diverse sexual orientations and gender identities. In addition, the
internal reliabilities for each of the factors are strong, providing further evidence that these
measures and their subscales are internally consistent. Five of the six LAS-SF subscales
demonstrated good internal consistency; however, the Ludus scale was found to be somewhat
problematic among the cisgender heterosexual and cisgender sexual minority groups. The
original two-factor structure of the SRS representing exchange and communal approaches to
sexual relationships was not confirmed and no other coherent factor structure could be obtained.
A discussion follows regarding issues related to the Ludus scale of the LAS-SF and SRS, as well
as implications of the results for all measures.

Regarding the LAS-SF, exploratory factor analyses revealed that the factor structures
postulated by Lee (1973) and demonstrated by Hendrick, Hendrick, et al. (1998) in an American
sample could be applied within samples of English-speaking North American and European
cisgender heterosexual, cisgender sexual minority, and trans-spectrum minority adults. Although the factor loadings for all three groups indicated that the items loaded onto their original six factors represented by Eros, Ludus, Pragma, Mania and Agape, consistent with the original scale, internal reliability analyses revealed that for the Ludus subscale, internal consistency among the four items for this factor was somewhat suboptimal (i.e., the reliability coefficient for the Ludus subscale fell below the expected .70 standard minimum) for the Cisgender Heterosexual Majority and Cisgender Sexual Minority groups, yet acceptable for the Trans-Spectrum Minority group. As a result, item #8 (“I enjoy playing the ‘game of love’ with my partner and a number of other partners”) was deleted for improved internal reliability of the Ludus subscale. This represented an improvement in internal consistency; however, the value remained slightly short of the recommended .70 standard minimum. Thus, a three-item, rather than the original four-item subscale, was utilized for computation of the Ludus subscale scores used within subsequent analyses in this study.

From a historical perspective, the literature suggests that item #8 has been the weakest of the four items on the Ludus subscale of the LAS-SF. The item was identified by Hendrick, Hendrick, et al. (1998) across three studies as having weaker factor loadings as compared with the remaining three items of the Ludus subscale. In attempting to devise a three-item per subscale version of the LAS-SF, Hendrick, Hendrick, et al. (1998) chose item #8 for omission; however, internal consistency was not improved over the four-item per subscale version. Thus, although it appears that this same item was perhaps the least optimal of the four items on the scale in previous research, the current study indicated that the meaning of this item has perhaps become more problematic over time.
Within the current study, the lower factor loading for item #8 was equally problematic in terms of internal reliability for both the cisgender heterosexual and cisgender sexual minorities. Thus, because the item was problematic among cisgender heterosexual participants as well as cisgender sexual minority participants, the problematic nature of this item is not likely attributable to the scale’s development within a cisgender heteronormative context. A more likely explanation is that perhaps the wording of the item and reference to the “game of love” has a historical/temporal context that has lost meaning since the development of the scale. Further evidence in support of this explanation relates to inquiries from research participants about the meaning of this particular item during the current study. Although the frequency of these inquiries was not tracked, several participants initiated contact to request clarification about the meaning of item #8; in particular, all inquiries related to the meaning of the phrase, “game of love”. No participants made inquiries about the meaning of any other of the scale items. Furthermore, the majority of missing data from the Ludus subscale related to item #8. Taken together, the evidence would suggest that some participants may have experienced particular difficulty ascertaining the meaning of this item.

One possible explanation for this difficulty might relate to a historical linguistic context for the phrase, “game of love”. Perhaps the phrase has lost meaning over time since the scale’s development. It appears likely that the use of this phrase within the LAS-SF was drawn directly from the writings of Lee (1973, 1976a, 1976b), where the phrase “game of love” was also used to describe a ludic love style. Because it is said that Lee (1973, 1976b, 1977) tended to rely on classical literature when interpreting the patterns in his interview study, perhaps the phrase has a historical origin in classical writings that has gradually lost meaning over time within the general population. A possibility for the origin of the phrase in Lee’s (1973, 1976a, 1976b, 1977) writings may relate to a 1965 hit song by Wayne Fontana and the Mindbenders called “The
Game of Love”, released in North America as “Game of Love” in the context of the 1960s hippy culture of free love, promiscuity and sexual experimentation (McElroy, 1996). Regardless of the cause, an important finding of the current study is that although the psychometric properties have been established for most of the LAS-SF subscales, the Ludus subscale is somewhat problematic among cisgender heterosexual and sexual minority individuals, particularly owing to item #8. Future researchers would be advised to strongly consider removing this item and computing a three-item subscale for Ludus.

Regarding the SRS, the scale’s psychometric properties among cisgender heterosexual adults reported by the original authors, Hughes and Snell (1990), were somewhat questionable (particularly among male adults) and attributed to small sample sizes. Despite this, the measure was included in the current research because, (a) it was believed that the measure had promise from a psychometric standpoint; and (b) the measure was based on strong theoretical linkages to Blau’s (1964) exchange theory of love, Clarke and Mills’ (1979) exchange and communal approaches to relationships, and represented an interesting attempt at extending these theories to sexual relationships. Given that the current research included both cisgender heterosexual and sexual/gender minorities, it was thought that there was an opportunity to re-examine the psychometric properties of this instrument within the context of a more diverse sample, which included a subgroup of the originally intended cisgender heterosexual population. Exploratory factor analyses in the current study revealed that there was no single factor structure that adequately captured the items of the SRS scale. The original two-factor structure representing exchange and communal approaches to sexual relationships was inadequate and no other coherent factor structure could be obtained for any of the three groups. The potential promise of this scale was not realized and demonstrates that the SRS is not a viable instrument for use in
future research, regardless of the gender identities or sexual orientations of individuals within the intended population.

Given that no factor structure could be obtained for any of the three groups, it is unlikely that difficulties with the SRS scale are related to minority status in particular. The original authors found that the factor structure that was obtained with a sample of cisgender heterosexual female adults was not retained with cisgender heterosexual male adults (Hughes & Snell, 1990). Additionally, internal consistency was questionable at best for both cisgender heterosexual male and female adults (Hughes & Snell, 1990).

In terms of explanations for the inability to replicate the factor structure of the SRS measure, one possible explanation may be related to design. Furr (2011), in his chapter on response formats and item writing, states that writing effective items should ensure relevant content, clarity of language, and include balanced scales. In regards to content, perhaps the content of the items within the SRS does not accurately reflect the intended constructs of exchange versus communal approaches to relationships. Even with knowledge of the theory behind the measure, with respect to certain items, it is difficult to know for sure which items correspond to which subscale without referring to the scoring key provided in the original publication (i.e., Hughes & Snell, 1990). For example, Item #4, which is apparently an item that corresponds to a communal approach to sex states, “If a sexual partner were to do something sensual for me, I’d try to do the same for him/her”; however, this item appears to speak to reciprocity and therefore seems more like an item that should represent an exchange approach to sex. With respect to clarity of language, the language used in some of the items is too vague, allowing for various possible interpretations. For example, Item #12 states, “When a person receives sexual pleasures from another, she/he ought to repay that person right away.” It seems
that in interpreting the meaning of “repay”, this term might mean different things to different people. Also regarding clarity of language, as with the Ludus subscale of the LAS, it could be that there has been a change in the linguistic context of the phrasing of the SRS items.

Another potential problem with the SRS measure may relate to the context in which the scale was developed. Hughes and Snell (1990) developed and attempted to validate their measure using small sample sizes of male and female young adults who were almost entirely Caucasian undergraduate students attending a single university located in the United States. It could be that the findings are not generalizable beyond this population within the context of the particular time in which the scale was developed.

Another explanation for the problematic SRS measure might relate to the attempt to extend exchange theory and the concepts of exchange and communal approaches to intimate relationships to the domain of sexual relationships, which may or may not involve emotional investment or intimacy. The original theory of exchange and communal relationships was developed regarding expectations and rules governing the fulfillment of relationship needs in general terms across a variety of relationships, such as transactional business relationships, friendships, parent-child relationships and intimate relationships (Clark & Mills, 2011). Perhaps an attempt to apply the theory to only sexual needs is too narrow. Furthermore, Clark and Mills (2011) stated, “not all relationships must be communal or exchange in nature” and also indicate that some relationships “seem to be some sort of hybrid of a communal and exchange relationship” (p. 235). Thus, perhaps an attempt to apply this theory to the meeting of sexual needs within intimate romantic relationships doesn’t work well if aspects of both communal and exchange approaches are occurring simultaneously in the intimate relationship domain of sex. Although Clark and Mills’ (1979) theory of Exchange and Communal Relationships appears to
have applied well in other areas of relationships, such as expressions of emotions in relationships (e.g., Clark & Taraban, 1991; Yoo, Clark, Lemay, Salovey, & Monin, 2011), perhaps this theory does not apply to the domain of sexual relationships.

A final potential cause for the problems associated with the SRS measure might relate to the fact that the majority of participants indicated that their relationships to date were fairly short in duration (i.e. 90% were between 1 week up to 4 years, although in each of the three groups there were extreme scores reaching 10 or more years in relationship). The theory of communal and exchange approaches to relationships pertained to “responsiveness to needs and desires as those needs and desires arise across time” (Clark & Mills, 2011, p. 233). Perhaps the short duration of the relationships resulted in insufficient time to adequately experience differentiation between exchange and communal characteristics. Additionally, Clark and Mills (2011) stated that romantic intimate relationships tend to involve norms that are communal in nature and that particularly during the early stages of a relationship, even individuals who tend to be exchange oriented exert much effort to follow communal norms. Given the tendency for short durations of relationships, perhaps many participants experienced a hybrid of communal and exchange approaches to the sexual aspect of the relationship, resulting in more haphazard endorsements of the communal versus exchange items and difficulty validating the intended two subscales proposed by the original authors of the measure. Regardless of the cause, an inability to replicate the factor structure of this measure made it impossible to continue with any further analyses of this theory with respect to predictors of relationship satisfaction.

In sum, exploratory factor analysis of the relationship measures included in the current study revealed that the factor structures for most measures was consistent with the factor structures obtained in samples of heterosexual adults. Although there was no single factor
structure that captured the items of the SRS and there is evidence to suggest that the
psychometric properties of this measure do not hold up well when applied to male and female
adults in intimate relationships, there is sufficient evidence to support the use of the other
relationship measures in future research among diverse sexual orientation and gender minority
populations. In terms of the measures themselves, although the Ludus subscale of the LAS-SF is
somewhat problematic, deletion of the one item improved internal reliability for this scale,
rendering it a measure that can be confidently used in future clinical and research applications.
The ECR-RS is a relatively new measure that has demonstrated excellent psychometric
properties among large Internet samples (Fraley, 2010; Fraley et al., 2011); however, this is the
first study to replicate these findings in relation to sexual orientation and gender identity minority
status. The RAS is a widely used measure of relationship satisfaction and this study supports its
use within much-needed future research targeting relationship satisfaction among sexual
orientation and gender identity minority adults.

**Objective #2: Love and Attachment Style Predictors of Relationship Satisfaction**

The second objective of the current study was to explore the relative abilities of the LAS-
SF, ECR-RS and SRS to predict concurrent relationship satisfaction among a mainstream
heterosexual majority sample versus samples of sexual and gender minority adults. Although
several other researchers have established that these intimate relationship factors are important
predictors of relationship satisfaction among cisgender heterosexual adults (e.g., Contreras et al.,
1996; Finch, 1999; Fricker & Moore, 2002; Levy & Davis, 1988; Morrow et al., 1995), building
on existing love style, attachment and exchange theories in relation to intimate relationships, this
study is the first to examine these constructs within a diverse sample inclusive of a variety of
sexual and gender identity minority adults.
On the basis of existing literature containing studies of actual or presumed cisgender heterosexual adults (e.g., Fricker & Moore, 2002; Hendrick et al., 1988; Levy & Davis, 1988; Morrow et al., 1995), several hypotheses were made that similar patterns would be found with respect to cisgender sexual minority and trans-spectrum adults. Specifically, in terms of love and attachment style predictors of relationship satisfaction, it was hypothesized that Eros and Agape love styles would be positively associated with relationship satisfaction, whereas Ludus and attachment avoidance and attachment anxiety would be negatively associated with relationship satisfaction.

After dividing the three groups further by gender to create six groups, bivariate correlations relationships were examined between love and attachment styles and demographic variables identified for further exploration for possible inclusion in the regression analysis. Age was chosen as a demographic variable for further exploration due to significant differences between groups on age (with the cisgender heterosexual group being the youngest and the trans-spectrum group being the oldest) and certain other demographic variables following a similar pattern that could likely be accounted for by age (e.g., the older participants tended to report higher income, education level, etc.). Sexual exclusivity was also chosen for further examination because of differences between groups on this variable (i.e., cisgender sexual minority and trans-spectrum minority were significantly more endorsing of open relationships, whereas the cisgender heterosexual group tended to more highly endorse closed relationships), as well as past research findings among heterosexual individuals that this variable may affect relationship satisfaction (Klusman, 2001; Seal et al., 1994). Examination of the bivariate correlations revealed that age and sexual exclusivity were not associated with relationship satisfaction; thus, these variables were not included in the regression models because they were unlikely to influence the main variables of interest on relationship satisfaction.
Initial exploration of the nature of bivariate relationships between the love and attachment styles with relationship satisfaction revealed a positive correlation between Eros and Storge with relationship satisfaction across all groups. Attachment anxiety and attachment avoidance were negatively correlated with relationship satisfaction across all groups. Ludus was negatively correlated with relationship satisfaction for all groups except the transfeminine group. The other love styles were either negatively or positively correlated with relationship satisfaction for some groups but not others. Because there were at least some correlations found for all love and attachment styles with respect to relationship satisfaction, all of these variables were entered simultaneously in the initial regression models to explore their relative strengths as predictors of relationship satisfaction.

An examination of the regression coefficients in the initial exploratory regression models indicated that Eros, attachment anxiety, and attachment avoidance were the most important in predicting relationship satisfaction; thus, these were entered as the first step of the hierarchical regression. Pragma was not found to predict relationship satisfaction among any of the groups; thus, it was not included in the follow-up hierarchical regression. The importance of the remaining love styles (i.e., Ludus, Storge, Mania and Agape) on the basis of regression coefficients were negligible for some groups and were therefore retained for entry in the second step of the hierarchical regression.

The final hierarchical regression model indicated certain commonalities across groups, yet also some unique differences. In terms of commonalities, the majority of the variance in relationship satisfaction was explained by the Eros love style, attachment anxiety and attachment avoidance. Another commonality across groups was that Storge was not a positive predictor of relationship satisfaction once the variance due to Eros, attachment anxiety and attachment avoidance...
avoidance were removed. Some differences were found in terms of the abilities of the remaining love styles of Ludus, Mania, and Agape to predict relationship satisfaction. Specifically, Ludus proved to be negatively predictive of relationship satisfaction for the cisgender male sexual orientation minority adults only. Mania was found to be a negative predictor for sexual minority females only and Agape a positive predictor of relationship satisfaction among cisgender heterosexual and sexual minority females only. What follows next is a detailed discussion regarding the specific commonalities and differences, including possible reasons for the findings.

In terms of commonalities, for all six groups, Eros was a significant positive predictor of relationship satisfaction. This finding is consistent with past research among cisgender heterosexual adults, for which this has been the most consistent love style finding among North American and various other cultures (e.g., Contreras et al., 1996; Hendrick et al., 1988; Morrow et al., 1995). The finding is also consistent with past research among lesbian couples (Finch, 1999). In terms of research among other cisgender sexual minority and trans-spectrum minority adults, no research to date has examined love styles as predictors of relationship satisfaction. However, the finding of Eros being a consistent positive predictor of relationship satisfaction across groups is not surprising, given my previous findings within a study examining love style endorsement patterns using a different adult sample, where the majority of individuals, regardless of sexual orientation and gender identity, tended to score highest on erotic styles of loving (Couperthwaite, 2005, 2011). This finding lends support to arguments made by various authors (e.g., Hatfield & Rapson, 1987; Jankowiak & Fischer, 1992; Marazziti & Baroni, 2012) that passionate love is a “human universal”. Furthermore, it lends additional support to conclusions made by Fisher, Aron, and Brown (2005) on the basis of fMRI studies examining cross-cultural differences, which suggested that passionate love is a primary universal motivational system or drive. Although Lee (1976a) attempted to portray the love styles as equal,
it does appear that Eros (or passionate love) is one of the most salient love style predictors of intimate partner relationship satisfaction above all others and that this is the case regardless of sexual orientation and sexual identity. This is an important finding because it provides evidence of common ground in terms of the importance of passion to relationship satisfaction across a variety of relationship compositions. One of the benefits of a growing body of research that is inclusive of a broad spectrum of sexual orientations and gender identities is that it contributes to our collective understanding of relationship satisfaction in general and builds on the existing voluminous literature highlighting the importance of passionate love to relationship satisfaction among heterosexual adults. Furthermore, findings related to Eros as a common positive predictor of relationship satisfaction across groups challenges stereotypes of sexual minority and transgender adults as having dysfunctional or inferior relationships in comparison to heterosexual adults (Peplau & Fingerhut, 2007).

Another common finding across the six groups relates to Storge (friendship love) and Pragma (logical, practical, “shopping list” love), which did not predict interpersonal relationship satisfaction, regardless of sexual orientation or gender identity. This finding is consistent with previous research across many studies of various relationship type, including dating, married, and unmarried committed long-term relationships (e.g., Cho & Cross, 1995; Davis & Latty-Mann, 1987; Frazier & Esterly, 1990; Hendrick, 1988) as well as within a recent meta-analytic study (Graham, 2011). In terms of the cisgender sexual orientation minority adults in this study, the finding that Storge does not predict relationship satisfaction is also not surprising given my previous research findings, which indicated that cisgender sexual orientation minority adults are even less storgic in their love style attitudes than cisgender heterosexual adults (Couperthwaite, 2005, 2011). This is not to say that friendship love is not important to intimate relationships. Hendrick and Hendrick (1993) found that within a sample of 84 participants across three
different studies in which individuals provided both written accounts of relationships and ratings, friendship love was the most frequently mentioned theme and that more than half named their romantic partner as their closest friend. Indeed, in the current study, bivariate analyses revealed that Storge was significantly associated with relationship satisfaction across all groups. However, when both types of love were included as predictors of relationship satisfaction, only Eros emerged as significant. These findings suggest that, although friendship-type love might be an important component of successful relationships, passionate-type love seems to be more important for relationship satisfaction.

One explanation for the finding that passionate love is more important to relationship satisfaction than friendship love may relate to Walster and Walster’s (1978) theory proposing two kinds of love: passionate and companionate. Passionate love has been described as characteristic of love early in a relationship that evolves naturally into companionate love over time. Companionate love has been described as a less intense emotion that incorporates attachment, trust, commitment and intimacy. This theory characterizes passionate love as intense yet fragile, dissipating over time and becoming replaced by a less intense but more robust companionate love (Walster & Walster, 1978). Thus, this theory would suggest that in the early stages of a relationship, passionate love may be more important to relationship satisfaction and that companionate (or friendship) love may emerge more strongly over time as a relationship progresses. It could be that the shorter durations of relationships reported by participants in this study may have contributed to passionate love being a strong predictor of relationship satisfaction. Perhaps the impact of Storge (friendship love) may have emerged as an important predictor of relationship satisfaction had this sample been characterized by a larger number of individuals in longer-term relationships. However, it is uncertain if relationship length may have
been a factor that contributed to Storge’s lack of predictive power with respect to relationship satisfaction.

Although Walster and Walster (1978) theorized that passionate love dissipates over time, some research refutes this claim. On the basis of a cisgender heterosexual married sample, Contreras et al. (1996) confirmed cross-cultural similarity of love styles comparing Mexican American and Anglo couples ranging in age from 20 to 60 years and found that passionate love was the strongest predictor of relationship satisfaction across all age groups. Hendrick and Hendrick (2000) argued that passionate and companionate love often co-exist in romantic relationships; however, it is passion that distinguishes romantic love from friendship and that “passionate love’s demise over the course of the life span have been greatly exaggerated” (p. 214). Hendrick and Hendrick (1997) argued that one of the challenges of maintaining relationship satisfaction over time is finding strategies for partners to keep their passion for one another alive.

Another main finding of this research with respect to commonalities across the six groups relates to adult attachment orientation, which was found to be an important predictor of relationship satisfaction among a diverse sample inclusive of various sexual orientations and gender identities. Attachment insecurity in the avoidance domain was a strong negative predictor of relationship satisfaction for all groups by gender, as expected and consistent with past research (e.g., Babcock et al., 2000; Crowell et al., 2002; Fricker & Moore, 2002; Ridge & Feeney, 1998). Similarly, attachment insecurity in the domain of anxiety was also found to be a strong predictor of relationship satisfaction for all groups. The finding of attachment anxiety being a strong negative predictor of relationship satisfaction across all groups is also consistent
with prior research (e.g., Babcock et al., 2000; Crowell et al., 2002; Fricker & Moore, 2002; Ridge & Feeney, 1998).

Differences were found for specific groups in terms of the ability of the love styles of Ludus (game-playing love, love and sex seen as fun or an activity without intention of hurting anyone; moving from partner to partner, having several partners at a time), Mania (obsessive love) and Agape (altruistic, giving love) to predict relationship satisfaction, although to a very small extent. Contrary to one of the hypotheses of this study and prior research findings that have found that Ludus is a consistent negative predictor of relationship satisfaction, particularly among heterosexual men (e.g., Contreras et al., 1996; Hendrick et al., 1988; Morrow et al., 1995), Ludus was a weak negative predictor of relationship satisfaction among the cisgender male sexual orientation minority adults only and, for this group, the contribution did not lead to much change in the variance of relationship satisfaction. Ludus was not found to be a predictor of relationship satisfaction for any of the other groups, including the cisgender heterosexual males or transmasculine individuals.

A possible explanation for this significant finding among cisgender sexual orientation minority men may relate to the nature of the Ludus items, which reflect non-negotiated extradyadic sexual interactions (i.e., open sexual relationships in which the couple has not negotiated the terms of this in advance). Gay men have been found to more-often engage in nonmonogamy compared with lesbians and heterosexual men and women (Bryant & Demian, 1994; McWhirter & Mattison, 1984). Research has shown that although sexual infidelity is negatively associated with relationship satisfaction for lesbian and heterosexual couples, this has not been the case among gay male couples (Kurdek, 1991). The reason that nonmonogamy (or sex outside of a primary relationship) tends to not be a factor that negatively affects relationship
satisfaction among gay men has been thought to relate to male same-sex couples tending to have agreements that sex outside the primary relationship is acceptable (Hickson et al., 1992). Evidence for this explanation has been found by Ramirez and Brown (2010), who examined open versus closed relationships among gay men. No significant differences were found between groups in levels of satisfaction or attachment styles, similar to others studies (e.g., Kurdek, 1995; Peplau & Spalding, 2003). However, results indicated that gay men in open relationships with explicit rules about sex outside of the primary relationship had significantly higher relationship satisfaction than gay men without such rules (Ramirez & Brown, 2010). The Ludus items on the LAS-SF do not reflect this sort of a pre-established arrangement for open relationships. For example, items #5, 6 and 7 imply secrecy in general or concealed extradyadic sex (i.e., Item #5 – “I believe that what my partner doesn’t know about me won’t hurt him/her”; Item # 6 – “I have sometimes had to keep my partner from finding out about other partners”; and Item #7 – “My partner would get upset if he/she knew of some of the things I’ve done with other people”). The wording of Ludus items on the LAS-SF do not appear to account for the negotiated nonmonogamy that often characterizes gay male sexual behaviour and, as a result, gay men in the current study who had higher scores on Ludus experienced less satisfaction in their relationships.

Mania (obsessive love) was found to be a negative predictor for cisgender sexual minority females only. That is, women who identified their primary object of attraction as women and who had higher scores on obsessive/dependent love reported lower relationship satisfaction. These findings may be due to female socialization processes, such as a tendency for women to be more emotionally expressive (Harkless & Fowers, 2005). Although this tendency may serve many women well, when it comes to love, heightened emotional expressivity may lend itself to a manic love style which is an “obsessive, jealous love style characterized by self-
defeating emotions” (Regan, 2008, p. 126). Furthermore, Russianoff (1981) hypothesized that heterosexual women tend to emotionally exhibit “desperate dependence” on men in intimate relationships and that this emotional dependency is learned through socialization processes from childhood. Henderson and Cunningham (1993) developed the Emotional Dependence Questionnaire (EDQ) to test Russianoff’s (1981) hypothesis in a sample of 137, primarily Caucasian, middle-class, Australian heterosexual women and found support for this theory, particularly among younger women with less feminist attitudes who were less career-oriented. They argued that these findings supported the proposition that this tendency was a result of female socialization. Further support for dependent characteristics being more common among women has been cited by the American Psychiatric Association (2000) in that a diagnosis of dependent personality disorder has generally been found to be more common in females compared to males. According to Meredith (1984), because same-gender couples involve two people of the same gender, there may be an intensification of certain gender-related attitudes within a relationship, which may explain why Mania was a significant predictor only for the sexual minority women. Furthermore, Harkless and Fowers (2005) similarly argued that a dyad composed of two people of the same gender may predispose the couple to relate in certain ways. An obsessive/dependent love style being negatively related to relationship satisfaction among cisgender sexual minority women may also be related to findings of other research that among lesbian women, satisfaction is higher when partners are equally involved in or committed to a relationship (Peplau et al., 1982). A manic love style tends to be characterized by emotional dependency on one’s relationship partner for reassurance to overcome tendencies for low self-esteem (Hendrick & Hendrick, 1986). Dependency implies a lack of equality in that one partner is reliant on the other to fulfill unmet needs through reassurance. Where a partner experiences a manic love style characterized by obsession, jealousy and/or dependency, it is likely that the
individual would perceive their romantic partner as less involved and committed to the relationship, leading to a reduction in relationship satisfaction. Conversely, sexual minority women may also be more likely to perceive a relationship more negatively when their partner exhibits dependent traits, attitudes and/or behaviors. In sum, the effect of Mania on relationship satisfaction may be particularly salient for women involved in intimate relationships with other women owing to an intensification of gender-related attitudes with respect to dependency being perceived in particularly negative ways. In contrast, among relationships in which there is at least one male partner, a manic love style exhibited by one partner in the dyad may be more normalized.

A final difference in findings between groups relates to Agape being a positive (yet minor) predictor of relationship satisfaction among cisgender heterosexual and sexual minority females only. Agape, or “an all-giving, selfless love style that implies an obligation to love and care for others without any expectation of reciprocity or reward” (Regan, 2008, p. 126) also seems consistent with women’s socialization as “other-oriented, nurturing, and non-competitive” (Harkless & Fowers, 2005, p. 169). In some ways, it is consistent with Jack’s (1991) Silencing of the Self Model, which suggests that girls are socialized to suppress their own needs and desires, and to put other’s needs before their own in order to develop and maintain relationships. If girls’ socialization involves messages that this is the best way to establish healthy relationships, then this may result in greater relationship satisfaction among those who endorse this love style, most notably, cisgender women. Of note, Agape was not a significant predictor of relationship satisfaction among transfeminine spectrum or transmasculine spectrum participants. For the transfeminine group, this could be attributed to early socialization as males; however, Agape was also not a significant predictor for the transmasculine spectrum group, which included individuals who conceivably would have been socialized as females. Zucker and Brown (2014)
have noted that because girls exhibiting cross gender behaviours are considered more “normative” in comparison to effeminate boys who are more likely to face social rejection, trans men tend to generally fare better psychologically in comparison to trans women. In particular, trans men are thought to fare better than trans women who exhibited cross gender behaviours in childhood due to a higher likelihood of this sub-group of trans women tending to experience significant relational traumas, such as bullying, harassment, social rejection over long periods (Zucker & Brown, 2014). As such, an explanation for why Agape was not a significant predictor of relationship satisfaction in the current research could be that both groups were more heavily influenced by social norms and values associated with masculinity, resulting in similar love style predictor patterns for both transmasculine and transfeminine individuals, both of which more closely resemble natal males than natal females.

It should be noted that the findings related to Ludus, Mania and Agape were that these represented very small changes in relationship satisfaction for the specific groups previously discussed. The effects of Eros, attachment anxiety and attachment avoidance, which together account for the majority of the variance in relationship satisfaction across all six groups, are much more salient. Thus, it appears that there are more similarities than there are differences in terms of the love and attachment style predictors of relationship satisfaction, although these variables operated somewhat differently by sexual orientation identity among the cisgender individuals in this study.

Sample Composition

Composition of the sample was critically important to the achievement of the objectives of the study: To examine how interpersonal factors in the areas of love, attachment and sexuality contribute to relationship satisfaction across individuals of diverse sexual orientations and gender
identities. Despite the growing visibility of lesbian, gay, bisexual and trans people in our society, knowledge of the relationship experiences of non-heterosexual and/or noncisgender individuals is relatively limited in comparison to the abundance of knowledge regarding cisgender heterosexual relationships. Todosijevic et al. (2005) argued that this disparity of knowledge is largely a function of obstacles in recruiting large numbers of LGBTQ individuals to participate in research that assesses intimate relationship experiences within diverse relationship compositions. As a result, most studies of optimal relationship functioning have relied on findings from heterosexual couples, with the assumption that this is representative of relationship functioning in general. This is problematic as experiences of the majority do not necessarily apply to minorities. With respect to sample composition for the current study, a particular challenge was to ensure sufficient numbers of trans participants, as such individuals have tended to be particularly ignored and marginalized within the existing literature on intimate relationships (Blumer, Green, Knowles, & Williams, 2012). Arguably, this marginalization regarding trans adults has occurred to an even greater extent than the lack of intimate relationships research among cisgender sexual orientation minority adults.

Findings of Blumer et al. (2012), by way of a content analysis of marriage, couple and family therapy journals between 1997 through 2009, indicated that only 0.0008% of 10,739 articles across 17 journals either focused on transgender issues and/or allowed for variables by which participants could self-identify as non-cisgender (e.g., transgender, transsexual, genderqueer). In addition, although there are studies that claim to be inclusive of transgender persons, many of these studies have not adequately represented this subgroup of the LGBTQ community (Blumer et al., 2012; Dargie, et al., 2014). More specifically, among studies that have included and purport to represent individuals who are lesbian, gay, bisexual, and transgender, the relative sample sizes for transgender participants have tended to be small. For
example, Jackson, Johnson, and Roberts (2008) conducted a study on discrimination in healthcare access among older LGBT individuals yet the final sample contained only two trans persons out of a total of 132 participants (or 0.02% of the overall sample composition), resulting in a lack of adequate representation and limiting the generalizability of the findings for trans adults. Dargie et al. (2014) argued that the conflation of sexuality and gender, which occurs when lesbian, gay, bisexual and transgender individuals are assumed to constitute one subpopulation under the LGBTQ umbrella, erases the experiences of trans persons because findings may not generalize to this group.

Some researchers have more recently utilized innovative recruitment strategies to improve access and visibility of hidden populations such as bisexual and trans people in research (e.g., Bauer & Brennan, 2013; Bauer, Travers, Scanlon, & Coleman, 2012; Ross et al., 2010). With respect to the recruitment of trans people specifically, one example is the community-based participatory action research studies of the Trans PULSE project, which utilized an innovative respondent-driven sampling and recruitment strategy to achieve a large representative sample of 433 transfeminine and transmasculine people in Ontario, Canada [see http://transpulseproject.ca for further details and further elaboration below under directions for future research; see also Bauer et al. (2012), which provides a detailed description of the sampling/recruitment strategy]. Some of the keys to the success of this work was the emphasis on community control that empowered members of the community to be involved as co-thinkers at every stage of the research process to ensure community empowerment, transparency in decision-making, and reduction in power differentials between community and academic partners, positioning and involving trans community members as co-creators of knowledge as opposed to passive recipients (Travers et al., 2013).
In comparison to many studies of sexual and gender minorities in which the researchers have relied primarily on convenience samples or recruitment from their own social circles within LGBTQ communities (Peplau & Spalding, 2000), the current research was successful in obtaining a large diverse sample without the use of such methods. The recruitment efforts and inclusive methodology of the current study were successful in overcoming obstacles in terms of the overall sample composition and successfully obtaining relatively large sample sizes of male and female cisgender heterosexual adults, male and female cisgender sexual minority adults adequately represented by a number of subgroups (e.g., gay, lesbian, bisexual, pansexual/queer), and transmasculine and transfeminine adults. These three groups composed 23.5%, 51.7%, and 24.8% respectively of the overall sample of over 900 participants. This sample composition is notable given the frequent inadequate representation of trans persons within LGBTQ research (Blumer et al., 2012). The use of recruitment letters providing transparency as to the purposes of this study, the sensitive way in which questions were formulated that conveyed inclusiveness (e.g., various commonly used labels of sexual orientation and gender identity were provided as options, in addition to an “other, please specify” option) and an understanding of sexual orientation and trans issues and identities, as well as targeted efforts undertaken to recruit trans people are thought to have contributed to a relatively large sample of trans participants. In sum, the goals of obtaining large numbers of cisgender heterosexual and sexual minority adults, as well as a large subset of transgender adults were achieved. However, despite the sample consisting of almost 25% trans-spectrum minority adults (and over 100 each of transfeminine and transmasculine participants), goals for adequate representation of trans-spectrum minority participants reporting a variety of sexual orientation identities in order to make direct comparisons to cisgender participants by sexual orientation were not met.
The study originally sought to obtain sufficient participants to conduct analyses across various self-identified sexual orientation identity groups among the trans-spectrum participants. Participants were asked to indicate their sexual orientation identity by way of Question #9 on the Demographic Questionnaire (see Appendix H). However, binary specifiers of sexual orientation (e.g., use of the term *lesbian* refers both to the gender of the subject as well as object of attraction) were used in different ways among the trans-identified participants. Some participants referenced their genetic sex whereas others referenced their current gender identity. For example, among transfeminine participants attracted to women, some of these participants self-identified as lesbian and others self-identified as heterosexual individuals. To reduce confusion and ensure uniformity, data pertaining to sexual orientation identities of heterosexual, gay/homosexual, and lesbian participants were recoded to identify each participant’s preferred object of attraction without attributing a sex assignment or gender identity to the subject; namely, attracted to females and attracted to males. For the trans participants, this recoding sometimes required the researcher to reference responses to Demographic Questions #4 and #5 regarding gender identity and genetic sex respectively in order to ensure accurate transformation of the data from binary specifiers of sexual orientation identity that reference the subject and love object (i.e., heterosexual, gay, lesbian) to “attracted to females” and “attracted to males”. Endorsements of bisexual, pansexual/queer, unsure/questioning did not make any such assignations to the subject and therefore did not require recoding. In sum, sexual orientation was delineated into the following categories: attracted to females, attracted to males, bisexual, pansexual/queer, unsure/questioning, and other.

An examination of the distribution of participants by gender (i.e., cisgender male, cisgender female, transmasculine, transfeminine) revealed differences between cisgender and transgender participants in terms of the distribution of participants across the sexual orientation
identity categories. These unanticipated differences resulted in an inability from a methodological and statistical perspective to make direct comparisons between cisgender and transgender participants by sexual orientation identity. Within the subset of cisgender participants, endorsement of sexual orientations was distributed across the sexual orientation categories that were included in the study (e.g., there were sufficient sample sizes of cisgender males and females endorsing sexual orientations in terms of attraction to females, attraction to males, bisexual, pansexual/queer). However, there were significant issues in terms of determining equivalent sexual orientation identity groups among the trans-identified individuals. In particular, there were differences in terms of the relative higher frequency with which trans-spectrum participants used sexual orientation identity labels such as pansexual, queer and 2-spirit that do not rely on a binary understanding of gender.

This difference in use of sexual orientation labels led to an inability to proceed in making direct comparisons between transgender and cisgender adults on this variable. By virtue of the manner in which sexual orientation identity was assessed (i.e., types of questions and wording of questions, such as use of binary sexual orientation terms as options for participants to indicate their sexual orientation identity like gay and lesbian rather than providing other options or separate questions that would have allowed participants to indicate a primary attraction to males, females, both, neither, or other), the data was limited, resulting in an inability to create groups to reflect heterosexual versus sexual minority trans-spectrum participants (for direct comparison with heterosexual versus sexual minority cisgender participants). The limitation in the data was primarily related to the small sample sizes within some sexual orientation identity categories, namely, trans-spectrum participants reporting a primary attraction to men. Although one consideration was to re-code the sexual orientation variable in order to achieve a four-group structure (i.e., cisgender heterosexual, cisgender sexual minority, trans-spectrum heterosexual,
and trans-spectrum sexual minority), this would have required relying upon behavioural data, which was incomplete. Furthermore, it was considered unacceptable to not honor participants’ self-identified sexual orientation identity labels chosen by them.

As previously stated in the methods section above, the decision to collapse the sexual orientation identity categories such that the trans-spectrum participants were included in a single group is not intended to reflect or endorse an idea that trans-spectrum individuals are homogenous in terms of sexual orientation or that the author of this study is confounding gender identity and sexual orientation in the analyses. Rather than attempting to impose a four-group structure that the data would not support due to limitations in the data created by the design of certain questions, the three- and six-group structures used in this study (as opposed to the intended four- and eight-group structures) reflects this limitation. However, despite the collapsed sexual orientation categories within the trans-spectrum groups, there was sufficient merit to conducting separate analyses of the trans-spectrum groups separately from the cisgender groups, which allowed comparisons between cisgender and transgender adults. This study is the first to have such a large sample with adequate composition in order to establish the psychometric properties of three commonly-used measures of love style, attachment style and interpersonal relationship satisfaction and to make direct comparisons of love and attachment style predictors of relationship satisfaction between a diverse sample of trans-spectrum adults endorsing a number of different sexual orientations to cisgender heterosexual and sexual minority adults.

Differences between cisgender and transgender adults in the patterns of endorsements of sexual orientation identity labels represent interesting, yet unanticipated findings of this study. Similar findings have also been reported in other recent research (e.g., Dargie et al., 2014; Kuper, Nussbaum, & Mustanski, 2012) that has pointed to the often fluid nature of the identities
of trans persons, not only with respect to gender expression but also sexual orientation (Carrera, DePalma, & Lameiras, 2012). These findings lend further support to the argument that trans-spectrum adults may prefer sexual orientation identity labels that do not require identifying a binary male or female object of attraction (Dargie et al., 2014; Kuper et al., 2012). This argument was initially made by Kuper et al. (2012) due to similar research findings related to the patterns of endorsements of sexual orientation labels among trans adults. Specifically, these researchers conducted an online survey of 292 trans people and found that most participants did not adhere to typical binary definitions of gender with respect to sexual orientation identity (e.g., heterosexual, lesbian, gay, bisexual), in that more than half identified their gender identity as genderqueer (as opposed to transgender or transsexual) and over a third selected pansexual or queer to denote their sexual orientation identity. These results are consistent with findings of the current study; however, within this study even a higher number of trans-spectrum minority adults endorsed pansexual or queer to denote their sexual orientation identity (i.e., approximately 50%).

The findings of this and other recent research (e.g., Dargie et al., 2014; Kuper et al., 2012) that trans persons tend to identify more frequently with sexual orientation labels of pansexual and queer in comparison to labels such as lesbian, gay, heterosexual and bisexual is likely explained by such terms relying on a binary understanding of gender, which is not necessarily representative of the experiences of trans persons. For example, the term lesbian communicates both that an individual self identifies as female, and that the object of that individual’s attraction is also female. The relationship between the individual and the object of her attraction is clear. However, these binary categorizations (i.e., male/female) are less relevant when we consider that gender identities do not fit within a binary mold. For example, the term bisexual loses meaning when we acknowledge that one can be attracted to individuals outside of the two-gender classification system (K. L. Blair, personal communication, November 25, 2013).
In addition, some individuals do not identify with any specific gender (e.g., endorsements of *queer* in relation to gender as opposed to transsexual or transgender) and others report that they are predominantly attracted to trans men, trans women, or individuals with queer gender identifications. Terms such as *lesbian*, *gay* and *bisexual* are problematic in such circumstances. By virtue of their non-binary experience of gender, it is somewhat intuitive that these groups would be unlikely to endorse more traditional conceptualizations of sexual orientation, including the labels *gay, lesbian, or bisexual*, which contain information in reference to both the gender of the subject and object of attraction. In addition, trans-identified persons may identify more strongly with sexual orientation labels such as *pansexual, queer* or *two-spirit* due to changes in sexual orientation before and after gender affirming surgery, particularly among trans women (e.g., Nieder et al., 2011; Weyers et al., 2009). Thus, an unanticipated but important implication of this research is that it adds further evidence that use of binary sexual orientation identity labels do not appropriately reflect the identities of trans persons as a group and use of such terms may be detrimental from a methodological standpoint in research that seeks to compare relationship experiences of cisgender and transgender adults where sexual orientation is a variable of interest.

**Limitations and Directions for Future Research**

The inclusive nature of this study represents an important extension of the romantic relationships literature to sexual and gender identity minorities; however, it is important to consider the limitations of this work. Participants were recruited from the Internet, bringing into question the generalizability of the results to people in general. Fraley (2004) argued that there is no such thing as an ideal sample obtained from the Internet, although the positives outweigh the negatives compared to student samples, historically the most commonly used in behavioural science. For example, it has been argued that Internet samples are inherently restricted given that
online research participants have access to the Internet and therefore tend to be more educated than the average person (Fraley, 2004; Reips, 2000). Despite this limitation, Fraley (2004) argued that Internet participants “are more likely to vary in age, income, country of origin, and occupation” (p. 282).

Some sampling limitations should be noted. One possible sampling-related limitation is that although the sexual and gender minority participants were recruited from LGBTQ-oriented blogs, classified advertising, forum posts, social networking sites, and email LISTSERVs related to community/advocacy/news organizations geared to the LGBTQ community, it is impossible to locate a comparable population of cisgender heterosexual individuals as no such analogous organizations exist that are centered around a cisgender heterosexual identity (Cochran, 2001). Thus, there may be systematic personality or other differences between the types of individuals participating in these LGBTQ interest groups and cisgender heterosexual individuals recruited from online mechanisms that were not specifically LGBTQ-oriented, such as general-interest blogs, classified advertising, forum posts and social networking sites. The sexual and gender identity minority participants in this study may also have a greater tendency to be involved politically with respect to their association with the various LGBTQ groups targeted for recruitment purposes in comparison to the cisgender heterosexual participants.

Another potential sampling issue relates to the distribution of participants by genetic sex. This study has a high proportion of cisgender female participants. This is similar to findings by Fraley (2004) and Fraley et al. (2011) who have indicated that Internet-based relationships research samples tend to have higher proportions of women. It has generally been argued that the disproportionate distribution of women in relationships research is a result of female socialization, specifically the argument that women are more interdependent and concerned with
close relationships than men (Cross & Madson, 1997; Fraley et al., 2011). Thus, there may be a self-selection bias that has occurred with respect to the cisgender female participants in this study. It also suggests that there may also be differences between cisgender males who decided to participate in this study compared to cisgender males in general (Fraley et al., 2011). A further sampling limitation is that this study was unfortunately unable to achieve sufficient numbers of intersex participants to conduct separate analyses with this group. An important direction for future research would be to more specifically target this group for inclusion in love research as there is currently a relative absence of literature regarding intimate relationship satisfaction among intersex persons and their intimate partners.

Another limitation of this study may relate to generalizability. This was manifested in several ways. First, the generalizability of the findings in this study may be limited in relation to class, race, and education. This research tended to consist of individuals primarily from industrialized capitalistic countries, specifically Canada, the United States of America, Australia, and various English-speaking European countries. The sample was primarily Caucasian and well-educated, although many other racial groups were represented. The results of this study may not apply to those in less privileged societies. In addition, there were indicators that people who completed all measures tended to be more educated, involved emotionally and sexually with their most recent partner, and more likely to endorse currently being in love than participants who provided incomplete data. Thus, the findings of this study may not fully generalize on these bases as well.

Generalizability of the findings of this study may be lacking with respect to certain types of relationships due to the wording of the LAS-SF, ECR-RS, SRS, and RAS, which asked participants to respond with their current or most recent *primary partner* in mind. Feedback was
received from three participants who took the time to contact the primary researcher by email and telephone that they felt their experience was not fully represented by wording in the surveys due to their involvement in openly polyamorous relationships in which they did not view one particular relationship as primary. Labriola (2003) provided an overview of various models of open/polyamorous relationship models and argued that the most commonly practiced form of polyamorous relationship is one in which the couple relationship is considered primary with any other relationships revolving around the couple as secondary relationships. Barker (2005) also described the most common polyamorous models as having two primary partners and other secondary partners forming “triads” (i.e., three person involvements), and “quads” (i.e., two couple involvements). A large-scale study by Mitchell, Bartholomew, and Cobb (2013) including 1,093 polyamorous individuals found that the majority of participants (i.e., 65.4%) identified one partner as primary. Although the wording of questions in the current study likely captured the majority of polyamorous participants’ relationship structures adequately, findings from this research may not fully generalize to individuals involved in open/polyamorous relationships where an individual does not consider themselves to have one particular primary partner. A direction for future research could be to begin with a question regarding how many partners with whom the participant is currently or most recently involved and then have participants complete the surveys in turn for each of these relationships separately. A methodology for assessing constructs across a number of different relationships is modeled by Fraley et al. (2011), who devised the ECR-RS to be used across multiple relationships (e.g., parents, friends, intimate partners, etc.). This methodology could also easily be applied to the LAS-SF and RAS to assess individual intimate relationships separately. Thus, a direction for future research would be to extend this research more fully to various polyamorous relationship formations.
Additional issues related to the generalizability of the findings from this research may also be related to the highly skewed dependent variable of relationship satisfaction, in which most participants endorsed being highly satisfied in their relationships. Given that the majority of participants also reported that their most current relationship was of relatively short duration, a positivity bias [a term coined by Metts and Bowers (1994)] may explain this result. Metts and Bowers (1994) argued that people in newer relationships tend to hide negative emotions, not only from their partner, but also from themselves; thus they are more likely to view their relationships in positive terms. Another explanation is that perhaps participants who were more highly satisfied in their relationship were more interested in participating in this study and receiving feedback that confirmed their positive views of their relationship. Whatever the cause, a limitation of this research was that the power of the model generated by the regression analysis may not be very high with those who score very low in interpersonal relationship satisfaction and the results will be much more accurate for those who are more satisfied in their relationship. A direction for future research might be to solicit participation in this type of research with clinical samples of distressed couples seeking intervention as well as individuals from the general population to achieve greater heterogeneity on the variable of relationship satisfaction to determine if the model still applies.

Regarding sexual orientation identity, the unanticipated tendency for trans-spectrum participants to disproportionately endorse pansexual, queer and two-spirit labels of sexual orientation identity in comparison to cisgender participants led to an inability to proceed in making direct comparisons between transgender and cisgender adults on this variable. In line with this pattern, a qualitative study of links between gender and sexual identity over time by Diamond and Butterworth (2008) indicated that two transgender female participants in that study preferred to adopt alternative sexual orientation identity labels such as pansexual and queer over
heterosexual gay/lesbian or bisexual labels in order to acknowledge the full spectrum of gender as opposed to dichotomous male/female categories. This preference of alternative sexual orientation identity labels such as pansexual and queer has also since been confirmed in other subsequent research (e.g., Dargie et al., 2014; Kuper et al., 2012). A possible direction for future research that would allow for direct comparisons between trans people and cisgender people could be to instead examine relationship composition and assess the gender of participants’ current or most recent intimate partner as male, female, transfeminine (or genderqueer genetic male) or transmasculine (or genderqueer genetic female). From there, comparisons could be made between cisgender and trans-spectrum participants in terms of the relationship couplings in which they are currently or were most recently involved (e.g., cisgender female involved with cisgender female; trans male involved with cisgender female, and so on). Another aspect of sexual orientation that could be included for future research is that of sexual attraction. For example, the Trans PULSE project provided a potentially useful question that could be used in future research, which asked, “Are you attracted to… ? (Please check all that apply)”, with the following response options: (a) trans men; (b) non-trans men; (c) trans women; (d) non-trans women; (e) genderqueer or bi-gender people; (f) none of the above; (g) other, please specify [for further information on this and other items in the survey, please see Trans PULSE (2012)]. For future research, an advantage to including an attraction item, in addition to the questions included in this study that pertained to sexual orientation identity and sexual behaviour, is that sexual orientation is commonly understood in terms of these three dimensions of identity, behaviour and attraction (Laumann, Gagnon, Michael, & Michaels, 1994). Another option for future research in terms of assessing sexual attraction as one component of sexual orientation would be to incorporate objective measures of sexual attraction. For example, a measure of pupillary dilation could be included, which is used in studies of sexual attraction by researchers
at Cornell University (e.g., Rieger & Savin-Williams, 2012) and is less invasive than other types of measures of sexual response, such as penile plethysmography (e.g., Blanchard, Klassen, Dickey, Kuban, & Blak, 2001; Freund, 1991) or vaginal photoplethysmography (e.g., Chivers, Seto, & Blanchard, 2007).

Most studies examining health outcomes among LGBTQ communities have used a variety of methods to assess sexual orientation – most commonly, measures assessing sexual orientation identity (i.e., self-reported sexual orientation identity labels), behavioural measures [i.e., questions requesting participants specify the gender(s) of their sexual partners over a specified period of time – most commonly the past year, five years, or lifetime], or a combination of sexual orientation identity and behaviour [for further detail regarding these methodologies and a summary of references of each, see Bauer and Brennan (2013)]. Another commonly used measure to assess sexual orientation in research has been the Kinsey Scale (Kinsey, Pomeroy, & Martin, 1948) in which individuals specify their sexual orientation on a spectrum, typically using a seven-point (or sometimes five-point) Likert scale typically ranging from 0 (exclusively heterosexual) to 6 (exclusively homosexual). One consideration for using this measure in future research relates to findings from the current study in which trans people tend to use the terms heterosexual and homosexual in different ways to describe similar relationship compositions.

Given some of the limitations associated with using sexual orientation identity labels, particularly among transgender individuals, future research could also expand the results of this study by possibly including different measures of gender and sexuality, such as Alderson’s (2012, 2013a) Sexuality Questionnaire. This measure takes into consideration trans identities, in addition to sexual orientation self-identified labels, attractions, sexual preference, behaviours,
fantasies, propensity to fall in love, etc. This is a relatively new measure and some of the psychometric properties are described in Brown and Alderson (2010); specifically, the measure has shown good internal consistency (alpha = .85) for the full scale and alpha’s ranging from .84 for items assessing opposite gender interest and .94 for items assessing same gender interest. Unfortunately there is not yet a consensus about the best methods for assessing sexual orientation and gender identity (Moradi, Mohr, Worthington, & Fassinger, 2009). Future research should endeavour to establish this to ensure an ability to compare results across studies.

Another limitation of the current study relates to the operationalization and assessment of sexual orientation used in this study, which was conceptualized categorically and as a “snapshot” at a particular moment in time. By way of the demographic questionnaire, participants were provided with 14 potential sexual orientation labels, along with definitions, and asked to select one that they felt best described their current sexual orientation. One of the 14 options provided was “Other (please specify)”, including a text box in which participants could choose a different label other than the other 12 provided, or they could even provide a description of their sexual orientation if they so wished. This method of assessing sexual orientation may or may not be an accurate reflection of participants’ actual sexual orientation across time or across various other dimensions such as sexual attraction, romantic affections, or sexual behaviour. A number of studies have shown that many individuals prefer not to adopt sexual orientation labels at all, and for many people, a sense of one’s own sexuality or sexual identity can change within different relationship contexts or partners and over the course of one’s life, particularly among women (Diamond, 2006b, 2006c, 2008a, 2008b; Diamond & Butterworth, 2008; Rust, 1993; Stokes, McKirnan, & Burzette, 1993). In addition, the provision of labels with definitions to conceptualize sexual orientation advocates an operationalization of sexual orientation in terms of sexual orientation identity. This is problematic, as it may suggest that sexual identity labels are
predetermined or fixed, promoting an essentialist view of sexual orientation (i.e., certain identities are natural, inevitable, and unchanging). Alternatively, constructivists have argued that the use of sexual orientation identity labels “belie the unique and unfolding nature of growth and development as a sexual person” – that labels, once chosen by a person as part of their unique process of “sexual meaning making”, can be limiting, constrictive, and oversimplify the complexity of an individual’s sexual development over time (Cross & Epting, 2005, p. 53). Similarly, Diamond and Butterworth (2008) have stated that traditional models of sexual and gender identity development that essentialize identities and conceptualize these processes as fixed (i.e., unchanging) and dichotomous (i.e., heterosexual versus gay/lesbian; male versus female), do not sufficiently account for experiences of gender and sexuality as fluid (i.e., changeable over time in response to particular contexts) and potentially multifaceted (e.g., sexual orientation identities such as bisexual, pansexual, queer, etc., and gender identities such as genderqueer, gender fluid, etc.). These authors also argue a social constructionist view (i.e., sexual orientation identity is determined within various socio-political contexts) and that society exerts “relentless pressure toward categorization in the domain of sexual orientation and identity” (Diamond & Butterworth, 2008, p. 373). However, labels can also have advantages in that they can be affirming and can represent safety, belongingness, and a consolidation of one’s experience with meaningful language (Cross & Epting, 2005). A direction for future research might include a mixed methods design in which further detail about participants’ choice of sexual orientation labels are explored qualitatively. Another direction for future research might be to examine predictors of relationship satisfaction using a repeated measures longitudinal design in which participants are assessed at various points over the course of their lives and potentially across various relationship contexts for determining the generalizability of the findings of this study.
It is important to note that the groupings used for the purposes of statistical analyses in this study were necessary to facilitate a quantitative methodology and may represent broad-stroke comparisons that may not adequately reflect differences within the groups on dimensions of sexuality and gender. In terms of sexuality, differences in the diversities of sexual orientation identities among the participants were collapsed for the cisgender sexual orientation minority group, consisting of individuals endorsing various sexual orientation identity labels such as gay/lesbian, bisexual, pansexual, queer, etc. This limited the ability to make comparisons between various subgroups, which represent areas for future exploration.

Similarly, in terms of gender, various subgroups of trans participants were also grouped together. The terms “trans”, “trans-spectrum”, “transfeminine” and “transmasculine” were utilized as umbrella terms to refer to various sub-identities within the gender identity spectrum. This also limited the ability to compare and contrast various participant subgroups. Within the umbrella term of trans-spectrum, there is a great deal of variability with respect to a variety of gender identities endorsed by participants in this study, including transgender, FTM, MTF, transman, transwoman, genderqueer, gender fluid, transsexual, two-spirit, and so on. Furthermore, certain sexual orientation identities that were underrepresented in the sample of trans participants (i.e., namely trans-spectrum participants endorsing a primary attraction to males) resulted in the need to collapse categories across sexual orientation identity to facilitate quantitative analyses with sufficient statistical power. This limited the ability to make comparisons among subgroups of trans people, such as by sexual orientation identities and between trans people and cisgender people by sexual orientation identity. Future research should endeavor to acquire larger samples of trans-spectrum participants representing a wider variety of diverse sexualities of trans-identified individuals.
It is not clear what factors might be relevant to the limited number of transfeminine and transmasculine participants endorsing a primary attraction to men in this study. In terms of transmasculine individuals, from a historical perspective it has long been assumed that virtually all FTMs were attracted to women and it was quite rare for FTMs to be attracted to men (American Psychiatric Association, 2000). If this were true, then the greater difficulty recruiting FTMs attracted to men would be easily explained. However, a relatively recent Internet study of more than 1,000 FTMs indicated that FTMs engage in sexual relationships with all types of partners (Meier, Green, & Dickey, 2010) and various other studies have indicated that the sexual attractions of FTM people are more diverse than previously thought (Bockting, Benner, & Coleman, 2009; Meier, Pardo, Labuski, & Babcock, 2013). It could be that even among FTM individuals with a primary attraction to men, individuals preferred to utilize sexual orientation identity labels such as pansexual, queer, or two-spirit. It could also be that FTM participants with primary attractions to men were truly absent from this research. Regarding transfeminine individuals, low numbers of participants endorsing a primary attraction to men could potentially be explained by the two trajectory developmental model of MTFs described by the American Psychiatric Association (2000). This model describes two subtypes of MTF people – sometimes referred to as primary transsexual women and secondary transsexual women (Alderson, 2013b). The recently published DSM-5 (American Psychiatric Association, 2013) now distinguishes among two groups of individuals with a diagnosis of gender dysphoria (i.e., “a marked incongruence between one’s experienced/expressed gender and assigned gender”), referring to these groups as early-onset and late-onset (p. 452). According to the American Psychiatric Association (2013), the early-onset form in natal males tends to be characterized by the development of cross-gender experience/expression in childhood, an increased likelihood of experiencing exclusive sexual attraction towards men, and, where gender-affirmation
interventions are desired, there is a tendency to present for medical treatment (e.g., hormone treatments, surgery, etc) in late adolescence and early adulthood. Asschemann and Gooren (1992) asserted that these individuals ultimately tend to become more “passable” as female through transition, having less to overcome in terms of the degree of hormonal masculinization. It could be that this particular group, owing to their greater ability to live their lives “stealth” (i.e., nondisclosing of their transition history) as women may be less likely to identify or be desirous of affiliation with some of the trans advocacy organizations targeted for recruitment in this study. Conversely, the American Psychiatric Association (2013) has indicated that, among genetic males with gender dysphoria, the late-onset form tends to be characterized by the development of cross-gender experience/expression later in life (i.e., early to middle adulthood), a greater tendency to have lifetime histories of sexual involvements primarily with women, and, where gender affirmation interventions are desired, a tendency to present later in life for medical interventions. Asscheman and Gooren (1992) argued that because these individuals have more to overcome in terms of the degree of irreversible hormonal masculinization they tend to have more difficulty “passing” as natal females.

It was not possible based on information gathered in the current study to determine the percentage of the MTF participants who might fall into these two posited trajectory categories of MTF transsexuals and how this might relate to sexual orientation identity. However, it is important to note that the use of sexual orientation identity labels may have masked actual primary attractions to men by participants who preferred alternative labels such as pansexual and queer. It is also possible that this sample consists of a greater percentage of MTFs who have followed the later onset trajectory of transsexualism and therefore were less likely to experience primary or exclusive attractions to men. In addition, secondary MTF transsexuals may have been more likely than primary MTF transsexuals to be involved with the LGBTQ organizations for
support due to increased minority stressors associated with transitioning later in life and possibly a greater tendency to be involved in political advocacy. As a result, this study may have disproportionately recruited greater numbers of late-onset/secondary MTF transsexuals (i.e., with a tendency for greater bisexuality and primary attraction to females) compared to early-onset/primary MTF transsexuals (i.e., with a tendency for primary attractions to men). However, it should be noted that information pertaining to trans-spectrum participants’ desire for or pursuit of medical intervention (e.g., use of hormones, gender affirmation surgeries), if any, was not gathered in this study. A direction for future research would be to seek larger sample sizes of trans-spectrum participants in which retrospective data is gathered that might speak to the developmental trajectory of the participants’ trans identities. Another potential direction for future research would be to gather additional information about participants’ sexual attractions, romantic affections, and so on, in the hopes of recruiting greater numbers of MTF and FTM individuals with primary attractions to men.

**Strengths and Significance of the Study**

This study represents the first empirical psychological study of love and attachment style predictors of relationship satisfaction inclusive of both heterosexual and LGBTQ communities. Using the Internet to conduct this research was successful for recruiting a large sample consisting of sexual and gender minority participants. In comparison to many studies of sexual and gender minorities in which the researchers have relied primarily on use of convenience samples or social circles within LGBTQ communities (Peplau & Spalding, 2000), this study has the strength of not utilizing a convenience sample for recruitment, yet still reaching the objectives of obtaining a large diverse sample. The use of the Internet provided a forum in which sexual and gender minorities could participate with a guarantee of anonymity and strict confidentiality of personal
responses. Reaching the trans-spectrum participants in particular proved to be the most difficult task, likely in part because this group tends to be small relative to the general population [e.g., the American Psychiatric Association (2000) estimates the prevalence of individuals seeking gender reassignment as 1 per 30,000 adult males and 1 per 100,000 adult females] and these individuals may be especially reluctant to participate in research due to stigma within a society that already tends to be highly rejecting of them. More importantly, a history of past exploitation of trans communities in research wherein individuals have been studied as objects of interest by psychologists and medical professionals acting as both “experts” from outside the community and gatekeepers to medical transition procedures has resulted in further pathologizing and stigmatization [Travers et al., 2013; American Psychological Association of Graduate Students’ (APAGS) Committee on LGBT Concerns, 2014]. This history has inevitably led to a tendency for people in the trans community to understandably distrust individuals and organizations seeking to include trans people in their research. Despite these challenges, a reasonably large sample of trans-spectrum participants took part in this research, allowing for progress towards a more comprehensive literature on love relationships and relationship satisfaction inclusive of trans persons. It is believed that this was accomplished through use of a thoughtful and transparent recruitment strategy and methodology that ensured a sensitive approach by way of recruitment letters, advertisements and study materials using respectful and inclusive language that conveyed both understanding and appreciation of trans identities and issues. In addition, it is thought that the incentive for participants to receive a copy of their personalized love and attachment styles report with interpretation functioned to both provide incentive for some (i.e., 25% of the study sample), yet perhaps more importantly, communicated a transparency and openness regarding the intent of the study. It is thought that these factors may have been more salient for trans people and other marginalized populations who may be concerned that
information they provide might be used to further marginalize them. In addition, recruitment posters expressing a desire for inclusivity of people of various sexual orientation and gender identities may have also provided some incentive to participate. Rather than studying one subgroup in isolation, the fact that the purpose of this study was to be as inclusive as possible of a variety of sexual orientations and gender identities may have been particularly appealing. Overall, the study was quite well received and a number of participants took the time to email letters containing positive feedback that they appreciated the opportunity to take part in a study that was interesting and informative to them on an individual level (e.g., thinking through certain questions, such as selecting sexual orientation labels that best described their sexual orientation through a process of examining various definitions, thinking through their responses to questions about love styles and attachment within the context of a particular relationship, receiving their individualized love and attachment style scores and information about the meaning of the results), as well as being important to broadening the scope of the collective understanding of love and attachment inclusive of a variety of people in terms of diverse gender identities and/or sexual orientations (e.g., an awareness that the results of this study would be incorporated within this dissertation research and possible future journal publications, contributing to increased understanding about people’s intimate relationship experiences).

This study provides further confirmation of love style and attachment style theory and represents an important extension of the considerable body of research on experiences of love among mainstream cisgender heterosexual individuals. The study of factors that predict interpersonal relationship satisfaction in the context of intimate relationships are particularly poignant given that it is one of the most important predictors of relationship stability and sustainability (Masuda, 2003; Sternberg & Hojjat, 1997). The current research is the first to collectively explore love styles and relationship-specific attachment styles as correlates of
relationship satisfaction among those of different genders (including transgender individuals) and a wide range of sexual orientations.

Examination of evidence that the measures used in this study are psychometrically sound for use with the minority groups has the potential to both promote their use in future research and for practical applications, such as therapy sessions with clients of diverse gender identities and/or sexual orientation identities. In the pursuit of a more comprehensive literature of love research dedicated to the well-being of various types of relationship formations inclusive of heterosexual and queer sexual orientations, as well as both cisgender and transgender people (with varying desires with respect to transitioning), there is a need for sound measures that reflect the diversity of modern-day mainstream society. This study overcomes a common problem in sexual and gender minority research in which the psychometric properties of adapted measures are not often provided much attention (Moradi et al., 2009).

**Implications for Clinical Practice**

In terms of practical applications, the measures used in this study have been shown to be useful tools in couple’s therapy with heterosexual adults such that therapists can use these measures to provide a context to promote insight into one another’s love behaviour by examining each partner’s responses. Hendrick and Hendrick (2006) argued that this insight can provide couples with a language for talking about aspects of their relationship, which can lead to an inclination to make more positive attributions of the behaviours through which their partner expresses their love. This is clinically relevant because in the marriage literature, attributions, or how an individual explains his or her partner’s behaviour, have been shown to be positively correlated with relationship satisfaction [e.g., see Bradbury and Fincham (1990) for a review].
Although the LAS-SF was originally developed for research purposes, the authors have suggested that it can also be used creatively in clinical applications (Hendrick & Hendrick, 2003). For example, in the context of couples counselling the authors have suggested that counsellors, knowing that research has consistently shown passionate love to be positively related to relationship satisfaction, optimal use of the scale would likely involve using partners’ scores to stimulate a non-judgmental discussion about how the partners view love within their relationship. The authors have also suggested a method wherein counsellors can facilitate identification of aspirational goals for therapy by administering the measure twice to each partner – once as a reflection of current reality of the love relationship and once as they would ideally like it to be. Goals are important to therapy because they are an important aspect of motivation (Arkowitz, Westra, Miller, & Rollnick, 2008; Beck, 1995). Goals also provide direction, both to the therapist and the client. For example, once goals are identified, the therapist and client can collaborate together to identify barriers to be addressed and identification of possible therapeutic techniques to be implemented as part of treatment.

In addition to contributions to creating a more comprehensive close relationships literature, the results of this study have implications for the assistance provided by psychologists to individuals in both mainstream and diverse intimate relationships who seek greater satisfaction in their relationships. Adding to scientific knowledge of attachment by exploring how attachment styles relate to love styles and relationship quality, this information can help educate therapists working with sexual orientation and gender minorities to recognize the qualities that LGBTQ individuals value in their relationships and how these values might be associated with relationship satisfaction. Knowing that attachment avoidance and anxiety are negatively associated with relationship satisfaction can aid clinicians in being proactive with clients that may tend to have relationship difficulties and open up avenues for discussion with clients once
their dominant attitudes, beliefs and motivations are identified in therapy. Once identified, therapists are in a unique position to intervene with respect to attachment avoidance and anxiety. For example, several therapeutic modalities consider attachment to be malleable, changeable between relationships, and modifiable through therapeutic techniques and processes (for an overview, please see Wei, 2008); for example, cognitive behavioural therapy (e.g., Dattilio, 2010; Young, Klosko, & Weishaar, 2003), psychodynamic therapy (e.g., Wallin, 2007), and experiential therapy (e.g., Elliott, Watson, Goldman, & Greenberg, 2004). Furthermore, knowing that erotic/passionate love and domains of attachment security are positively associated with relationship satisfaction may also aid clinicians in identifying strengths in relationships of LGBTQ clients and, in the absence of identifiable issues with respect to love styles and attachment, point them towards other factors for consideration, such as the impact of social context. This is important in working with diverse sexual orientation and gender identity individuals who have a common struggle of having to frequently cope with various minority stressors (e.g., issues of coming out, potential lack of support from family members, overt and covert discrimination, acts of violence, and so on) as this forms a unique context for intimate relationships that may also ultimately affect their satisfaction in relationships.

Summary and Conclusions

It is hoped that this research represents a step towards a more comprehensive literature on love relationships and promotes the advancement of the study of adult intimate relationships across diverse continuums of sexual orientations and gender identities. The evidence this study provides regarding the acceptable psychometric properties of the LAS-SF, ECR-RS, and the RAS among cisgender sexual orientation and trans-spectrum samples confirms that there is a standard way to assess love styles, relationship-specific attachment styles, and relationship
satisfaction within both research and clinical contexts among individuals of various sexual orientations and gender identities. It also provides further confirmation of love style and attachment style theories extending to those of diverse sexual orientations and gender identities, representing an important contribution to the literature by extending the considerable body of research on experiences of love among mainstream cisgender heterosexual individuals.

In terms of the role of love and attachment styles with respect to relationship satisfaction, a number of commonalities were revealed between groups. Eros was found to be a strong positive predictor and attachment orientation in both domains of anxiety and avoidance were found to be strong negative predictors of relationship satisfaction among cisgender heterosexual males and females, cisgender sexual orientation minority males and females, transfeminine persons and transmasculine persons. Thus, there are strong similarities in terms of love and attachment style predictors of relationship satisfaction, with very minor love style differences involving Mania, Agape, and Ludus for certain groups. Specifically, the Agape love style was a very small but significant positive predictor of relationship satisfaction among cisgender heterosexual and cisgender sexual minority females, Mania was a very small but significant negative predictor of relationship satisfaction for cisgender sexual minority females, and Ludus was a very small but significant negative predictor of relationship satisfaction for cisgender sexual minority males.

In summary, it can be concluded that in terms of love and attachment style predictors of relationship satisfaction, there are several strong similarities among individuals of various sexual orientations and gender identities, and where differences do exist, they account for very little in terms of understanding relationship satisfaction. The relationships of individuals of diverse sexual orientations and gender identities have historically been characterized as aberrant,
“different”, of lower quality, and less satisfying; yet this and other research confirm that there are more similarities than differences in terms of what makes us happy in our most intimate relationships. Although differences in love and attachment style predictors of relationship satisfaction were very small, they are important to consider. The implications of this echo an important point made by Dargie et al. (2014) that while there is considerable merit to utilizing inclusive research designs, it is important to recognize that, despite sometimes similar experiences among individuals represented by the various LGBTQ groups, the heterogeneity represented by the acronym needs to be appropriately taken into account to maximize the generalizability and utility of findings in relation to diverse intimate interpersonal relationship compositions and configurations.
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APPENDIX A: DEFINITION OF TERMS

**Adult Attachment**: An emotional bond that develops between adult romantic partners (Fraley, 2010; Hazan & Shaver, 1987). Hazan and Shaver (1987) drew comparisons between adult romantic relationships and infant-caregiver relationships, arguing that romantic love is a property of the attachment behavioural motivational system from childhood that functions as a motivational system within adult relationships (Fraley, 2010; Mikuliner, 2006). Hendrick and Hendrick (2006) argued that romantic love and attachment are separate constructs among adults in relationships. According to attachment theory and research, individuals differ from one another in the way they think about relationships in two fundamental ways, conceptualized in terms of two overall continuous dimensions of attachment and avoidance (Brennan et al., 1998; Fraley & Shaver, 2000). See also Attachment Anxiety and Attachment Avoidance.

**Approaches to Sexual Relationships**: Based on Clark and Mills (1979) theory of relationship orientation based on rules of giving and receiving of benefits in relationships, Hughes and Snell (1990) attempted to apply the theory of exchange versus communal approaches within of the realm of sexual relationships and developed the Sexual Relationship Scale (SRS) in an attempt to test the applicability to this dimension of intimate relationships. Building on previous social exchange theory, Hughes and Snell (1990) stated that individuals with a tendency to approach sexual relations from a communal perspective feel “responsible for and involved in their partners’ sexual satisfaction and welfare in order to please them”, whereas people with an exchange approach do not feel any special responsibility for their partners’ sexual satisfaction and welfare, “giving of sexual pleasure in response to sexual benefits received in the past or expected in the future” (p. 152).
**Attachment Anxiety**: Related to individuals’ working models about themselves, this form of attachment represents the degree to which an individual is sensitive to perceived threats of rejection or abandonment (Fraley, 2010).

**Attachment Avoidance**: Related to individuals’ working models about others, this form of attachment represents the degree of willingness a person has for relying on others for support in times of need (Fraley, 2010).

**Asexuality**: A tendency to not experience or an absence of sexual attraction to others (Usher, 2006).

**Autosexual**: A preference for engaging in self-gratification (e.g., masturbation) over engaging in other forms of sexual activity.

**Biphobia/binegativity**: Fear of and/or negative social attitudes towards bisexual people and the notion of bisexuality.

**Bisexuality**: A term used to indicate an experience of attraction to both males and females. See also Sexual Orientation.

**Cisgender**: A term first coined online by the transgender community, which has been defined by Schilt and Westbrook (2009) as a label for “individuals who have a match between the gender they were assigned at birth, their bodies, and their personal identity” (p. 442), in other words, people who do not identify with a gender diverse experience. The term has recently been used in academic publications (e.g., Green, 2006). See also gender and transgender.

**Cisnormativity**: A view that all people are or should be cisgender (i.e., a perception or belief that everyone has a gender identity that is the same as their biological sex). The term is
also used to refer to a belief that the bodies and/or identities of trans people are somehow less real, authentic or “normal” (Travers et al., 2013).

**Gay**: A term that has largely replaced *homosexual* in referring to men “who are sexually and affectionally attracted to other men” (National Lesbian and Gay Journalists Association, 2010). For women, the term *lesbian* is generally used; however *gay* is also sometimes used to describe women “sexually and affectionally attracted to women” (National Lesbian and Gay Journalists Association, 2010). See also *Lesbian* and *Sexual Orientation*.

**Gender**: A term referring to “attitudes, feelings and behaviors that a given culture associates with a person’s biological sex” (American Psychological Association, 2011). See *sex*.

**Genderqueer**: A general category for various gender identities other than the gender binary of male and female (Usher, 2006). A person who is genderqueer may experience their gender as somewhat male and somewhat female, or neither at all. See also *gender binary*.

**Gender Binary**: A traditional idea that there are only two genders – male and female (Usher, 2006).

**Gender Dysphoria**: A DSM-5 diagnosis defined as, “A marked incongruence between one’s experienced/expressed gender and assigned gender, of at least 6 months’ duration”, as manifested by at least six diagnostic criteria, with associated clinically significant distress or impairment (American Psychiatric Association, 2013).

**Gender Fluid**: A term used to describe an experience of fluidly moving between genders such that an individuals’ gender is not something experienced as fixed. This experience may
occur in response to different situational or relational contexts or in response to no particular cue (Usher, 2006)

*Gender Identity*: A person’s emotional and psychological sense of being either male or female, which may or may not match their biological sex. See also *sex*.

*“Gender Identity Disorder”*: A psychiatric diagnosis defined in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; DSM–IV–TR; American Psychiatric Association, 2000) as consisting of two main components in adults: (a) persistent cross-gender identification (i.e., the desire to be, or insistence that one is, of the other sex); and (b) persistent discomfort (also sometimes referred to as *gender dysphoria*) about one’s assigned sex or sense of inappropriateness in the gender role of that sex (American Psychiatric Association, 2000). See also *gender dysphoria, transgender* and *transsexual*.

*Gender Minority*: A term used to refer to a group of individuals who are non-cisgender. See also *LGBT, transgender* and *transsexual*.

*Heterosexism*: A belief or attitude that heterosexuality as the only legitimate form of sexuality.

*Heterosexual*: A term used to describe an individual whose sexual and affecational attraction is to someone of the opposite sex (National Lesbian and Gay Journalists Association, 2010).

*Homophobia/homonegativity*: Fear of and/or negative social attitudes towards those in same-gender relationships.
**Intersex**: A term referring to “persons born with atypical combinations of features that usually distinguish male from female”, which can include various indicators of biological sex, such as sex chromosomes, gonads, internal reproductive organs, and external genitalia (American Psychological Association, 2011).

**Lesbian**: A term used to describe women “who are sexually and affectionally attracted to women” (National Lesbian and Gay Journalists Association, 2010). See also *Gay, Lesbian* and *Sexual Orientation*.

**LGBT**: An acronym used since approximately the 1990’s that refers collectively to lesbian, gay, bisexual and transgender people. The term is sometimes used inclusively to refer to anyone who is non-heterosexual (Shankel, 2006) and non-cisgendered, often labeled *sexual orientation minorities* and *gender minorities*. To recognize this inclusion, popular variants have emerged, including LGBTTIQQ2SA (lesbian, gay, bisexual, transgender, transsexual, intersex, queer, questioning, two-spirited and allies), which was recently used in media advertisements for Toronto’s 2011 30th Annual Pride Week celebrations. Despite several variants, the LGBT acronym has become mainstream and has been adopted by the majority of sexual orientation and gender minority community centers and media in North America and other English-speaking nations (National Lesbian and Gay Journalists Association, 2010).

**Love Style**: A term coined by Lee (1973, 1974) to describe a set of six constructs that reflect attitudes or beliefs that people have about love relationship(s). A snapshot summary of the six love styles (or love attitudes) provided by Hendrick and Hendrick (2006) include as follows: “Eros (passionate, erotic), ludus (game-playing, uncommitted), storge (friendship), pragma (practical, calculating), agape (altruistic, giving), and mania (obsessional)” (p. 150). For further elaboration on the love styles see Appendix B.
**Monosexism:** A view or perception that only single-gender sexual orientations such as heterosexuality, lesbianism and homosexuality are legitimate, resulting in social discrimination for those of other sexual orientations (e.g., bisexuality, pansexuality) from those of single-gender sexual orientations.

**Pansexuality:** Derived from the Greek pre-fix ‘pan’, meaning ‘all’, this term refers to individuals having a capacity of attraction to others regardless of their gender identity or biological sex, including openness to potential attraction to men, women or trans, intersex or genderqueer individuals. Pansexuality differs from bisexuality in that it implies an openness to individuals who fall at all points or outside of the gender continuum (Usher, 2006).

**Queer:** An umbrella term that is sometimes used to denote “not heterosexual” (Usher, 2006). It may also be used to refer to one’s gender; however, the more common term for this would be genderqueer. See also gender queer.

**Relationship Satisfaction:** A partners’ subjective valuing of a meaning produced within a relationship (Hendrick, Dicke, et al., 1998).

**Sex:** A term referring to “a person’s biological status, typically categorized as male, female, or intersex” (American Psychological Association, 2011). See intersex.

**Sexual Orientation:** A term referring to “the sex of those to whom one is sexually and romantically attracted” (American Psychological Association, 2011). Mayer et al. (2008) warns that the term “encompasses more than sexual behavior because individuals may identify with a specific sexual minority group without expressing those behaviors”, citing Johnson, Mimiaga and Bradford (2008)’s definition of lesbian as “women primarily oriented to other women”, gay
as “men primarily oriented to other men”, and bisexual as “individuals oriented to both men and women” (p. 990).

**Sexual Orientation Minority:** A term used to refer to a group of individuals who are non-heterosexual. See also LGBT and sexual orientation.

**Transgender:** Used within the LGBT umbrella, the terms transgender is often used “as an inclusive term to describe people who have gender identities, expressions, or behaviours not traditionally associated with their birth sex” (Mayer et al., 2008, p. 990). The term “may describe individuals who have undergone hormone treatment or surgery to reconstruct their bodies” (sometimes referred to as transsexuals) “or to those who transgress gender categories in ways which are less permanent” (Hines, 2006, p. 353). See transsexual and transsexualism.

**Transphobia/Transnegativity:** Fear of and/or negative social attitudes towards transsexualism and/or transsexual or transgender people.

**Transsensuality:** A term used to describe attraction to transgender or transsexual people.

**Transsexual:** A term used to describe an individual who is “uncomfortable being regarded by others, or functioning in society as, a member of their designated sex at birth and often seek hormonal and surgical treatments to alleviate their discordance” (Ettner, 2007, p. 109). This discordance is referred to as gender dysphoria. See Gender Identity Disorder, transgender and transsexualism.

**Transsexualism:** “The condition whereby one desires to change one’s natal sex” (Ettner, 2007, p. 109). See also transgender and transsexual.
Two-spirit: This term is an English translation for many different words in a variety of Aboriginal tribal languages referring to males and females who assume and live in various gender roles that differ from those considered traditional to their anatomical birth sex (Usher, 2006). The term can be used to refer to an individuals’ sexuality, gender identity, or both.
APPENDIX B: LOVE STYLE DEFINITIONS

Lee (1974) argues that the various styles of love are equally valid. The key characteristics of the following six Styles of Loving (as measured by the Love Attitudes Scale by Hendrick, Hendrick, et al., 1998) are described by Lee (1988) as follows:

**Eros** – “the Love of Beauty”

- Eros lover knows what physical features he/she likes in a partner;
- Gets involved quickly on many levels – Eros lover shares all of him/herself with partner, and there is an intense focus on the partner;
- Powerful physical attraction and emotional passion;
- Eros may be quick to develop and may also be quick to end.

**Ludus** – “Playful Love”

- Love as a game – love and sex are seen only as fun or an activity;
- Ludic lovers move from partner to partner and may have several at a time, although they do not wish to hurt anyone;
- Passion is for the “game of love”, not the partner.

**Storge** – “Companionate Love”

- Based on long-term friendship of strong affection;
- Does not tend to be overly exciting or passionate;
- Storge relationships are strong, secure, stable and trusting;
- Focus is on long-term commitment; thus, it places less emphasis on passion, lust and sex.

**Mania** – “Obsessive Love”

- Intense mental preoccupation, but little satisfaction;
- The love is passionate, however tends to be turbulent and ambivalent;
- Manic lover is likely to be possessive, jealous and doubtful.

**Pragma** – “Realistic Love”

- Rational and practical; based on evaluation of “marketability”;
- Pragma lovers evaluate their potential mates very carefully for their suitability, and tend to place more emphasis on their partner being suitable as opposed to passion or pleasure;
- Intense feelings may develop once a partner is chosen.

**Agape** – “Altrusic Love”

- Generous, unselfish giving of oneself;
- Love is unconditional (i.e., no return is expected);
- Less emphasis on passion and sexuality.
Dear __________________:

My name is Lisa Couperthwaite and I’m a Doctoral student in Counselling Psychology at the University of Toronto, Ontario Institute for Studies in Education (OISE). I am presently working on my Doctoral Dissertation research to learn more about love and attachment styles, approaches to sexual relationships and experiences in close relationships under the supervision of Dr. Mary Alice Guttman.

I am writing to seek your permission to post the attached announcement on your [website/LISTSERV] in the hopes of recruiting some participants for my online research study. Past research in the area of intimate relationships has typically focused on primarily heterosexual participants. Of particular importance to my research is to recruit a diverse sample of participants and ensure representation of sexual orientation and gender minority groups. Many people find participating in this research interesting because the program analyzes their responses and provides them a personalized summary of the love and attachment style information they provided.

Your assistance would be greatly appreciated in circulating the attached announcement. Please contact me with any questions, concerns or comments. My contact information can be found below.

Sincerely,
Lisa M. Couperthwaite, M.A., Ph.D. (Candidate)
University of Toronto (OISE)
Email: lisa.couperthwaite@utoronto.ca
Phone: (xxx) xxx-xxxx

Email Attachment:

“Have you ever wondered what your love and attachment styles are and what they mean? I’m a doctoral student completing my dissertation at the University of Toronto to learn more about love and attachment styles and experiences in romantic relationships. No matter if you are straight, gay, lesbian, bisexual, same-gender loving, same-sex partnered, transgender or transsexual person, we invite your participation. You can participate if you are over the age of 18 and if you have either dated, been in love, been sexually active and/or been involved in a romantic relationship(s) at some point in your life. In return, you will receive your personalized love and attachment style results. Please click the following link: www.____.com”.
APPENDIX D: SAMPLE LETTER TO TRANSGENDER/TRANSSEXUAL ADVOCACY ORGANIZATION MANAGERS/DIRECTORS

Dear ________________:

I am a Doctoral student in Counselling Psychology at the University of Toronto, Ontario Institute for Studies in Education (OISE). I am presently working on my Doctoral Dissertation entitled, “Love Styles, Attachment and Relationship Satisfaction Among Sexual Orientation and Gender Minority Adults” under the supervision of Dr. Mary Alice Guttman.

Despite a great deal of research on individual differences between people in love relationships, such as factors that improve relationship happiness, an area that has received little attention is potential differences and similarities between mainstream heterosexual cisgendered people and sexual and gender minorities. My research study will not only seek to fill this gap in the psychology professional literature, the knowledge could also be applied in practical contexts. For example, it has the potential for practical applications in opening up greater understanding of the individual differences in love styles and attachment and their impact on relationship satisfaction for clinicians working with clients presenting with difficulties involving love. The measures used in this study are useful tools in couple’s therapy and partners can be aided in providing a context for insight into their own and their partner’s love behaviour when learning about their own and their partner’s responses. Establishing their usefulness with a wide range of sexual and gender minority groups will allow them to be used with these populations. The research also has the potential to debunk some commonly held stereotypes and myths about the relationships of sexual and gender minorities.

My purpose in writing to you is to seek your permission to post preferably an electronic advertisement (e.g., listserv, web forum, etc.), or alternatively a hard-copy advertisement, for those affiliated with your organization to see. In appreciation for your assistance, I would be willing to provide a written copy of the results of the study to your organization, if you desire. Many people find participating in this research interesting because the program analyzes their responses and provides a personalized summary of the love and attachment style information provided.

Enclosed for your review is a brief description of my research contained on an information sheet that will be provided to all participants, as well as a copy of the advertisement that I would like to post. Please contact me with any questions, concerns or comments. My contact information can be found below. Please note that you also have the option of contacting my supervisor, Dr. Mary Alice Guttman, at any time. Her contact information is provided on page two of the attached information sheet.

Thank you for your time. I look forward to hearing back from you!

Sincerely,
Lisa M. Couperthwaite, M.A., Ph.D. (Candidate)
University of Toronto (OISE)
Email: lisa.couperthwaite@utoronto.ca
Phone: (xxx) xxx-xxxx
APPENDIX E: SAMPLE EMAIL TO NON-LGBTQ WEBSITE AND LISTSERV OWNERS

Dear ________________:

My name is Lisa Couperthwaite and I’m a Doctoral student in Counselling Psychology at the University of Toronto, Ontario Institute for Studies in Education (OISE). I am presently working on my Doctoral Dissertation research to learn more about love and attachment styles, approaches to sexual relationships and experiences in close relationships under the supervision of Dr. Mary Alice Guttman.

I am writing to seek your permission to post the attached announcement on your [website/LISTSERV] in the hopes of recruiting some participants for my online research study. Past research in the area of intimate relationships has typically focused on primarily heterosexual participants. Of particular importance to my research is to recruit a diverse sample of participants and ensure representation of sexual orientation and gender minority groups. Many people find participating in this research interesting because the program analyzes their responses and provides them a personalized summary of the love and attachment style information they provided.

Your assistance would be greatly appreciated in circulating the attached announcement. Please contact me with any questions, concerns or comments. My contact information can be found below.

Sincerely,

Lisa M. Couperthwaite, M.A., Ph.D. (Candidate)
University of Toronto (OISE)
Email: lisa.couperthwaite@utoronto.ca
Phone: (xxx) xxx-xxxx

Email Attachment:
“Have you ever wondered what your love and attachment styles are and what they mean? I’m a doctoral student completing my dissertation at the University of Toronto to learn more about love and attachment styles and experiences in romantic relationships. No matter if you are straight, gay, lesbian, bisexual, same-gender loving, same-sex partnered, transgender or transsexual person, we invite your participation. You can participate if you are over the age of 18 and if you have either dated, been in love, been sexually active and/or been involved in a romantic relationship(s) at some point in your life. In return, you will receive your personalized love and attachment style results. Here is the link: ____.”
APPENDIX F: SAMPLE OF ONLINE RECRUITMENT SOURCES

e-groups (Listservs)
- bi-gay-men-athens
- bi-gay-men-berlin
- bi-gay-men-bucharest
- bi-gay-men-freetown
- bi-gay-men-tanzania
- bi-gay-men-usa
- bi-hombres-barcelona
- bi-hombres-hacer-contactos
- bimenbayarea
- bi-men-big-apple
- bi-men-chicago
- bi-men-dallas
- bimenforum
- bi-men-france
- bi-men-germany
- bimengreece
- bi-men-houston
- bi-men-inside-edition
- bimenitaly
- bi-men-morocco
- bi-men-north-carolina
- bi-men-phoenix-az
- bi-men-seniors
- bi-men-united-states

Facebook Groups
- Advocate Magazine
- Asexuality & Pansexuality Awareness and Education at UCF
- Bi Cafe
- Bi Community News
- BI MEN ARE HOT
- Bi Social Network
- Biomedical Engineering
- Black Professional Men, Inc.
- Blackpool Pride
- BOLD – Humber’s Gay-Straight Alliance
- Doncaster Pride
- Engineering
- Engineeringstudenthelpcenter
- Engineering Students
- Fairfax Pride
- Fantasia Fair
- Ftm
- GAMING
- Gay lesbian bisexual pansexual and transgenders
- Gay Professional Network
- Gays, Lesbians, Bisexuals, Asexuals, Transgnero, Tranvestis, Pansexuales, etc
- Get Equal
- Have a Gay Day
- Humber College BOLD
- Joburg Pride
- Intersex Allies
- Lesbians, bisexuals, gays, transsexuals, transgender, pansexual
- LGBTQ Health Professional Students, Allies and Mentors
- Male to female club
- Male to female Feminization
- Male to female transgendered wales
- MINT Network for Professional gay women
- Men’s Health URBANATHLON
- Miami & Ft. Lauderdale – Professional Gay Men’s Social Network
- milehighbiclub
- Mixed Race Relationships
- M-y Se-xua-ility I-sn’t H-yph-en-a-ted
- Organisation Intersex International
- PANSEXUAL INDONESIA (BUTCH, FEMME, ANDRO)
- Pansexual Pride
- Phoenix Pride
- PrideAlive
- PRIDE
- PRIDE BRISTOL
- PrideFest Denver
- PrideNation
- Pride Center – Student Federation of the University of Ottawa
- Professional Men of Leisure (PMOL)
- Proud Pansexual
- PRIDE PILIPINAS
- Psychology Today
- Relationships
- San Francisco LGBT Community Center
- Shemales
- Software Engineering
- SMTBR – Straight Men Taking Back Rainbows
- Straight Men for Gay Rights!
- Support for Action Against Intersex Surgery
- Support Gays, Lesbians, Bisexuals, Transgenders, and Pansexuals
- THE RAINBOWS
- Toronto Pride
- Trans*
- Transgender
- White Collar Club – gay and lesbian professional networking group in Leeds
- World Intersex Society for Humanity (WISH)

LinkedIn Groups ([www.linkedin.com](http://www.linkedin.com))
- Canadian Psychology Network
- Chicago Area Gay and Lesbian Chamber of Commerce
- Gay Business Association - GBA – UK
- Gay Business Network
- GAY INDIAN PROFESSIONALS
- Gay Professional Network – London
- GLAAD Gay & Lesbian Alliance Against Defamation (Non-official)
- GLBT Professionals (Gay, Lesbian, Bisexual, Trans, and Friends)
- Graduate Psychology Students
- IGLCC International Gay and Lesbian Chamber of Commerce
- ILGA International Lesbian and Gay Association
- Internet Psychology
- Lesbian, Gay, Bisexual & Transgender Community Center
- LGBT-Friendly Professional Network
- LGBT - GLBT - Gay, Lesbian, Bisexual, Trans, Queer, Questioning and Allies Networking
- National Gay and Lesbian Task Force
- New England - LGBT Professional Networking
- Ontario Gay & Lesbian Chamber of Commerce
- Oregon & Washington LGBT Professional Network
- Positive Health and Productivity
- Social Influence
- Students and Recent Grads
- The Psychology Network

Meetup Groups ([www.meetup.com](http://www.meetup.com))
- AMBI - LA's Bisexual Network
- Atlanta TG (Atlanta, GA)
- Bay Area T-girl/G-girl Mutual Admiration Society
- Boston Gay Women’s Network
- Boston Social Network
- Boston Social/Singles Networking Meetup Group
- Emerald City Social Club (Seattle, WA)
- EROS: Exploring Love, Sex and Soul
- Gay, Lesbian, Bisexual, and Trans Parents of Boston
- Hangin’ OUT LGBTQA Social Club (Toronto, ON, Canada)
- LeFemme
- Lesbian 35+ Toronto Social Group
- London Bisexuals
- Miami Social Network (Miami, FL)
- Miami Gay Women’s Network (Miami, FL)
- Mile High Bi Club (Parker, CO)
- NYC Area Transgender Meetup Group
- Madfemmepride: friendly, diverse, queer/femme community
- Orlando Transgender (Orlando, FL)

**Organization Listservs**
- APA Division 44
- BGALA (MIT LGBT Alumni Group)
- Biversity
- Bi Community News
- BiNetUSA
- Bi Social Network
- Bisexual Women of Toronto
- Boston Gay Women’s Network
- Brown University Alumni Association
- Brown University Transgendered, Bisexual, Gay, and Lesbian Alumni (Providence, RI)
- Cornell University Alumni Association
- Cornell University Gay and Lesbian Alumni (Cornell CUGALA)
- Cornell University Lesbian, Gay, Bisexual and Transgender Resource Center
- Dartmouth Alumni Association
- Dartmouth GALA (Gay, Lesbian, Bisexual & Transgender Alumni/AE Association
- EGALE Canada
- FTM Alliance ([www.ftmalliance.org](http://www.ftmalliance.org))
- FTM Alliance of Los Angeles, CA
- Gay, Lesbian, Bisexual People of Color
- George Brown Positive Space (Toronto, ON, Canada)
- Global Action for Trans* Equality (GATE)
- Harvard Alumni Association
- Harvard Gay & Lesbian Caucus (HGLC)
- Humber College BOLD
- Lady Ellen’s LeFemme Finishing School
- LGBT Parenting Network (Toronto, ON, Canada)
- LGBT Out (University of Toronto, ON, Canada)
- Mount Holyoke Lyon’s Pride – Queer Alumnae/Alumni Group of Mount Holyoke College
- National Centre for Transgender Equality (NCTE)
- OutSport Toronto
- Penn State Alumni Association
- PennGALA (Lesbian Gay Bisexual Transgender Alumni Association)
- PFLAG (Parents, Families, & Friends of Lesbians and Gays)
- Pride Centre of the University of Ottawa
- Queer Ontario ([www.queerontario.org](http://www.queerontario.org))
- SOGII Section of the Canadian Psychological Association
- Sherbourne Health Centre (Toronto, ON, Canada)
- Stanford University Alumni Association
- Stanford PRIDE
- tbn_announce
- Tr@nZ Newsletter
- Trans-Academics (Google Group)
- Transgender Law Center (San Francisco, CA)
- Twin City Bisexual Organizing Project
- University of Toronto Alumni Association
- University of Toronto Family Care Office
- Yale University Alumni Association
- Yale GALA – Yale’s LGBT Alumni Network
- York University Alumni Association (Toronto, ON, Canada)

Twitter re-tweets (Organizations only – specific individuals not included for privacy reasons)
- @APAGradStudents
- @biggaynews
- @ClubLesbian
- @Couples_News
- @Curvnow
- @EcoFriendlyST
- @eqca
- @EqualityMaine
- @freetomarry
- @equalitync
- @eurOut
- @family_equity
- @GayTravelBuddy
- @GetEQUAL
- @GLADLaw
- @GLSEN
- @LAGayCenter
- @LegalizeTrans
- @LesbianClub
- @LesBianInt
- @LGBTNA
- @MassTPC
- @OpenSourcePs
- @prideagenda
- @Pridecups
- @PsychToday
- @queerunity
- @sfLGBTcenter
- @SexualityToday
- @SocialPsych
- @TGworldNews
- @TheMensDoc
- @TransEquality
- @TransgenderNews
- @TransgenderToda
- @transguys
- @TransMediaWatch
- @TransNewsDaily
- @transresearchin
- @WomenTwoWomen

Yahoo Groups (Listservs)
- 2spiritwomen
- academic_bi
- Alberta Trans Peer SupportNetwork
- bayarea2spirits
- BiDiscussion
- Bi-Gay-Men-London
- Bi-MEN-BRITAIN
- Bi-MEN-CANADA
- BiMenofColor
- Bi-men-ottawa
- Bi-Men-Vancouver
- BiNetUSA
- BiRequest
- BiRequest NYC
- BiTO (Bi Toronto)
- BiZoneNJ
- Bimot (Bisexual Men of Toronto)
- Biwot (Bisexual Women of Toronto)
- biwriters
- Bi_Writers_Association
- blackandbiinlosangeles
- blackandbimenandwomen
- CambridgeMensGroup
- Capital_District_Bisexual_Network
- canada_SGL_men_of_African_descent
- Central Jersey Lesbian Alliance
- eldertg
- gaywarriors
- ladhadpartylist
- LI-BI-do-owner
- londonbi-list
- manhattanbisexuals
- MTF-SRS-FTM
- nativeamericanlgbti
- sexloveandrelationships
- SydBiMen
- tbn-announce
- Transgender
- transsexual-uk-wg
- TSTallGirls
- tucsontwospirit
- Qstudy-l
- queerpeaceinternational
Websites
- Academia.Edu: www.academia.edu
- Babycentre: www.babycentre.com
- BiZone: http://www.BiZone.org
- Bi Social Network: www.bisocialnetwork.com
- Canadian Psychological Association’s (CPA) Recruitment Research Participant Portal (R2P2): www.cpa.ca
- Chaz Bono website and discussion group: www.chazbono.net
- Dan Savage: www.savagelove.net
- EG ALE Canada: www.egale.ca
- Gay Canada (Various sections targeting major cities in Canada): www.gaycanada.com
- Gay Star News: www.gaystarnews.com
- GLBT Social: http://www.glbsocial.net
- Kijiji Advertisements (various sections targeting major cities in Canada): www.kijiji.ca
- LGBT Out website and listserv: www.lgbout.com
- LGBT Parenting Network (Toronto, ON, Canada) website and listserv: www.lgbtqparentingconnection.ca
- National Transgender Advocacy Coalition: www.genderadvocates.org
- Pride Center New Jersey: http://www.pridecenter.org/
- PFLAG National: www.pflagcanada.ca
- PFLAG Toronto: www.torontopflag.org
- PFLAG USA: www.pflag.org
- PFLAG – various state organizational websites (Various major U.S. cities)
- Sherbourne Health Centre (Toronto, ON, Canada): www.sherbourne.on.ca
- Social Psychology Network Advertisement: www.socialpsychology.org/expts.htm
- Tranz Magazine: www.tranzmag.ca
- University of Toronto, ON, Canada (Various clubs): www.utoronto.ca
Hello! My name is Lisa Couperthwaite. I am a doctoral student at the University of Toronto, Ontario Institute for Studies in Education (OISE). I would like to invite you to take part in a research project investigating experiences in relationships. My goal is to learn more about people’s experiences of love, inclusive of individuals of various sexual orientations and gender expressions.

**WHAT IS THIS STUDY ABOUT?** The purpose of this study is to learn more about love and attachment styles, approaches to sexual relationships and experiences in close relationships.

**AM I ELIGIBLE TO PARTICIPATE?** You must be 18 years or older to participate. If you are not 18 years or older, you should not participate. It is also necessary to participate that you have dated, been sexually active and/or been involved in a romantic relationship(s) at some point in your life.

**DO I HAVE TO PARTICIPATE?** Your participation is completely voluntary. You do not have to participate in this study. There will be no negative consequences should you decide not to participate. It is important that you answer as many questions as possible, but please note that you are free to skip any questionnaire item that you wish. You are also free to withdraw from the study at any time without fear of prejudice or penalty (this includes being free to withdraw your data once it has been collected). Not participating, stopping the study, or requesting your data be withdrawn will not affect your current or future relationship with the University of Toronto in any way.

**WHAT WILL I BE ASKED TO DO?** If you agree to participate in this study, you will be asked to complete questionnaires pertaining to your most recent (or, if applicable, current) romantic/dating/love relationship(s). To answer the questions, you simply click on the answers that are appropriate to you. The process will take about 30 minutes of your time, once you have finished reading this information sheet.

You should know that some of the questions asked of you might seem quite personal, such as some about your sexual orientation and your intimate sexual relationships. If you feel that this will make you uncomfortable, you are under absolutely no obligation to participate in this study. At no time will you be asked to provide your name, to ensure anonymity. Please be assured that the investigators will keep all information provided on your questionnaire confidential.

**ARE THERE ANY BENEFITS TO PARTICIPATING?** The benefit for you directly is that the program will analyze your responses and give you a personalized summary of the love and attachment style information you provided. You are also welcome to request a copy of a summary of the research results via the contact information provided at the end of this information sheet. Some people find participating in this kind of research interesting because they are given the chance to think about their relationship experiences. Also, having the opportunity to find out about your particular love style and attachment style is fun! Another
benefit to participating is that your participation may help contribute to increased understanding about people’s intimate relationship experiences.

**HOW SAFE IS IT TO PARTICIPATE IN THIS STUDY ONLINE?** Use of the Internet in general is not completely risk free in terms of privacy and confidentiality. There is a chance that third parties can view and/or track your email correspondence and track your Internet activity. However, every possible precaution has been taken to reduce or eliminate this risk. For example, all survey responses on this website are secure, using SSL encryption, to ensure unwanted access by other Internet users. Once questionnaires are submitted on the website, there is no online record of the responses maintained on the server. The responses are downloaded to secure servers that are kept in locked cages that allow entry via a pass card and biometric recognition only. There is also digital surveillance equipment and controls for temperature, humidity and smoke/fire detection. The website is staffed 24 hours per day, 7 days per week, and a firewall restricts access to all ports of the server. The data is backed up every hour internally and every night to a centralized backup system with offsite backups in event of a catastrophe.

In addition to the above precautions already in place, the following are some additional steps you should take to ensure privacy:

1. Take the survey in a private place;
2. Immediately close the Internet browser if someone comes within reading distance of the screen;
3. Erase the cache and temporary Internet files on the browser (if you require instructions on how to do this, please email me at lisa.couperthwaite@utoronto.ca);
4. Do not participate from a place of employment as an employer may track your online activities (most employers have a legal right to do this and some employers take copies of all email sent from office computers).

If the above additional measures are taken, there is little to no risk to participating in this study over the Internet. The researchers will keep the information you provided confidential and no identifying information, such as IP addresses, will be collected with the data you provide. If you feel uneasy about the security of online participation and would like to discuss it further, please contact me.

**WHAT WILL HAPPEN TO THE INFORMATION AFTER I PARTICIPATE?** The questionnaire responses from all participants will be downloaded from the server and data will be saved on an encrypted file on an external hard drive, which is stored in a locked cabinet (in a facility with a security system and fire protection) when not in use. Once the data is downloaded, all online records of your participation will be erased from the server. The data will be coded with letters and numbers only. My supervisor, Dr. Mary Alice Guttman (see contact info below) will have access to the data.

This study is being undertaken by me to help fulfill my dissertation requirement for a Doctor of Philosophy Degree in Counselling Psychology. As a result, information from this study will appear within my dissertation, which will be accessible online and in print at a future date. The information from this study may also appear in future publications and public presentations. Given that your name and other identifying information will not be collected, there will be an estimated 400 participants in this study, and the results will be published as quantitative data in
terms of overall trends in the scores between groups of individuals, there is no risk that you would become identified by others reading the results of the study. The information collected from you will be stored in a locked filing cabinet for a minimum of five years upon the conclusion of the study, after which the data will be destroyed. If you wish to receive a summary of the results of this study, please request it from me.

**HOW CAN I LEARN MORE ABOUT THIS STUDY?** Please note that we cannot directly answer questions about your particular situation. However, if you would like assistance in locating mental health professional resources, if you have any questions about the study or if you would like to obtain a copy of the research results at the conclusion of the study, please contact:

Lisa Couperthwaite, M.A., Lead Investigator  
Email: lisa.couperthwaite@utoronto.ca  
Phone: (xxx) xxx-xxxx

Mary Alice Guttman, Ph.D. (Supervisor)  
Email: maryalice.guttman@utoronto.ca  
Phone: (xxx) xxx-xxxx

If you have any questions about your rights as a participant in this study, please contact:

Office of Research Ethics at the University of Toronto  
Email: ethics.review@utoronto.ca  
Phone: (416) 946-3273.

**HOW DO I PROVIDE MY CONSENT?** Please provide your consent by clicking the button below. Submission of the completed questionnaires will be indication of consent for your data to be used in this study. Please note that the study questionnaires do not ask you to provide your name due to the private nature of the information being collected. Please print a copy of this information sheet through your web browser for future reference, or request a copy from me.

**CONSENT**

PLEASE CLICK THE BUTTON BELOW TO PROVIDE YOUR CONSENT.

Once you’ve indicated your consent below, click the “NEXT” button at the far bottom right of the web browser window.

NOTE: If you do not consent OR you do not meet the requirements to participate in this study, please exit by closing your web browser.

○ I have read and understood the above consent form and I am choosing of my own free will to participate in this study. I verify that I am at least 18 years or older, I also confirm that I have experienced one or more of the following at some point in my life: dating, being in love, sexual activity or involvement in a romantic relationship(s).
APPENDIX H: DEMOGRAPHIC QUESTIONNAIRE

INSTRUCTIONS: The following personal questions pertain to different aspects of your life. The information you provide may be important in understanding your responses to the other questions in the study. Please read the following questions carefully and answer them to the best of your ability. Your responses will be kept completely confidential. Please answer the following items as honestly and accurately as possible.

1. Have you taken this survey before? ☐ yes ☐ no

2. What is your age in years? Please specify using numbers on your keyboard.

3. In which country do you currently reside? Please select your country from the drop-down list below. You may need to scroll through to find the appropriate option as the list is long and in alphabetical order.

4. What is your gender identity? You can place your mouse over the terms below to view definitions prior to making your selection. If you do not apply a label to your gender identity, please provide further information by choosing ‘other’. Please select one option below.

[NOTE: Internet version contained “mouse over” boxes to provide definitions as shown in brackets beside certain terms below.]

☐ Female (Also known as ‘cisgender female’, this term is used to describe an individual who has a match between the female gender they were assigned at birth, their female body, and their personal identity as a woman)

☐ Male (Also known as ‘cisgender male’, this term is used to describe an individual who has a match between the male gender they were assigned at birth, their male body, and their personal identity as a man)

☐ Intersex [According to the American Psychological Association (2011), this is a term referring to “persons born with atypical combinations of features that usually distinguish male from female”, which can include various indicators of biological sex, such as sex chromosomes, gonads, internal reproductive organs, and external genitalia.]

☐ Transsexual (A term used to describe an individual who is uncomfortable being regarded by others, or functioning in society as, a member of their designated sex at birth and often seek hormonal and surgical treatments to alleviate their discordance.)

☐ Transgender (A term often used inclusively to describe people who have gender identities, expressions, or behaviours not traditionally associated with their birth sex. It is generally used to describe those who transgress gender categories in ways which are less permanent than hormonal treatment or surgery, but is sometimes used to describe such individuals as well.)

☐ Genderqueer (A term used by people to describe an experience of not fitting into even the broadest definition of the gender binary of male/female as the only choices. One’s sense of gender is not fixed and does not depend on physical appearance.)
Gender fluid (A term used to describe an experience of “moving between genders”)
Two-spirit (A spiritual identity of some Aboriginal people who embody masculine and feminine spirits or genders within the same body. This term can also refer to a person of aboriginal ancestry who is lesbian, gay, bisexual, or queer, or who identifies as being either of mixed gender or transgender.)
FTM (An acronym for ‘female to male.’ A transgender person who, at birth or by determination of parents or doctors, has a biological identity of female but a gender identity of male.)
MTF (An Acronym for ‘male to female.’ A transgender person who, at birth or by determination of parents or doctors, has a biological identity of male but later discovers a gender identity of female.)
Unsure/Questioning
Other (please specify) __________________________

5. What is your genetic sex (or your biological sex, or ‘assigned sex’) at birth? You can place your mouse over the term ‘intersex’ below if you require a definition. If you do not apply a label to your genetic sex, please provide further information by choosing ‘other’. Please select one option below.

[NOTE: Electronic version contained “mouse over” boxes to provide definitions as shown in brackets beside certain terms below.]

- Female
- Male
- Intersex [According to the American Psychological Association (2011), this is a term referring to “persons born with atypical combinations of features that usually distinguish male from female”, which can include various indicators of biological sex, such as sex chromosomes, gonads, internal reproductive organs, and external genitalia.]
- Undetermined
- Other (please specify) __________________________

6. Which of the following BEST describe your behaviour? (Click ALL that apply.)

- My romantic/sex partner(s) have been exclusively female
- My romantic/sex partner(s) have been exclusively male
- My romantic/sex partner(s) have mostly been female, but some have been male
- My romantic/sex partner(s) have mostly been male, but some have been female
- My romantic/sex partner(s) have included both males and females
- My romantic/sex partner(s) have included male-to-female transgender/transsexual individuals
- My romantic/sex partner(s) have included female-to-male transgender/transsexual individuals
- I have not had a romantic/sex partner
- Other (please specify) __________________________
7. Which of the following best describes your romantic/sex partner(s) in the last 12 months? (Click ALL that apply.)

☐ My romantic/sex partner(s) have been exclusively female
☐ My romantic/sex partner(s) have been exclusively male
☐ My romantic/sex partner(s) have mostly been female, but some have been male
☐ My romantic/sex partner(s) have mostly been male, but some have been female
☐ My romantic/sex partner(s) have included both males and females
☐ My romantic/sex partner(s) have included male-to-female transgender/transsexual individuals
☐ My romantic/sex partner(s) have included female-to-male transgender/transsexual individuals
☐ I have not had a romantic/sex partner
☐ Other (please specify) ____________________________

8. Which of the following best describes your romantic/sex partner(s) since age 18? (Click ALL that apply.)

☐ My romantic/sex partner(s) have been exclusively female
☐ My romantic/sex partner(s) have been exclusively male
☐ My romantic/sex partner(s) have mostly been female, but some have been male
☐ My romantic/sex partner(s) have mostly been male, but some have been female
☐ My romantic/sex partner(s) have included both males and females
☐ My romantic/sex partner(s) have included male-to-female transgender/transsexual individuals
☐ My romantic/sex partner(s) have included female-to-male transgender/transsexual individuals
☐ I have not had a romantic/sex partner
☐ Other (please specify) ____________________________

9. Which of the following do you feel BEST describes your sexual orientation? You can place your mouse over the terms below to view definitions prior to making your selection. If you do not apply a label to your sexual orientation, please provide further information by choosing ‘other’. Please select one option below.

[NOTE: Electronic version contained “mouse over” boxes to provide additional definitions as shown in brackets beside certain terms below.]

☐ Straight/Heterosexual (Sexually attracted to the opposite sex.)
☐ Lesbian (Woman romantically/sexually attracted to other women.)
☐ Gay (Man romantically/sexually attracted to other men)
☐ Bisexual (An individual sexually attracted to men and women. The prefix ‘bi’ denotes two genders, male and female. The term ‘bisexual’ refers to someone who is sexually attracted to biological males and females, but excludes other individuals outside the gender continuum.)
☐ WLW or WSW (Woman who loves and/or has sex with women)
☐ MLW or MSM (Man who loves and/or has sex with men)
☐ Transsensual (A person attracted to transgender or transsexual people)
☐ Pansexual (Derived from the Greek pre-fix ‘pan’, meaning ‘all’, this term refers to an individual having the capability of attraction to others regardless of their gender identity or biological sex, including openness to someone who is male, female, transgender, intersex, or genderqueer. Pansexuality should not be confused with bisexuality, as pansexuals are open to people who fall at all points or even outside of the gender continuum, regardless of their gender or sex.)
☐ Polysexual (Derived from the Greek prefix ‘poly’, meaning ‘many’, this term refers to people who are attracted to more than one gender or sex, but do not wish to identify as bisexual because it implies that there are only two binary genders or sexes. Individuals may be open to relationships with some people who fall at points outside of the gender continuum, but not others. Such individuals therefore should not be confused with pansexuals as described above.)
☐ Two-spirit (A spiritual identity of some Aboriginal people who embody masculine and feminine spirits or genders within the same body. This term can also refer to a person of aboriginal ancestry who is lesbian, gay, bisexual, or queer, or who identifies as being either of mixed gender or transgender.)
☐ Asexual (An individual not sexually attracted to others)
☐ Autosexual (A term used to describe a sexual orientation toward oneself; that is, preferring self-gratification over other forms of sexual activity)
☐ Unsure/Questioning
☐ Other (please specify) __________________________

10. Approximately what is your annual income range? Please click on the drop box below to make your selection.

☐ Below $20,000
☐ $20,000 – 29,999 
☐ $30,000 – 39,999
☐ $40,000 – $49,999
☐ $50,000 – $59,999
☐ $60,000 – $69,999
☐ $70,000 – $79,999
☐ $80,000 – $89,999
☐ $90,000 – $99,999
☐ $90,000 or above
☐ Prefer not to answer

11. What is your highest level of education completed to date? (Click one.)

☐ Less than grade 9
☐ Some High School
☐ High School or GED (High School Equivalency)
☐ Some College or University
☐ College Degree or College Diploma
Undergraduate University Degree
☐ Master’s Degree
☐ Doctoral Degree
☐ Professional Degree (LLB, JD, MD, etc.)
☐ Other (please specify) ____________________

12. Are you currently dating, sexually active or in a relationship(s)?  ☐ yes  ☐ no

13. What is your current status? (Click ALL that apply.)

☐ Living Common Law
☐ Living with partner
☐ Married
☐ Divorced
☐ Separated
☐ Widowed
☐ Single – NOT dating or in a relationship with anyone currently
☐ Single – Currently dating or in a relationship (but NOT living with partner)

14. Are you currently involved in a relationship with someone you are emotionally close to and engage in sexual activity with?

☐ Yes
☐ No

[NOTE: If yes to #14 above…]

(a) What is the length of your current primary relationship? Please provide an estimate in years, months, and/or weeks by typing in numbers below using your keyboard.
   _____ Years
   _____ Months
   _____ Weeks

(b) Which of the following BEST describes the gender identity of your current primary partner? Please select one.
   ☐ Cisgender Female
   ☐ Cisgender Male
   ☐ Intersex
   ☐ Male-to-Female Transgender/Transsexual
   ☐ Female-to-Male Transgender/Transsexual
   ☐ Other (please specify) ____________________

(c) What are your living arrangements with your current primary partner? Please select one.
(d) Which of the following describes your relationship with your current primary partner? Please select one.

☐ Sexually Exclusive (Also known as ‘Closed’ or Monogamous)
☐ NOT Sexually Exclusive (Also known as ‘Open’ or Non-monogamous)

[NOTE: If no to #14 above…]

(e) What is the length of your most recent primary relationship? Please provide an estimate in years, months, and/or weeks by typing in numbers below using your keyboard.

____ Years
____ Months
____ Weeks

(f) Which of the following BEST describes the gender identity of your most recent primary partner? Please select one.

☐ Cisgender Female
☐ Cisgender Male
☐ Intersex
☐ Male-to-Female Transgender/Transsexual
☐ Female-to-Male Transgender/Transsexual
☐ Other (please specify) _______________________

(g) What are your living arrangements with your most recent primary partner? Please select one.

☐ Living with current romantic/sexual partner
☐ Not living with current romantic/sexual partner

(h) Which of the following describes your relationship with your most recent primary partner? Please select one.

☐ Sexually Exclusive (Also known as ‘Closed’ or Monogamous)
☐ NOT Sexually Exclusive (Also known as ‘Open’ or Non-monogamous)

15. Approximately how many times in your life have you been in love? Please type an approximate number in the box below using your keyboard.

16. Are you in love now? Please select one.

☐ Yes
☐ No
☐ Unsure
☐ Other (please specify) _______________________

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17. People sometimes identify themselves by ‘race’ and/or colour. I should point out that there is no evidence of clear biological distinctions between ‘racial’ groups. From my perspective, such divisions are a question of culture (i.e., learned) and not of biology. Please check the box(es) that best describes the group(s) to which you would identify. Examples of heritage groups are also provided. Please select ALL that apply.

☐ South Asian (East Indian, Pakistani, etc.)
☐ Asian (Chinese, Japanese, etc.)
☐ Native / Aboriginal (Inuit, Métis, etc.)
☐ White (Eastern European, Northern European, etc.)
☐ Black (African, Caribbean, etc.)
☐ Hispanic / Spanish
☐ Other (please specify) _______________________________

18. People also sometimes identify themselves as a function of ‘ethnic’ background, which is also a cultural factor (e.g., Italian, Jewish, Jamaican, etc.) Do you identify yourself in this way? Please select one.

☐ No
☐ Yes (please specify) _______________________________

19. In order to be able to anonymously locate your responses in this study, should you decide that you wish to withdraw your data OR if you later request to receive a copy of the love and attachment style information you provide, please indicate the following by typing in letters using your keyboard:

**First** 2 letters of the street where you currently live (e.g., Bloor St. is B L)
**First** 2 letters of your month of birth (e.g., May is M A)
**Last** 2 letters of the city or town where you were born (e.g., Scarborough is G H)
APPENDIX I: THE LOVE ATTITUDES SCALE: SHORT FORM (LAS-SF; HENDRICK, HENDRICK & DICKE, 1998)

INSTRUCTIONS: Please respond to each statement by clicking a response to indicate how much you agree or disagree. Whenever possible, please answer the questions with your current primary partner in mind. If you are not currently dating or in a partnered/marital relationship with anyone, please answer the questions with your most recent primary partner in mind, in terms of when you were still together. Remember to try to respond to all items, even if you are not completely sure. Your answers will be kept in the strictest of confidence.

1. My partner and I have the right physical “chemistry” between us.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

2. I feel that my partner and I were meant for each other.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

3. My partner and I really understand each other.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

4. My partner fits my ideal standards of physical beauty/handsomeness.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

5. I believe that what my partner doesn’t know about me won’t hurt him/her.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

6. I have sometimes had to keep my partner from finding out about other partners.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

7. My partner would get upset if he/she knew of some of the things I’ve done with other people.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree

8. I enjoy playing the “game of love” with my partner and a number of other partners.
   - [ ] Strongly Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Strongly Agree
9. Our love is the best kind because it grew out of a long friendship.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

10. Our friendship merged gradually into love over time.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

11. Our love is really a deep friendship, not a mysterious, mystical emotion.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

12. Our love relationship is the most satisfying because it developed from a good friendship.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

13. A main consideration in choosing my partner was how he/she would reflect on my family.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

14. An important factor in choosing my partner was whether or not he/she would be a good parent.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

15. One consideration in choosing my partner was how he/she would reflect on my career.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

16. Before getting very involved with my partner, I tried to figure out how compatible his/her hereditary background would be with mine in case we ever had children.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

17. When my partner doesn’t pay attention to me, I feel sick all over.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree

18. Since I’ve been in love with my partner, I’ve had trouble concentrating on anything else.

Strongly Disagree    Disagree    Neutral    Agree    Strongly Agree
19. I cannot relax if I suspect that my partner is with someone else.

[ ] Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree

20. If my partner ignores me for a while, I sometimes do stupid things to try to get his/her attention back.

[ ] Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree

21. I would rather suffer myself than let my partner suffer.

[ ] Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree

22. I cannot be happy unless I place my partner’s happiness before my own.

[ ] Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree

23. I am usually willing to sacrifice my own wishes to let my partner achieve his/hers.

[ ] Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree

24. I would endure all things for the sake of my partner.

[ ] Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree
APPENDIX J: EXPERIENCES IN CLOSE RELATIONSHIPS – RELATIONSHIP STRUCTURES QUESTIONNAIRE (ECR-RS; FRALEY, HEFFERNAN, VICARY & BRUMBAUGH, 2011)

INSTRUCTIONS: This questionnaire is designed to assess the way in which you mentally represent your current or most recent primary dating or partnered/marital relationship. Please indicate the extent to which you agree or disagree with the statements below in terms of your current primary dating or partnered/marital relationship. If you are not currently dating or in a relationship with anyone, please indicate the extent to which you agree or disagree with the statements with your most recent primary partner in mind, in terms of when you were still together. Please indicate the extent to which you agree or disagree with each statement by clicking one response option for each item. NOTE: Remember to try to respond to all items, even if you are not completely sure. Please respond as honestly and accurately as possible.

1. I usually discuss my problems and concerns with this person.
   - Strongly Disagree
   - Strongly Agree

2. I talk things over with this person.
   - Strongly Disagree
   - Strongly Agree

3. It helps to turn to this person in times of need.
   - Strongly Disagree
   - Strongly Agree

4. I find it easy to depend on this person.
   - Strongly Disagree
   - Strongly Agree

5. I prefer not to show this person how I feel deep down.
   - Strongly Disagree
   - Strongly Agree

6. I don’t feel comfortable opening up to this person.
   - Strongly Disagree
   - Strongly Agree

7. I’m afraid this person may abandon me.
   - Strongly Disagree
   - Strongly Agree

8. I worry that this person won’t care about me as much as I care about him or her.
   - Strongly Disagree
   - Strongly Agree
9. I often worry that this person doesn’t really care for me.

Strongly Disagree □ □ □ □ □ □ □ Strongly Agree
APPENDIX K: SEXUAL RELATIONSHIP SCALE (SRS; HUGHES & SNELL, 1990)

INSTRUCTIONS: Listed below are several statements that concern the topic of sexual relationships. Please read each of the following statements carefully and decide to what extent it is characteristic of you. Some of the items refer to a specific relationship. Whenever possible, answer the questions with your current partner in mind. If you are not currently dating anyone, answer the questions with your most recent partner in mind. If you’ve never been involved with anyone sexually, please respond in terms of what you think your answers would be.

Please respond to each statement by clicking the appropriate a square to indicate the extent to which each statement applies to you. NOTE: Remember to try to respond to all items, even if you are not completely sure. Your answers will be kept in the strictest of confidence. Also, please be honest in responding to these statements.

1. It would bother me if my sexual partner neglected my needs.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

2. When I make love with someone, I generally expect something in return.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

3. If I were to make love with a sexual partner, I’d take that person’s needs and feelings into account.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

4. If a sexual partner were to do something sensual for me, I’d try to do the same for him/her.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

5. I’m not especially sensitive to the feelings of a sexual partner.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☒ = Moderately characteristic of me.
☐☐ = Very characteristic of me.

6. I don’t think people should feel obligated to repay an intimate partner for sexual favours.
   ☐ = Not at all characteristic of me.
   ☒ = Slightly characteristic of me.
   ☐☐ = Somewhat characteristic of me.
   ☒☒ = Moderately characteristic of me.
   ☒☐☐ = Very characteristic of me.

7. I don’t consider myself to be a particularly helpful sexual partner.
   ☐ = Not at all characteristic of me.
   ☒ = Slightly characteristic of me.
   ☐☐ = Somewhat characteristic of me.
   ☒☒ = Moderately characteristic of me.
   ☒☐☐ = Very characteristic of me.

8. I wouldn’t feel all that exploited if an intimate partner failed to repay me for a sexual favor.
   ☐ = Not at all characteristic of me.
   ☒ = Slightly characteristic of me.
   ☐☐ = Somewhat characteristic of me.
   ☒☒ = Moderately characteristic of me.
   ☒☐☐ = Very characteristic of me.

9. I believe sexual lovers should go out of their way to be sexually responsive to their partner.
   ☐ = Not at all characteristic of me.
   ☒ = Slightly characteristic of me.
   ☐☐ = Somewhat characteristic of me.
   ☒☒ = Moderately characteristic of me.
   ☒☐☐ = Very characteristic of me.

10. I wouldn’t bother to keep track of the times a sexual partner asked for a sensual pleasure.
    ☐ = Not at all characteristic of me.
    ☒ = Slightly characteristic of me.
    ☐☐ = Somewhat characteristic of me.
    ☒☒ = Moderately characteristic of me.
    ☒☐☐ = Very characteristic of me.

11. I wouldn’t especially enjoy helping a partner achieve their own sexual satisfaction.
    ☐ = Not at all characteristic of me.
    ☒ = Slightly characteristic of me.
    ☐☐ = Somewhat characteristic of me.
    ☒☒ = Moderately characteristic of me.
    ☒☐☐ = Very characteristic of me.
12. When a person receives sexual pleasures from another, she/he ought to repay that person right away.

☐ = Not at all characteristic of me.
☐ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☐ = Moderately characteristic of me.
☐ = Very characteristic of me.

13. I expect a sexual partner to be responsive to my sexual needs and feelings.

☐ = Not at all characteristic of me.
☐ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☐ = Moderately characteristic of me.
☐ = Very characteristic of me.

14. It’s best to make sure things are always kept “even” between two people in a sexual relationship.

☐ = Not at all characteristic of me.
☐ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☐ = Moderately characteristic of me.
☐ = Very characteristic of me.

15. I would be willing to go out of my way to satisfy my sexual partner.

☐ = Not at all characteristic of me.
☐ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☐ = Moderately characteristic of me.
☐ = Very characteristic of me.

16. I would do a special sexual favor for an intimate partner, only if that person did some special sexual favor for me.

☐ = Not at all characteristic of me.
☐ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☐ = Moderately characteristic of me.
☐ = Very characteristic of me.

17. I don’t think it’s wise to get involved taking care of a partner’s sexual needs.

☐ = Not at all characteristic of me.
☐ = Slightly characteristic of me.
☐ = Somewhat characteristic of me.
☐ = Moderately characteristic of me.
☐ = Very characteristic of me.
18. If my sexual partner performed a sexual request for me, I wouldn’t feel that I’d have to repay him/her later on.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

19. I’m not the sort of person who would help a partner with a sexual problem.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

20. If my sexual partner wanted something special from me, she/he would have to do something sexual for me.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

21. If I were feeling sexually needy, I’d ask my sexual partner for help.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

22. If my sexual partner became emotionally upset, I would try to avoid him/her.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.

23. People should keep their sexual problems to themselves.
   □ = Not at all characteristic of me.
   □ = Slightly characteristic of me.
   □ = Somewhat characteristic of me.
   □ = Moderately characteristic of me.
   □ = Very characteristic of me.
24. If a sexual partner were to ignore my sexual needs, I’d feel hurt.

☐ = Not at all characteristic of me.
☒ = Slightly characteristic of me.
☐☐ = Somewhat characteristic of me.
☐☐☐ = Moderately characteristic of me.
☐☐☐☐ = Very characteristic of me.
APPENDIX L: RELATIONSHIP ASSESSMENT SCALE (RAS; HENDRICK, DICKE, & HENDRICK, 1998)

INSTRUCTIONS: Listed below are several statements that concern the topic of romantic relationships. Please read each of the following statements carefully and decide how satisfied you are with your current partner in mind. If you are not currently dating or in a partnered/marital relationship with anyone, please answer the questions with your most recent partner in mind, in terms of when you were still together.

Please respond to each statement by clicking your choice to indicate how satisfied you are/were for each item. NOTE: Please remember to respond to all items, even if you are not completely sure. Please answer the following items as honestly and accurately as possible.

1. How well does your partner meet your needs?
   - not at all well □ □ □ □ □ □ extremely well

2. In general, how satisfied are you with your relationship?
   - not satisfied □ □ □ □ □ □ very satisfied

3. How good is your relationship compared to most?
   - not at all good □ □ □ □ □ □ extremely good

4. How often do you wish you hadn’t gotten into this relationship?
   - never □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ often

5. To what extent has your relationship met your original expectations?
   - not at all well □ □ □ □ □ □ □ extremely well

6. How much do you love your partner?
   - very little □ □ □ □ □ □ □ very much

7. How many problems are there in your relationship?
   - very few □ □ □ □ □ □ □ □ □ □ very many
APPENDIX M: RESULTS OF EXPLORATORY FACTOR ANALYSES AND INTERNAL RELIABILITY ANALYSES

Table M1

Factor Loadings for Exploratory Factor Analysis With Oblique Rotation (Promax) of the LAS-SF for Cisgender Heterosexual Majority Group (n = 214)

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Note. The highest loadings for each factor are in boldface. LAS-SF = Love Attitudes Scale, Short Form
Table M2

Factor Loadings for Exploratory Factor Analysis With Oblique Rotation (Promax) of the LAS-SF for Cisgender Sexual Minority Group (n = 469)

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Note. The highest loadings for each factor are in boldface. LAS-SF = Love Attitudes Scale, Short Form.
Table M3

Factor Loadings for Exploratory Factor Analysis With Oblique Rotation (Promax) of the LAS-SF for Trans-Spectrum Minority Group (n = 234)

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Note. The highest loadings for each factor are in boldface. LAS-SF = Love Attitudes Scale, Short Form.
Table M4

Results from Reliability Analyses (Cronbach’s Alphas Within Groups) of the LAS-SF, ECR-RS, and RAS (N = 917)

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Note. Cis Het Majority = Cisgender Heterosexual Majority; Cis Sexual Minority = Cisgender Sexual Minority; Trans-Spec Minority = Trans-Spectrum Minority; Avoidance = Attachment Avoidance; Anxiety = Attachment Anxiety; LAS-SF = Love Attitudes Scale, Short Form. All other subscales on the LAS-SF contain 4-item subscales. ECR-RS = Experiences in Close Relationships – Relationship Structures Questionnaire. RAS = Relationship Assessment Scale.  

a Internal Reliability of the Ludus Subscale was improved by removing Item #8 (“I enjoy playing the ‘game of love’ with my partner and a number of other partners”), thus making it a 3-item subscale.
Table M5

*Factor Loadings for Exploratory Factor Analysis With Oblique Rotation (Promax) of the ECR-RS by Group (N = 917)*

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<td>0.92</td>
<td>-0.13</td>
<td>0.94</td>
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</table>

*Note.* The highest loadings for each factor are in boldface. ECR-RS = Experiences in Close Relationships – Relationship Structures Questionnaire; Cis Het Majority = Cisgender Heterosexual Majority; Cis Sexual Minority = Cisgender Sexual Minority; Trans-Spec Minority = Trans-Spectrum Minority; Item # = Item number; Avoidance = Attachment Avoidance; Anxiety = Attachment Anxiety.
Table M6

*Factor Loadings for Exploratory Factor Analysis With Oblique Rotation (Promax) of the RAS by Group (N = 917)*

<table>
<thead>
<tr>
<th>Item #</th>
<th>Cis Het Majority (n = 214)</th>
<th>Cis Sexual Minority (n = 469)</th>
<th>Trans-Spec Minority (n = 234)</th>
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</tbody>
</table>

*Note.* The highest loadings for each factor are in boldface. ECR-RS = Experiences in Close Relationships – Relationship Structures Questionnaire; Cis Het Majority = Cisgender Heterosexual Majority; Cis Sexual Minority = Cisgender Sexual Minority; Trans-Spec Minority = Trans-Spectrum Minority; Item # = Item number.