Make Yourself Proud: An Investigation of Experienced and Anticipated Pride in Physical Activity Contexts

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy

Exercise Sciences
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Abstract

This program of research consists of four inter-related studies that examined how the experience and anticipation of pride is associated with physical activity behaviours. Further, the antecedents of anticipated pride were also examined. Study 1 employed an intensive longitudinal design and purposeful sampling of individuals training for a long-distance race \( n = 131 \), to explore how experiences of authentic and hubristic pride are associated with subsequent training progress. Using data collected from this same dataset \( n = 158 \), Study 2 examined how both the experience and the anticipation of pride and shame predicted the quality and quantity of training behaviours as individuals trained for an upcoming race. Guided by the Affect and Health Behavior Framework, Study 3 utilized a prospective design to test whether intentions to be physically active mediated the relationship between anticipated pride and engagement in physical activity among young adults \( n = 158 \). Finally, study 4 \( n = 130 \) employed a cross-sectional design to examine the theoretical antecedents of anticipated pride using the Process Model of Self-Conscious Emotions (Tracy & Robins, 2004) as the guiding framework. Based on tenets of this model, the congruence between self-representations were of particular interest. Collectively, this body of work underscores the functional nature of pride in physical activity contexts for promoting achievement outcomes. Pride is a competence relevant emotion that
motivates achievement striving. When engaged in competence pursuits, low feelings of pride provide feedback that changes in goal striving are needed. Subsequently, this results in greater goal progress. Thus, individuals strive to experience pride and the anticipation of pride is likely to guide behaviour. The anticipation of fitness-related pride was associated with intentions to engage physical activity behaviours. Finally, self-representations associated with an individual’s ideal self is a prominent antecedent of authentic pride. These findings are important given the relative scarcity of research on self-conscious emotions, and positive emotions more generally, despite their stated importance for optimal functioning in achievement contexts. Given the predominance of research that has examined the effects of negative emotions in sport and exercise contexts, the current program of research highlights the importance of targeting positive emotional experiences such as pride as they appear to have important regulatory functions in these contexts that can facilitate both performance and participation in health behaviours.
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Preface

Study 1 (described in Chapter 3) was conducted at the University of Toronto. The manuscript has been submitted to *Psychology of Sport and Exercise* [Gilchrist, J. D., Sabiston, C. M., Conroy, D. E., & Atkinson, M. Pride Regulates Runners’ Training Behaviour. Revise and Resubmit, *Psychology of Sport and Exercise*.] Catherine Sabiston (CMS), David Conroy (DEC), and Michael Atkinson (MA) are co-authors on this manuscript. JDG was responsible for all aspects of the research (i.e., conceptualizing research question, application for ethical approval, collecting data, analyzing and interpreting data, and manuscript preparation. CS oversaw all aspects of the research and facilitated participant recruitment. DEC provided conceptual and statistical assistance. All authors reviewed the final manuscript. Ethical approval for this study was granted by the University of Toronto Research Ethics Board.

Study 2 (described in Chapter 4) was conducted at the University of Toronto. The manuscript has been submitted to the *Journal of Sport & Exercise Psychology* [Gilchrist, J. D., Conroy, D. E., & Sabiston, C. M. Experienced and Anticipated Pride and Shame as Predictors of Goal-Directed Behaviour. Accepted]. David Conroy (DEC) and Catherine Sabiston (CMS) are co-authors on this manuscript. The primary author (JDG) was responsible for all aspects of the research (i.e., conceptualizing research question, application of ethical approval, collecting data, analyzing, and interpreting the data, and manuscript preparation). CMS oversaw all aspects of the research and facilitated participant recruitment. DEC oversaw data analysis. All authors reviewed the final manuscript. Ethical approval for this study was granted by the University of Toronto Research Ethics Board.

Study 3 (described in Chapter 5) was conducted at the University of Toronto. The manuscript has been submitted for publication in *Sport, Exercise, and Performance Psychology* [Gilchrist, J. D., & Sabiston, C. M. Do Intentions Mediate the Association Between Anticipated Pride and Physical Activity in Young Adults? Revise and Resubmit.] Catherine Sabiston (CMS) was a co-author on this manuscript. JDG was responsible for all aspects of the research (i.e., conceptualizing research question, recruiting participants, collecting data, analysis, interpretation, and manuscript preparation). CMS oversaw all aspects of the research. All authors
reviewed the final manuscript. Ethical approval for this study was granted by the University of Toronto Research Ethics Board.

Study 4 (described in Chapter 6) was conducted at the University of Saskatchewan. The manuscript has been submitted for publication in *The Journal of Theoretical Social Psychology* [Gilchrist, J. D., Sabiston, C. & Kowalski, K. Associations Between Actual and Ideal Self-Perceptions and Anticipated Pride among Young Adults. Under Review.] Catherine Sabiston (CMS) and Kent Kowalski (KK) are co-authors on this manuscript. JG was responsible for all aspects of the research (i.e., conceptualizing research question, organizing secondary data analysis, analyzing and interpreting data, and manuscript preparation. CS oversaw all aspects of the research. KK facilitated participant recruitment. All authors reviewed the final manuscript. Approval for this study was granted by the University of Toronto Research Ethics Board.
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Chapter 1

1 Introduction

Psychological factors and processes have long been implicated in influencing – and being influenced by – participation in sport and exercise. The desire to feel effective and to demonstrate competence is considered fundamental and a recurring theme in these contexts (Puente & Anshel, 2010; White, 1959). Competence is associated with greater achievement and impacts on individuals’ well-being and how they feel about themselves (McClelland & Atkinson, 1953). An understanding of the factors that serve to promote competence is thus warranted. Pride is a self-evaluative emotion that reflects individual’s evaluation of their competence and is theorized to regulate achievement striving however this emotion has been overlooked in sport and exercise contexts in favour of positive affect or enjoyment. As a result, little is known about the regulatory function of pride in sport and exercise contexts.

1.1 Pride

There is evidence that supports the notion that self-conscious emotions play a central role in motivating and regulating people’s thoughts, feelings, and behaviour (Campos, 1995; Fischer & Tangney, 1995). In the achievement-oriented context of sport and exercise, self-conscious emotions such as pride are relevant because they provide competence-relevant feedback in relation to the self that guides subsequent achievement behaviours (Tracy & Robins, 2004; Weidman, Steckler, & Tracy, 2017). Pride is a positive, self-conscious emotion that results from an individual engaging in, or presenting with, valued behaviours and/or characteristics and provides feedback that an individual’s self is valued (Fischer & Tangney, 1995; Tracy & Robins, 2007a). Consequently, experiencing pride not only makes people feel good, but feel good about themselves. As a result, feelings of pride are thought to reinforce and encourage individuals to engage in future behaviours conducive to pride. From this perspective, examining feelings of pride are particularly important in sport and exercise contexts because of their role in motivating goal-directed behaviours (Barrett & Campos, 1987; Fredrickson, 1998; Frijda, 2007; Lazarus, 1991c).
An understanding of pride in specific domains has been called for (Tangney & Tracy, 2012) and research on body-related self-conscious emotions has begun to emerge. There is considerable relevance for exploring experiences of body-related emotions in sport and exercise contexts given the inherently evaluative nature of these environments. Evaluations may pertain to physical attributes such as appearance as well as body functionality including performance and physical skills. Building on multidimensional models of the self (Shavelson, Hubner, & Stanton, 1976), Castonguay and colleagues (2013) reported that experiences of pride were tied to both what the body looks like (i.e., appearance-related pride) and what the body can do (i.e., fitness-related pride). Providing initial support for the association between fitness-related pride and physical activity, Mack and colleagues (2015) found a positive association between fitness-related pride and moderate-to-vigorous physical activity. Targeting positive emotional experiences around the body’s abilities may be one route thorough which to promote health enhancing behaviours and regulate achievement striving.

Research on pride, and emotions more generally, has been constrained primarily to the experience of emotions despite recent theorizing advancing the anticipation of emotion as important in motivating behaviour (Baumeister, Vohs, DeWall, & Zhang, 2007; Perugini & Bagozzi, 1998). Anticipated emotions, because of their forward-looking nature, have been implicated in goal-directed pursuits. Although several researchers have speculated about the role of emotions in the goal-action cycle (e.g., Carver & Scheier, 2002; Lazarus, 1991a), and made calls for increased investigations into anticipated emotions (e.g., Baumeister et al., 2007; DeWall, Beaumeister, Chester, & Bushman, 2016), we still know little about whether, and if so how, anticipated emotions guide behaviour in achievement contexts like sport and exercise. Goal-directed behaviours are likely to be promoted by anticipating how one will feel when attaining/not attaining one’s goal (e.g., Bagozzi, Baumgartner, & Pieters, 1998). There is evidence that anticipated emotions, regardless of valence, predict behaviour that aids in goal attainment. For instance, anticipating the positive feelings associated with goal success and the negative feelings associated with goal failure have been shown to lead to greater persistence and goal attainment (Bagozzi, et al., 1998; Dunton & Vaughan, 2008). Regarding physical activity behaviour specifically, there is support for anticipated emotions in the prediction of future behaviour and intentions, although the emotions considered to date have primarily focused on regret or on positive and negative affect (Abraham & Shreeran, 2003; 2004, Bagozzi, et al.,
A notable limitation of existing work on the relationship between anticipated emotions and physical activity is the reliance on positive and negative affect. While such investigations have provided initial insight into the relationship between anticipated emotions and behaviour, there is value in exploring discrete emotions given their different functions in adapting to changing relational circumstances (Lazarus, 1991a). Rich insight can be gained in terms of the behavioural consequences when discrete anticipated emotions are considered. That is, even emotions of the same valence (e.g., pride and happiness) can have very different effects on goal striving (Campos et al., 2013).

1.2 Antecedents of Anticipated Pride: The Process Model of Self-Conscious Emotions

Evaluations of the self are inextricably linked with self-conscious emotions (Sabiston et al., 2010; Wilson, Mack, & Sabiston, 2012). An understanding of the processes that give rise to self-conscious emotions is outlined in the Process Model of Self-Conscious Emotions (Tracy & Robins, 2004). The authors contend that the congruence (or incongruence) between individuals’ self-representations in part determines their emotional reaction. Much of the extant research has been undertaken with a specific emphasis on evaluating current conceptions of the self. Yet self-representations may be linked to multiple aspects of an individuals’ identity that extend beyond the present conception of the self including past or future selves (Higgins, 1987; Markus & Nurius, 1986; Tracy & Robins, 2004). Tracy and Robins (2004) contend that pride is often linked to future self-representations, or who one would like to be in the future (Tracy & Robins, 2004). Thus, consideration of future self-representations is important to consider when examining experiences of pride.

When future self-representations are activated, actual and ideal selves are evaluated and interpreted with reference to these future self-representations (Markus & Nurius, 1986; Tracy & Robins, 2004). In this way, future self-representations provide an evaluative context against which one can gauge the current success of the self’s functioning. Although researchers have addressed how congruence or incongruence between self-representations are related to emotions
like pride, guilt, and shame (e.g., Castonguay, Brunet, Ferguson, & Sabiston, 2012; Crocker et al., 2014), little research has examined how congruence between self-representations predict anticipated emotions when thinking about selves in the future. Thus, examining the antecedents associated with anticipated pride is warranted.

1.3 Dissertation Objectives

Sport and exercise contexts are achievement domains that may be affected by various emotional experiences, including pride. However, there is little research that has examined the role of pride in promoting behaviour in these contexts and how this might occur. Pride, in particular, is thought to be useful in the prediction of achievement behaviours because it is a positive self-focused emotion that motivates goal-directed behaviour and contributes to resources that aid individuals in goal pursuit (e.g., grit; Gilchrist, Fong, Herbison, & Sabiston, revise and resubmit; Williams & DeSteno, 2008; Ho, Tong, & Jia, 2017). The overarching goal of this research is to examine how the experience and anticipation of pride functions to promote behaviour in physical activity contexts. Further, the antecedents that give rise to the anticipation of pride are examined.

Across four studies, this program of study sought to:

i. Test (a) assumptions that pride is an emotional response to achievement, and (b) that experiences of pride promote progress towards goals.

ii. Examine how both the experience and the anticipation of pride and shame impact training behaviours among adults training or a long-distance race.

iii. Examine intentions to engage in physical activity as a mechanism through which anticipated pride is associated with physical activity.

iv. Examine how self-representations of current and ideal selves, and the congruence between them, impact young adults’ anticipation of pride.

1.4 Significance and Implications of the Dissertation Research

While the self is one of the most studied constructs in the social sciences, research on emotion has traditionally been overlooked in favour of more popular cognitivist theories, although research in this area has increased dramatically since the 1980s (Ekkekakis, Hargreaves, & Parfitt, 2013; Leary & Tangney, 2003). Despite the popularity and proliferation of research on
these topics, where these areas of research converge – self-conscious emotions - remains an area of research that until only somewhat recently began to receive interest from researchers. This is somewhat surprising given the centrality of self-conscious emotions to a range of social and behavioural outcomes. The present research aimed to address calls from researchers to grow the existing literature on self-conscious emotions, specifically pride, (Tangney, 1999; Tangney & Tracy, 2012) and holds the potential to advance the literature in a number of ways. First, greater attention has been paid to negative emotions, both basic and self-conscious, leaving pride and its associated outcomes less understood (Tangney & Tracy, 2012). Further, researchers that have investigated positive self-conscious emotions have focused on pride at the global level with investigations into pride experienced in particular domains limited. As a consequence, our understanding of the outcomes associated with pride in a given domain are restricted. This program of study answers calls for further research to explore individual’s experiences of pride in body-related contexts other than weight and appearance (Castonguay et al., 2012). Furthermore, Baumeister and colleagues (2007) argue that it is not experienced emotions that direct behaviour, rather it is the anticipation of emotion that reliably guides behaviour, yet anticipated emotions are rarely considered. Finally, although the process model of self-conscious emotions (Tracy & Robins, 2004) incorporates various self-representations into its conceptualization of identity-goal relevance and congruence, the authors do not make predictions as to whether the processes that give rise to self-conscious emotions hold when different types of self-representations are activated. With much of the existing literature focused on current self-representations, it is unclear how future self-representations shape the processes that give rise to pride.

As this review has illustrated, there is much to be learned by investigating experiences of pride in sport and exercise contexts. A focus on (a) global, (b) negative, and (b) currently felt, experienced emotion fails to consider the full potential that emotions can have on individual’s motivation, performance, and participation in sport and exercise. Guided by this program of study, there exists potential to enhance performance in sport and exercise contexts and increase participation in health promoting behaviours by targeting experiences of pride. Investigations of emotions beyond retrospective accounts represent a novel approach towards better understanding the impact of emotions in these contexts. The present study adds to the understanding of the relationship between emotions and behaviour by examining these relationships over time to test
processes that cannot be captured with the use of a cross-sectional design. Thus, results of this research provide a comprehensive picture of the dynamic relations between emotion and behaviour that includes both practical as well as conceptual and theoretical implications.

### 1.5 Overview of Dissertation

Chapter one has provided a brief overview of the program of research, along with the overarching purpose and specific aims of each study. Chapter two provides a more complete overview of the literature pertaining to emotions - pride in particular - in physical activity contexts. Further, this chapter includes the theoretical frameworks that guide the subsequent studies. Chapters three through six are presented in manuscript form, and represent the unique scholarly contributions that have resulted from this program of research. Chapter three presents a longitudinal investigation of adult runners’ experiences of pride and training progress as they train for an upcoming long-distance race (Gilchrist, Sabiston, Conroy, & Atkinson, submitted). Drawing from this same sample, Chapter four examines the effects of both experienced and anticipated pride and shame on the quality and quantity of training behaviours (Gilchrist, Conroy, & Sabiston, revise and resubmit). Chapter five provides an overview of a prospective study examining intentions to engage in physical activity as a mediator of anticipated pride and physical activity in young adults (Gilchrist & Sabiston, submitted). Chapter six illustrates a cross-sectional scenario based study that was conducted to examine the antecedents of anticipated pride among young adults (Gilchrist, Sabiston, & Kowalski, submitted). Finally, Chapter seven provides a comprehensive discussion of the four studies, with specific emphasis on the theoretical, conceptual, methodological, and practical implications of this line of research.
Chapter 2

2 Literature Review

Scheff (1988) has noted that as humans, “we are virtually always in a state of pride or shame” (p. 399). More specifically, Scheff’s observation highlights the oscillations of achievement and failure as we move throughout our lives and pursue goals important to us. Broadly speaking, reactions to these perceived events take the form of self-conscious emotions – emotional reactions about ourselves - shame when we fail, pride when we succeed. Although Scheff’s observation is likely hyperbolic concerning our everyday lives, sport and exercise are achievement contexts where self-conscious emotions are likely to be experienced. These environments are inherently social and evaluative in nature and there exists numerous opportunities for evaluations of individuals’ competencies. Positive evaluations are associated with experiences of pride and the regulation of these experiences has important implications for achievement pursuits. Although research on pride has been increasing in recent years, there is still much to be learned in terms of how pride regulates achievement striving and how pride can best be targeted to facilitate achievement in these contexts.

2.1 Emotions, Mood, and Affect

Providing a definition of what exactly constitutes an ‘emotion’ has proven to be a difficult task (Izard, 2011, Ekman & Cordaro, 2011; Levenson, 2011; Panksepp & Watt, 2011). The synonymous or interchangeable use of the terms ‘affect’, ‘emotion’, or ‘mood’ is not uncommon in research investigating affective phenomena (Ekkekakis & Petruzzello, 2000). Although cleanly delineated definitions do not exist, there is some convergence in definitions that should help to guide researchers and readers to determine the affective phenomena of interest to them. Choosing which phenomena to focus on ultimately depends on the research question at hand. Emotions, according to Lazarus’ Cognitive-Motivational-Relational Theory of Emotions (1991a), “are generated by the personal implications for well-being conveyed by relationships with the environment (typically social) and comprehended through an appraisal process” (p. 55). The particular emotion that is experienced will depend on the appraisal process. Generally speaking, events that present opportunities for well-being elicit positive emotions while
challenges to one’s well-being elicit negative emotions. Emotions, by definition, are of short duration and experienced in response to a given stimuli. Conversely, moods, while also hypothesized to have a cognitive origin are much more diffuse than emotions and lack any specific target (Frijda, 1993). Unlike emotions, moods do not have an associated action tendency and are typically of longer duration. Although both emotions and mood share an appraisal process in common, there are distinct differences that distinguish between the two. The appraisal processes involved in the generation of moods pertains more so to the larger, existential aspects of one’s life (e.g., how we see the world and our place in it). Emotions, on the other hand, are responses to more acute, relatively narrow encounters with one’s environment (Lazarus, 1991b).

Finally, affect is the experiential component and takes the form of valenced accounts (e.g., feeling good/feeling bad; Frijda, 1993; Lazarus, 1991a). Affect is considered the most elemental of these phenomena, much broader than emotions (Batson, Shaw, & Oleson, 1992; Ortony, Clore, & Foss, 1987). Because affect is the experiential component of affective phenomena, it is true that all emotions have affective qualities (e.g., positive/negative) but not all affective phenomena qualify as emotions (Ortony et al., 1987). Lazarus (1991a) maintains that generalizing across dimensions of positive/negative, or pleasure/displeasure obscures important psychological meanings inherent in emotions. Ultimately, however, the choice to focus on affect, emotion, or mood is a reflection of the research question and the phenomena of interest to the researcher(s). Given the focus on pride in the current program of research, emotions, rather than affect or mood, are the particular focus of this research.

2.2 Emotions

According to functionalist accounts of emotions, emotions arise in interactions with our environment – either as a response to opportunities or as a response to challenges. As a functional adaptation, emotions initiate and guide action tendencies, motivations, and behaviours that best allow the individual to cope with the specific challenge or opportunity at hand (Fridja, 1988; Lazarus, 1991a; Nesse & Ellsworth, 2009; Tooby & Cosmides, 1990).

2.2.1 Basic Emotions

Basic emotions are assumed to be biologically based, shared with other primates, experienced across all cultures, and identifiable via a discrete, universal expression (Ekman & Friesen, 1971).
They serve adaptive value aimed at guiding appropriate responses conducive to increased survival and reproduction (Levenson, 2011). With six core emotions identified (i.e., anger, fear, disgust, sadness, happiness, and surprise), a review of the current literature yields some debate among theorists as to whether other emotions actually constitute inclusion in the ‘basic emotion’ category (e.g., contempt, love, interest, enjoyment; Ekman & Cordaro, 2011; Izard, 1971; Panksepp & Watt, 2011; Tracy & Randles, 2011).

2.2.2 Self-Conscious Emotions

While basic emotions primarily serve survival goals, social functional accounts of emotions hold that self-conscious emotions are an evolutionary adaptation that function to promote the attainment of social goals through coordinating and motivating behaviours central to social dynamics (Keltner & Buswell, 1997; Tracy & Robins, 2004; Tracy & Robins, 2007a). These are emotions that result as a function of thinking about and evaluating the self (Tangney & Tracy, 2012) and have been implicated in playing a central role in motivating and regulating individual’s thoughts, feelings, and behaviours (Campos, 1995; Fischer & Tangney, 1995). They are psychologically complex and involve certain processes for their elicitation (Izard, Ackerman, & Schultz, 1999; Lewis, 2000). More specifically, self-conscious emotions require the ability to form stable self-representations, to reflect on those representations and generate a self-evaluation (Tracy & Robins, 2004). They are individuals’ emotional reactions to themselves. It is this self-evaluative process that distinguishes basic emotions from self-conscious emotions (Tangney & Tracy, 2012). That is, while basic emotions such as sadness can, and often do, involve self-evaluative processes, only self-conscious emotions must involve these processes for their elicitation (Tracy & Robins, 2004). Further, unlike basic emotions, the universality of self-conscious emotions has been questioned. However, recent evidence supporting cross-cultural recognition and spontaneous displays amongst the congenitally blind has challenged this belief (Tracy & Randles, 2011; Tracy & Robins, 2008; Tracy & Matsomuto, 2008).

2.3 The Development of Self-Conscious Emotions

There are developmental differences between basic and self-conscious emotions that determine when these emotions will begin to be experienced. Throughout early development basic emotions occur with minimal cognitive or behavioural regulation and are often triggered by a
quick onset and automatic appraisal (Izard, 1971). As individuals age and higher order cognitive capacities increase, emotions and cognitions operate together to regulate emotional responses (Lewis, Alessandri, & Sullivan, 1992; Stipek, 1995). Self-conscious emotions rely on more advanced cognitive capabilities in their operation than basic emotions due to their requisite reliance on self-awareness and self-representation (Lagattuta & Thompson, 2007; Stipek, 1995). As a result, these emotions emerge later in the developmental trajectory than basic emotions.

From a developmental perspective, self-concept is a necessary prerequisite in developing and evaluating the self against a set of social standards, rules, and goals (Lewis, 1995; Tangney & Dearing, 2002). The development of a self-concept allows for self-awareness, as one is now able to think reflexively about the self (Leary & Tangney, 2003). Thinking about the self paves the way for one to make self-appraisals. To do this, a child must be able to recognize a standard against which his/her behaviour or characteristics can be evaluated against. In adopting given standards, the child is able to evaluate the degree to which he/she meets, exceeds, or fails to live up to that standard. The adoption of standards occurs through a process of internalization whereby children learn what is appropriate based on how others react to them (Lewis, 2000). Through this process, children come to own these standards and judgments as their own. In addition, children also come to internalize the standards and values of significant others (including society). For example, a society that places an emphasis on physical appearance will result in perceptions of physical attractiveness as an important contributor to self-esteem (Harter, 2012a). Further, the structure of the self changes as a result of differentiation as one develops increased cognitive abilities throughout childhood. Differentiation refers to the capacity to make differing self-evaluations across domains of experience in addition to the development of an ideal self (Harter 1986; 1990). That is, the child is able to make comparisons between who one is and who one would like to be. Differentiation sets the stage for multiple selves across different relational contexts. When individuals evaluate their own behaviours or characteristics against a set of standards and norms, they may experience a range of emotions such as pride (meeting social standards) or shame (when violating social norms; Harter, 2012b). Taken together, society tells us what kind of person we should be; we internalize these beliefs in the form of self-representations; and emotions motivate action toward the goals embodied in these self-representations. Thus, rather than experienced as an end in and of itself, emotions can be viewed
as useful regulators of behaviour that help individuals navigate their social world (Gordon, 1990; Scheff, 2000).

### 2.3.1 Emotions are Relational

Burkitt (1997) argues that emotions are not an expression of inner experiences, but rather, are relational. Emotions give meaning to relationships (Barbalet, 2002). The relationship between the self and others are the subject matter of feelings; they only have meaning in the context of others (Burkitt, 2002). This is particularly true for self-conscious emotions. At the root of these experiences is a set of socially prescribed standards. When living up to these standards (or not) we are taught to experience a given emotion (e.g., pride in accomplishment, shame in violating social standards or norms; Gordon, 1990). These feelings act to inform of us our social standing and our connections with other people (e.g., am I good? Am I bad? Am I valued? Have I done wrong?). However, this process is entirely social. In other words, individuals can only ever know if they’re behaviours are good or bad, appropriate or inappropriate, or if they’ve lived up to an expected standard. Kemper (1990) argues that power and status play a direct role in producing emotions. In terms of status, the question becomes ‘how do I compare to others’? If everyone behaved the same way and accomplished the same thing, there would be no pride. Inherent in this idea of accomplishment is comparisons between others. In this sense, pride (and other emotions) is always in dialogue with other people. If an act is considered to have social value, then individuals will feel pride. As this notion implies, pride is highly contingent on the person and the context of their relationship with others and is largely shaped by what is valued in a given time, in a particular place.

### 2.4 Self-Conscious Emotions: Pride

Self-conscious emotions evolved to provide information about one’s current self-representations (i.e., self-evaluations), and to motivate the functional behaviours (e.g., achievement) that allow individuals to maintain a positive self-concept and the respect and liking of others (Tangney & Dearing, 2002; Tracy & Robins, 2007a). They act to guide individual behaviour by motivating us to do things that are socially valued and to avoid doing things that are not. Recent research on self-conscious emotions has provided a better understanding of the development, expressions, functions, and consequences of this class of emotions (Tracy, Cheng, Robins, & Trzesniewski,
However, unlike other self-conscious emotions (i.e., shame and guilt), pride has received relatively little empirical attention (Tangney & Tracy, 2012). With shame and guilt largely elicited as a result of failure or social transgression, pride is considered to be an emotional response to success or mastery experiences (Lazarus, 1991b). More specifically, Mascolo and Fischer (1995) have defined pride as being generated by “appraisals that one is responsible for a socially valued outcome or for being a socially valued person” (p. 66). Pride functions to reinforce and motivate the socially valued behaviours that help maintain a positive self-concept and the respect and liking of others (Tracy & Robins, 2004).

Functional accounts of pride suggest that pride evolved as a mechanism to help individuals attain or maintain status, and this is accomplished by regulating achievement behaviour (e.g., Cheng, Tracy, & Henrich, 2010; Lewis, 2000; Tiedens, Ellsworth, & Mesquita, 2000; Tracy & Robins, 2004, 2007a; Williams & DeSteno, 2008). Individuals who achieve are valuable to their social group; they are competent individuals that possess skills, knowledge, and expertise that can benefit the group. As a result, these individuals are rewarded with high status. High status is adaptive in its own right – those with high status have greater access to resources and are more likely to survive and reproduce (Adler, Epel, Castellazzo, & Ickovics, 2000; Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Henrich & Gil-White, 2001). From this perspective, examining experiences of pride is particularly important since the experience directs motivation towards competence pursuits (Barrett & Campos, 1987; Fredrickson, 1998; Frijda, 2007; Lazarus, 1991a).

The pursuit of one’s goals entails effectively regulating behaviour that includes tradeoffs between benefits of immediate pleasure on one hand and long-term goal achievement on the other. This is especially relevant in sport and exercise contexts because of the number of hours that must be spent developing sport specific skills or the consistent time and effort that is required to maintain or improve health/fitness. Individuals must continually devote time and effort towards attaining goals in such contexts. As an achievement emotion, pride facilitates behaviours directed towards attaining these goals. Relative to other positive emotions such as happiness or enjoyment (which are associated with short-term pleasure; Katzir, Eyal, Meiran, & Kessler, 2010), or positive affective states (Williams & DeSteno, 2008), pride motivates individuals to engage in hedonically costly behaviour in the pursuit of long range goals (i.e.,
expending time and effort in goal pursuit; Fredrickson & Branigan, 2005; Verbeke, Belschak, & Bagozzi, 2004; Williams & DeSteno, 2008). Doing so results in skill development and goal attainment which provides benefits to the self including enhanced self-esteem and status. Providing further support for this notion, Campos and colleagues (2013) reported that pride is most closely associated with perceptions of accomplishment and a willingness to take on new challenges compared to other positive emotions.

2.4.1 Two Facets of Pride

Divergent perspectives about the experience of pride have persisted throughout history with both positive and negative connotations associated with its experience (Ekman, 2003; Tracy, Shariff, & Cheng, 2010). Negative connotations often depict individuals with an inflated sense of self while positive connotations often refer to appropriate responses toward personal accomplishment. Mirroring this conceptual dichotomy, varying outcomes have been associated with pride with both adaptive and maladaptive outcomes noted (Tracy et al., 2009; Tracy & Robins, 2007b). As a resolve to the paradoxical interpretation of pride, researchers have suggested that pride, rather than a unitary construct, may actually consist of two distinct facets (Fischer & Tangney, 1995; Lewis, 2000). Both facets are elicited in response to a positively appraised event (i.e., success or achievement), however authentic pride results from attributions to one’s own effort and is thought to be the more pro-social and psychologically healthy facet of pride, closely aligned with achievement, effort, and specific accomplishments (Tracy et al., 2009; Tracy & Robins, 2004; Verbeke et al., 2004). On the other hand, hubristic pride results from attributions to one’s innate talent and perceptions of superiority, and corresponds with the more narcissistic and sinful depiction of pride as it is aligned with feelings of arrogance and self-aggrandizement (Tracy & Robins, 2007b, 2009).

Thus, the question often arises as to why there exists a seemingly dark facet of pride. As noted previously, pride evolved as a mechanism for motivating behaviours and strategies oriented toward increasing status (Cheng et al., 2010). Having high status benefits the individual. Those high in status are granted influence over others and access to resources which promotes increased likelihood of survival and reproduction (Adler et al., 2000; Henrich & Gil, 2001). Both authentic and hubristic pride are routes to status but accomplish this in different ways (Cheng et al., 2010; Tracy, Shariff, & Cheng, 2010). Authentic pride promotes effort and accomplishments that
signal competence and engender perceptions of prestige based on the possession of skills or expertise. These individuals are open to sharing their knowledge and skills with those that defer to them and are thus respected and liked among their group. Conversely, hubristic pride promotes status through perceptions of dominance that is established through threat and intimidation, or by simply appearing competent in the absence of any actual achievement (Anderson & Kilduff, 2009). The attributions to innate talent and ability that undergird hubristic pride make it unlikely that those high in dominance are willing or able to impart their skills and knowledge to others. Others come to defer to those high in dominance out of fear, not respect (Cheng et al., 2010; Henrich & Gil-White, 2001). Thus, the ultimate function of pride remains the same for the two facets: to establish status, but this is accomplished by two different routes, one through engendering perceptions of prestige, the other by wielding dominance.

Consistent with this dichotomy, a number of divergent personality traits have been noted. Authentic pride has been shown to be more closely aligned with adaptive personality traits such as extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience whereas hubristic pride has been shown to be negatively related to agreeableness and conscientiousness (Carver, Sinclair, & Johnson, 2010; Tracy et al., 2009; Tracy & Robins, 2007b). Building on differences in personality characteristics, the two experiences of pride are associated with varying cognitive and behavioural outcomes. For example, inverse relationships have been found between the two facets of pride and outcomes such as antisocial behaviour (e.g., aggression), interpersonal functioning (e.g., relationship satisfaction and perceived social support), and mental health outcomes (e.g., anxiety and depression; Carver et al., 2010; Tracy et al., 2009). Further differences in other domains such as self-control and goal regulation have also been noted. Authentic pride is associated with greater self-control and increased perseverance while hubristic pride is associated with greater impulsivity and decreased perseverance (Carver et al., 2010; Williams & DeSteno, 2008). Further, experiences of authentic pride are associated with adaptive intertemporal choice, or the acceptance of short-term costs that favor long-term outcomes (DeSteno, 2009). Moreover, Ho, Tong, and Jia (2016) provided initial support that authentic pride facilitates the delay of gratification while hubristic pride inhibits the delay of gratification. Authentic pride is associated with the passionate pursuit of goals that are driven by an internal locus of control (i.e., harmonious passion) while hubristic pride is associated with the passionate pursuit of goals but is experienced as controlling as individuals display a rigid
persistence towards goal engagement (i.e., obsessive passion; Bureau, Vallerand, Ntoumanis, & Lafrenière, 2012). Further, hubristic pride is associated with contingent self-esteem and a desire for self-affirmation (Tracy et al., 2009). Given the fragility of the ego among those high in hubristic pride, these individuals avoid situations that do not provide positive feedback about the self. As such, those high in hubristic pride tend to seek immediate gratification and validation and may be less likely to persevere in situations that lack positive feedback about the self (Carver et al., 2010). Taken together, these results illustrate the potential of authentic pride to facilitate achievement outcomes while hubristic pride is likely to undermine achievement behaviour.

2.5 Pride in Physical Activity Contexts

Sport and exercise contexts are contexts in which individuals are subject to a number of emotions, including pride, and these experiences hold potential to modify individual’s achievement striving. Indeed, physical activity has received considerable attention as a context in which emotional experiences have been investigated (Biddle & Mutrie, 2008). However, investigations into negative affective experiences have been the prevailing focus of much of this research. Despite a focus on the effects of negative emotions in these contexts (e.g., anxiety; Hanin, 2000), or on a two-dimensional conception of affect (i.e., positive and negative affect), individuals experience a range of emotions from feelings of anger and shame from goals unmet to happiness and pride over attaining important goals (Cerin, 2003). Yet positive emotions remain relatively understudied relative to negative emotions (McCarthy, 2011). Coinciding with increased investigations into the experience of pride and the potential for pride to facilitate achievement behaviour, research examining the nature of the relationship between pride and physical activity has now begun to emerge. Results of existing studies suggest that feelings of authentic pride demonstrate a small positive association with physical activity behaviour in female adolescent athletes (Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011) and young female adults (Sabiston et al., 2010). No relationship was found between physical activity and hubristic pride (Mosewich et al., 2011). These results provide initial support for the facilitative role of authentic pride in motivating physical activity behaviour. Nonetheless, this line of research is still in its infancy and further research is needed to better understand the nature of the relationship between authentic and hubristic pride and goal-directed behaviour in these contexts.
2.6 Domain-Specific Experiences of Pride

Researchers investigating the outcomes associated with pride have predominately assessed pride as a disposition assessed at the global level (e.g., individuals’ tendency to experience pride in general across a range of situations and contexts; Tracy & Robins, 2007b; Weidman, Steckler, & Tracy, 2017). Global assessments of pride reflect individuals’ experiences of pride in general, while investigations into pride at the domain level reflects the notion that individuals may make differing self-evaluations across different life domains. As such, there is a dearth of understanding regarding domain-specific pride in predicting relationships with goal-relevant outcomes. Ryan (1995) argues that domain specific investigations can provide a better understanding of the extent that a given set of guiding principles holds across various settings, activities, or processes. As such, domain-specific investigations of pride can facilitate a more nuanced understanding of the consequences of authentic and hubristic pride (Tangney & Tracy, 2012).

One domain that has received considerable attention since the multidimensionality of the self was established, and is likely salient in physical activity contexts, is physical self-concept (Marsh Richards, Johnson, Roche, & Tremayne, 1994; Shavelson et al., 1976). The physical self has been identified as an important component of self-concept, contributing to self-esteem, well-being, and health behaviours (Fox & Wilson, 2008; Shavelson et al., 1976). Physical self-concept is nested under self-esteem and subsumes both an appearance and ability subdomain. There are no generally agreed upon self-perceptions that comprise either subdomain. The self-perceptions assessed largely differ as a function of the theoretical framework and instrumentation guiding the research. However, regardless of instrumentation, in general these perceptions are focused on either ability or appearance dimensions of the self (e.g., sport competence, endurance, strength, body fat, Fox & Corbin, 1989; Marsh et al., 1994). Researchers have suggested that evaluations of the dimensions of the physical self are inextricably linked with self-conscious emotions (Wilson, Mack, & Sabiston, 2012).

Body-related self-conscious emotions have been identified as important but overlooked predictors of behaviour in physical activity contexts (Sabiston et al., 2010). Although body image is a broad term that encompasses perceptual, attitudinal, affective, cognitive, and behavioural dimensions, most of the research examining body image has been very narrow in
scope, focusing primarily on dissatisfaction with appearance, especially body shape and weight (Webb, Wood-Barcalow, & Tylka, 2015). Cash and Pruzinsky (2002) argue that this represents a narrowed operationalization of body image and fails to capture much of the richness of the human experience. Researchers have called for further research that considers other aspects than simply dissatisfaction with physical appearance (Tylka, 2011).

Building on multidimensional models of the self, and Tangney and Tracy’s (2012) calls to explore domain specific experiences of pride, Castonguay et al. (2013) found that experiences of pride were tied to both what the body looks like (i.e., appearance-related pride) and what the body can do (i.e., fitness-related pride). This suggests that an evaluation of what the body looks like as well as what the body can do are domains capable of eliciting pride. Moreover, these evaluations were found to be both authentic and hubristic in nature with attributions made regarding either specific accomplishments or attributions of superiority. Providing some initial support for the association between fitness-related pride and engagement in physical activity, Mack and colleagues (2015) found a positive association between both authentic and hubristic pride with moderate-to-vigorous physical activity. Contrary to findings when pride is examined at the global level, these results provide support that experiences of pride about one’s fitness are associated with engagement in physical activity, whether as a result of attributions about one’s effort and hard work (i.e., authentic pride), or as a result of comparisons to others (i.e., hubristic pride). The results provide a more nuanced understanding of the relationship between pride about one’s fitness and engagement in physical activity. Taken together, these findings provide a sound rationale and impetus for future investigations to examine pride at the domain level, specifically as it pertains to the body.

2.7 Anticipated Emotions

The research thus far largely points to the direct role that emotions have on behaviour highlighting the adaptive value of emotional experiences for survival and social benefits (Levenson, 2011; Tracy & Robins, 2004). Until recently, examinations of pride – or most emotions for that matter, whether assessed at the global level or on a specific domain, have almost exclusively been discussed as responses to competence outcomes. Notably absent are discussions of anticipated emotions – or what one expects to feel in the future given a certain
outcome.\(^1\) The study of anticipated emotions (i.e., predicting how one will feel in the future) is an emerging area of interest with potential to provide insight into the antecedents of behaviour in sport and exercise. Baumeister and colleagues (2007) contend that as people interact with their environments and experience emotions, they learn to anticipate associations between the behaviour and the associated emotional experience (e.g., achievement and pride). Over time, the anticipation of pride functions to organize achievement-related behaviours.

Because of their forward-looking nature, anticipated emotions have been implicated in guiding behaviour in the service of goal pursuit (Greitemeyer, 2009; Nelissen, de Vet, & Zeelenberg, 2011). Anticipated pride may be particularly useful in instances where individuals perceive their actions to be instrumental to goal progress through the investment of time and effort or when there is a discrepancy between evaluations of the behaviour itself and performance of the behaviour (e.g., “exercise is good for me” versus “but engaging in exercise is uncomfortable”; Magnan, Shorey Fennell, & Brady, 2017). Thus, anticipated emotions are thought to be useful in the service of goal pursuit because anticipating how one will feel if they reach their goal prepares the individual to engage in the behaviours necessary to attain their goals (e.g., adhere to a training plan). Although several researchers have speculated about the role of emotions in the goal-action cycle (e.g., Carver & Scheier, 2002; Lazarus, 1991b), and made calls for increased investigations into anticipated emotions (e.g., Baumeister et al., 2007; DeWall et al., 2016), we still know little about whether and how anticipated emotions guide behaviour in sport and exercise contexts.

Initial support that anticipated affective reactions regulate goal directed behaviour has begun to emerge. For example, researchers have found that anticipated positive and negative affect are associated with behaviour in the pursuit of one’s goals (Bagozzi & Pieters, 1998; Nelissen et al., 2011; Troop, 2016). Other researchers have also provided support for the proposition that anticipated affect is positively associated with effort, persistence, and performance (Greitemeyer, 2009; Morewedge & Buechel, 2013). Moving beyond a valenced approach, Patrick, Chun, and MacInnis (2009) found that anticipated pride was associated with greater self-control than anticipated shame. Additionally, anticipated shame was more effective than anticipated guilt at

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\(^1\) Further distinctions between anticipatory emotions (currently experienced emotions about the prospect of a future outcome) and anticipated emotions (the anticipation of emotion that will occur in the future given a certain outcome) are described in greater detail elsewhere (see Sala, Baldwin, & Williams, 2016; Loewenstein & Lerner, 2003).
regulating behaviour (Chun, Patrick, & MacInnis, 2007). Finally, salespeople who anticipate experiencing work-related pride report a higher level of job performance, exert greater effort at work, and report greater motivation toward productivity and success (Verbeke et al., 2004). With evidence demonstrating associations between anticipated emotions and behaviours directed at goal-attainment, researchers have focused their attention on the utility of anticipating emotions in predicting physical activity intentions and behaviour (Abraham & Sheeran, 2003, 2004; Bagozzi & Pieters, 1998; Dunton & Vaughan, 2008; Loehr & Baldwin, 2014; Perugini & Bagozzi, 2001; Ruby, Dunn, Perrino, Gillis, & Viel, 2011). In a sample of undergraduate students Abraham and Sheeran (2004) found that anticipated regret over missed exercise sessions accounted for additional variance in exercise behaviour two weeks later beyond the variance accounted for by the constructs within the Theory of Planned Behaviour (Ajzen, 1991) including attitude, subjective norms, perceived behavioural control, and past behaviour. Dunton and Vaughan (2008), using the Transtheoretical Model (DiClemente et al., 1991; Prochaska & DiClemente, 1983) as a guiding framework, found that anticipated positive, but not negative, affect predicted both the adoption and maintenance of regular exercise. These results illustrate the utility of anticipated emotions in guiding goal-directed behaviour and support Baumeister et al.'s (2007) contentions that anticipated emotions provide a powerful motivational force underpinning goal-directed behaviour.

Considerably more research has investigated anticipated negative emotions relative to positive emotions or the focus has been on the non-performance of a behaviour rather than performance of a behaviour (Abraham & Sheeran, 2003, 2004; Bagozzi & Pieters, 1998; Dunton & Vaughan, 2008; Wang, 2011). Furthermore, researchers examining anticipated emotions have relied on broad affective states (i.e., positive/negative) and a small number of discrete emotions (i.e., regret). Although such investigations have provided initial insight into the relationship between anticipated emotions and behaviour, there is value in exploring discrete anticipated emotions given their different functions in adapting to changing relational circumstances (Campos, Shiota, Keltner, Gonzaga, & Goetz, 2013; Lazarus, 1991a). At present, there exists very little research that has examined the relative utility of anticipating discrete positive emotions such as pride. In this regard, it is not yet clearly understood how anticipated pride influences behaviour. However, further investigations of this topic are warranted in physical activity contexts as it holds potential to influence the strategies individuals use to motivate goal-directed behaviour.
2.7.1 Outcome-Expectancy Models

Anticipated emotions are variants of outcome expectancies that are articulated in other popular theories of health behaviour change. A central premise of many outcome expectancy based models is that behaviour is regulated through an understanding that current actions are associated with consequences in the future. For example, within expectancy-value models, behaviour is a function of what one expects to get from performing the behaviour and how much one values those outcomes (Eccles et al., 1983; Feather, 1982). The theory of planned behaviour (TPB; Ajzen, 1985) includes outcome expectancies that are operationalized as behavioural beliefs, or the belief that a behaviour will result in a given outcome, combined with the value of that outcome which, together, form the attitude component. Social norms also represent a kind of outcome expectancy with reference to how others may perceive an individual engaging in or avoiding the behaviour (Ajzen, 1991; Fishbein & Ajzen, 1975). The transtheoretical model includes the pros and cons associated with the performance of a behaviour (Prochaska & DiClemente, 1983), and social cognitive theory distinguishes between favorable and unfavorable outcomes that result from a given behaviour, in addition to one’s confidence in performing the behaviour (Bandura, 1998). Although expected outcomes are included in previous models of behaviour change, these have primarily been operationalized as cognitive outcomes (e.g., knowledge of health benefits), with little attention given to affective outcomes of behaviour.

Existing expectancy value models also often do not consider the ways in which the temporal dispersion of benefits associated with a behaviour impact individuals’ intentions or behaviours. Such theories have received scrutiny based on existing literature demonstrating biases in how much people value certain outcomes depending on the temporal dispersion of the outcomes. Biases in temporal discounting lead people to prefer gains that are immediate rather than gains that unfold over time (e.g., preferences for watching television now at the expense of health later; Ainslie, 1975; Chapman & Elstein, 1995). Researchers have shown this to be the case even when future gains are greater than immediate gains (Ainslie, 1975, 2001; Lowenstein & Thaler, 1989). That is, rewards that are more proximal in time are given more weight in the decision-making process than are rewards that occur farther into the future (Ainslie, 2013; Hall & Fong, 2013; Trope & Liberman, 2003).
Consideration of the temporal aspects of behaviour is particularly relevant to the prediction of physical activity. Although it is well-known that engagement in physical activity is associated with a host of physical and psychological benefits (Warburton et al., 2006), the majority of benefits do not occur at the time of the behaviour with most not occurring months or even years into the future, while the costs associated with exercise (e.g., effort, inconvenience, discomfort) are much more immediate (Hall & Fong, 2007). As such, consideration of more immediate benefits of physical activity may be appropriate targets to modify behaviour. Given the relatively quick onset and ties to goal-directed and socially valued behaviours, investigations into the positive emotions that result from engagement in physical activity may be relevant hedonic factors to explore (Lazarus, 1991b; Leary, 2007). In this way, emotions may be useful insofar as they are more immediate forms of reward than are more distal consequences of behaviour (e.g., improved health).

2.8 Process Model of Self-Conscious Emotions

Until now, this program of research has focused solely on the outcomes of pride. However, investigations of the antecedents of pride may provide fruitful information when attempting to modify experiences of pride, or the anticipation of pride. The Process Model of Self-Conscious Emotions provides a framework to test the antecedents of self-conscious emotions (Tracy & Robins, 2004). Within this model, evaluations of the self are prerequisites for the elicitation of self-conscious emotions. For self-conscious emotions to be experienced, an event must be deemed relevant to one’s identity. Self-representations activated by the event are then compared to other self-representations the individual holds to determine congruence or incongruence between self-representations. While there are a number of self-representations that comprise an individual’s identity (Higgins, 1987; Markus & Nurius, 1986; Tracy & Robins, 2004), the process model focuses most closely on actual and ideal self-representations. The congruence (or incongruence) between activated self-representations and how an individual sees themselves (i.e., actual self) and/or how they’d like to see themselves (i.e., ideal selves) in part determines individuals’ emotional experience. Positively valenced emotions such as pride are elicited when there is congruence between self-representations whereas discrepancies between self-representations lead to negatively valenced emotions such as guilt and shame (Higgins, 1987; Tracy & Robins, 2004).
Much of the extant research on self-conscious emotions has been undertaken with a specific emphasis on current conceptions of the self. However, the ability to reflect upon and evaluate the self is not limited to current conceptions but can include a number of selves including past, present, and future selves (Higgins, 1987; Markus & Nurius, 1986; Tracy & Robins, 2004). In order to understand what a future self means to the individual – and the emotions associated with that self - it is necessary to understand how future self-representations are in line with other aspects of an individual’s self-concept. The meaning that is ascribed to a future self is always in reference to other aspects of the self. Based on the process model of self-conscious emotions, depending on whether our future selves are viewed as consistent or not with other self-representations has implications for the emotions we anticipate experiencing (Higgins, 1989; Tracy & Robins, 2004). For example, thinking about scenarios where our future self is inconsistent with how we see ourselves, or how we’d like to see ourselves, will lead one to anticipate experiencing negative emotions. Conversely, when imagining a future self that is consistent with how we see ourselves, or how we’d like to see ourselves, will lead an individual to anticipate positive emotions. Although researchers have addressed how congruence (or incongruence) in self-representations are related to self-conscious emotions, most of this research has centered around current self-representations and has focused on negative emotions such as guilt or shame (e.g., Brunet, Sabiston, Castonguay, Ferguson, & Bessette, 2012; Castonguay et al., 2012). There has been little research that has examined the emotions one anticipates when future self-representations are activated. This is an important area of research given that Tracy & Robins (2004) argue that pride is thought to be most closely associated with future self-representations.

2.9 Dynamic Nature of Emotions and Behaviour

Theories examining relationships between emotions and behaviour generally emphasize a process-based perspective whereby phenomena of interest are separated in time and differences may occur both between- and within-persons (Stenling, Ivarsson, & Lindwall, 2017). Researchers in sport and exercise have primarily adopted cross-sectional designs that test between-person relations (Goetz, Sticca, Pekrun, Murayama, & Elliot, 2016; Stenling et al., 2017). Between-person analyses are not well suited to test within-person hypotheses because they do not explicate the processes that are involved and how the constructs under investigation are coupled together over time (Dunton, 2016). Recent findings suggest that within-
person variation is as important as the between-person variation when examining the relationship between emotions and physical activity (Dunton et al., 2014; Dunton, Liao, Intille, Huh, & Leventhal, 2015; Liao, Shonkoff, & Dunton, 2015). Research designs that are consistent with the underlying phenomena are thus needed to more accurately ascertain the nature of the proposed relationships.

2.10 Overview of Dissertation Studies

Table 2.1 highlights an overview of the objectives and corresponding methodology for each dissertation study. Study 1 is a longitudinal examination of authentic and hubristic pride and training progress, which is submitted to Psychology of Sport and Exercise (Gilchrist, Sabiston, & Conroy, & Atkinson, submitted). The purpose of this manuscript was to examine experiences of authentic and hubristic pride in regulating training progress among adults training for a long-distance race. Based on recent research it was of interest to examine how low authentic pride on a given week was associated with training progress the subsequent week. The findings of this study will tease apart the oft-cited association between pride and achievement to further explicate the nature of this relationship. Further, examining experiences of pride over time permits investigations of how these associations may differ between people as well as within-people. Study 2 is a longitudinal investigation of experienced and anticipated pride and shame and training behaviour and is currently awaiting feedback after receiving a decision of Revise and Resubmit to the Journal of Sport and Exercise Psychology (Gilchrist, Conroy, & Sabiston, Revise and Resubmit). The purpose of this manuscript was to gain a better understanding of the associations between anticipated pride and shame in predicting achievement behaviours. This research will contribute to the emotion literature given that the extant research has examined the experience of pride yet current theoretical perspectives highlight the importance of anticipated emotions in regulating goal-directed behaviour. (i.e. Baumeister et al., 2007). Study 3 is a prospective examination of intentions as a mediator of anticipated pride and physical activity. The purpose of this manuscript was to explore anticipated authentic and hubristic pride in the prediction of LTPA guided by the Affect and Health Behavior Framework (Williams & Evans, 2014). This study aims to explore the extent to which anticipated pride is directly, or indirectly, associated with physical activity behaviour. It also answers calls for research on domain specific self-conscious emotions (Tangney & Tracy, 2012). Doing so may provide targets that may be more amenable to change than might be when global, trait pride is considered. This manuscript
has been submitted to *Sport, Exercise, and Performance Psychology* (Gilchrist & Sabiston, Revise and Resubmit). Lastly, Study 4 is a cross-sectional study examining the congruence between self-representations in the prediction of anticipated pride and has been submitted to *The Journal of Theoretical Social Psychology*. This study builds on the previous research by bridging the knowledge gaps as to the predictors of anticipated authentic and hubristic pride using the process model of self-conscious emotions as the guiding framework and appropriate statistical approaches to examine congruence between self-representations. The next four chapters will present each of the respective dissertation studies (Table 2.1).

**Table 2.1 Overview of Dissertation Studies**

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<th>Title</th>
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<td>1</td>
<td>“Authentic Pride Regulates Runners Training Progress”</td>
<td>To examine a) if training progress predicted pride and b) to examine if low authentic pride predicted greater training progress the following week</td>
<td>Intensive longitudinal design</td>
<td>131 adult runners training for a long-distance race and following a training program</td>
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<td>2</td>
<td>“Experienced and Anticipated Pride and Shame as Predictors of Goal Directed Behaviour”</td>
<td>To examine both the experience and the anticipation of pride and shame in predicting the quality and quantity of training behaviour</td>
<td>Intensive longitudinal design</td>
<td>153 adult runners training for a long-distance race</td>
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<td>3</td>
<td>“Do Intentions Mediate the Association between Anticipated Authentic and Hubristic Pride and Engagement in Physical Activity among Young Adults?”</td>
<td>To examine the associations between fitness-related anticipated authentic and hubristic pride and engagement in moderate-vigorous physical activity and examine if intentions mediated the associations</td>
<td>Prospective design over 2-weeks</td>
<td>125 young adults</td>
<td>Revise and Resubmit</td>
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Gilchrist, Sabiston, Conroy, & Atkinson, 2017

Gilchrist, Conroy, & Sabiston
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<th>Design Methodology</th>
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<td>4</td>
<td>“Associations between Actual and Ideal Fitness-Related Self-Perceptions and Anticipated Pride”</td>
<td>To examine the congruence between actual and ideal selves in the prediction of anticipated pride</td>
<td>Cross-sectional, design; scenario based methodology</td>
<td>130 young adults</td>
<td>Submitted Gilchrist, Sabiston, &amp; Kowalski</td>
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Chapter 3

Authentic Pride Regulates Runner’s Training Progress

3.1 Abstract

Affect provides feedback about progress toward goals and feelings of authentic pride can serve as a barometer of achievement. For example, low levels of authentic pride may signal that changes in effort or behaviour are needed. Prior work has primarily focused on stable individual differences in pride rather than fluctuations in pride as people succeed or fail in their goal pursuits. The purpose of this study was to test the hypotheses that achievement is associated with authentic pride and that fluctuations in authentic pride would predict changes in training behaviours as evidenced by fluctuations in subsequent training progress. This study used a micro-longitudinal design with repeated weekly online diaries and multilevel modelling to test study objectives. Participants training for a long-distance race (N = 131, 78% women; M = 35.4 years) provided weekly self-reports on pride and training progress for seven weeks. Multilevel models indicated that training progress predicted authentic pride at both the within- (β = 0.45, p < .001) and between-person level (β = 0.56, p < .001). When participants reported lower authentic pride than usual on a given week, training progress increased following week (β = -0.43, p < .001). Conversely, greater authentic pride on average was associated with greater training progress on average (β = 0.37, p < .001). Consistent with the affect-as-information framework, runners may use their feelings of pride to regulate their behaviour. Low feelings of pride can be adaptive for goal striving by signaling when strategies or efforts need to be adjusted.
3.2 Introduction

In performance contexts such as sport, athletes receive feedback from a variety of sources including coaches, trainers, and teammates. Feedback can also come from the self in the form of emotional experiences. For example, experiencing pride after a training session or competition provides a form of immediate feedback about the relative acceptability of oneself and one’s actions (Tangney, Stuewig, & Mashek, 2007). The information that emotions provide influence how athletes pursue their goals (Carver & Scheier, 1990; Higgins, 1987; Schwarz & Clore, 1983).

Affective feedback has predominantly been studied in the context of valenced affective states (e.g., feeling good or bad; Frijda, 1993; Lazarus, 1991a). Positive affect signals that progress is being made towards one’s goals and that the individual may be able to relax their efforts and direct attention toward other goal-pursuits (Carver & Scheier, 1990; Martin, Ward, Achee, & Wyer, 1993). Alternatively, negative affect signals insufficient goal progress and that change is needed (Carver & Scheier, 1990). Negative affect provides information that the individual needs to modify current plans or behaviours, and may increase the likelihood of future success. In this way, affect can serve a self-regulatory function by providing individuals with feedback about how well they are functioning in their goal pursuit and whether changes are needed to improve the likelihood of success.

Affective valence is not the only, or perhaps even best, predictor of behaviour. Discrete emotions may provide more specific predictions because the underlying appraisal patterns elaborate on the motivational significance of the person in context, and thus even emotions of similar valence can have different effects on behaviour (Ellsworth & Scherer, 2003; Lazarus, 1991b; Ortony, Clore, & Collins, 1990). When attempting to understand how emotions influence goal-directed behaviours in sport and exercise, researchers have primarily focused on negative emotions such as anxiety (Cerin, 2003; Woodman et al., 2009). A prominent focus on anxiety is not surprising since such experiences are typically considered to be detrimental to performance (Burton & Naylor, 1997; Hardy, 1998). However, positive emotions also influence behaviour (Gross, Richards, & John, 2006; Tugade & Fredrickson, 2007). In achievement-oriented contexts, such as sport and exercise, self-conscious emotions provide competence-relevant feedback about the self.
Pride is a self-conscious emotion that results from an individual engaging in, or presenting with, valued behaviours and/or characteristics and provides feedback that the individual is competent and warrants high status (Fischer & Tangney, 1995; Tracy & Robins, 2007b). Researchers have distinguished between two facets of pride: authentic and hubristic pride (Tracy & Robins, 2004, 2007b). Authentic pride results from attributions to effort and hard work and is associated with feelings of confidence and achievement (“I won because I practised”) and functions to promote status through perceptions of prestige (Cheng, Tracy & Henrich, 2010). In contrast, hubristic pride results from attributing success to one’s innate ability or talent (“I won because I’m the best”; Tracy & Robins, 2004, 2007b) and functions to promote status through perceptions of dominance (Cheng et al., 2010). Feelings of authentic pride are thought to be functional when striving towards goals that incur short term costs such as expending effort (Fredrickson & Branigan, 2005; Williams & DeSteno, 2008) and authentic, but not hubristic pride, is associated with achievement outcomes such as increased persistence and effort, greater self-control, and adaptive intertemporal choices (Carver et al., 2010; DeSteno, 2009; Gilchrist, Conroy, & Sabiston, Revise and Resubmit; Williams & DeSteno, 2008). Authentic pride thus appears to be both the product of accomplishments and adaptive for ongoing goal pursuit.

Authentic pride has been proposed to serve as a barometer of competence and Weidman, Tracy, and Elliot (2016) put forth a novel conception of how pride is associated with subsequent achievement. They argue that low levels of authentic pride signal a lack of competence and motivate increased effort, changes in tactics, or both. For example, Weidman and colleagues (2016) followed adults training for a long-distance running race over four months and found that individuals who achieved greater training success felt more authentic pride. They also found that feelings of low authentic pride were associated with intentions to change training behaviour in the subsequent month, providing support for the important role of authentic pride in promoting achievement behaviour in the athletic domain. Further, the authors demonstrated that among undergraduate students studying and taking exams, low authentic pride after performing poorly on an exam was associated with changes in behavioural strategies and enhanced performance on a subsequent exam. These results provide initial support that authentic pride is a barometer of competence and that low feelings of authentic pride motivate subsequent behaviours when engaged in goal pursuit.
A significant limitation of the extant research examining pride and achievement striving is that researchers have largely examined relationships between people. However, findings at the between-person level of analysis (comparing average levels between participants) may not mirror findings at the within-person level of analysis (Brose, Voelkle, Lövdén, Lindenberger, & Schmiedek, 2015). As such, examining associations between average levels of authentic pride with average levels of achievement across people do not map onto the theoretical tenets that guide questions about the relationship between the information that authentic pride provides and subsequent behaviour. Such designs and analyses are insufficient, and even inappropriate, to test within-person hypotheses (Molenaar, 2004). Rather, it is most appropriate to test this phenomenon at the within-person level because of the temporal separation between experienced emotions and the resultant achievement outcomes that are coupled together within individuals. Although Weidman et al. (2016) provided temporal separation between experiences of authentic pride and achievement, the authors did not separate variance into between-person versus within-person components. As a result, it is not clear if achievement was greater because people had less pride in general (a between-person finding) or people reported less pride in a given month (a within-person finding). Moreover, it may be that experiencing low pride motivates changes in achievement striving behaviour only for those usually high in pride (a cross-level interaction).

3.2.1 Study Purpose

The purpose of this study is to extend the findings of Weidman et al. (2016) by testing the affect-as-information hypothesis with a focus on the role of authentic pride in this process. Based on previous research and theorizing (Carver & Scheier, 1990; Weidman et al., 2016), it was hypothesized that self-reported training progress would be positively associated with authentic pride at both the between- and within-person levels, consistent with the notion that authentic pride is a barometer of competence. It was also hypothesized that training progress would be greater following weeks when participants reported lower authentic pride than usual, after controlling for authentic pride at the between-person level and hubristic pride at both levels in the model. Age and gender were also included as covariates in the model because of documented differences in authentic and hubristic pride as a function of age and gender (Tracy & Robins, 2007b; Orth, Robins, & Soto, 2010).
3.3 Methods

3.3.1 Participants and Procedure

Individuals training for a long-distance race that took place in the Fall of 2015 were recruited for the study. Participants were enrolled in running programs that offered training for long distance races. All individuals were introduced to the study via in person recruitment carried out by the first author at local running groups after receiving ethical approval from a university-based Research Ethics Board. Interested participants were given a letter that included information about the study, the researcher’s contact information, as well as a link to complete the initial survey. Individuals completing the baseline survey were emailed a survey to complete each week for seven weeks leading up to their race.

3.3.2 Measures

3.3.2.1 Pride

Participants were asked to complete the Authentic and Hubristic Pride Scale (AHPS; Tracy & Robins, 2007b) in response to their training each week. The AHPS assesses both authentic and hubristic pride (7 items each) with adjective items such as “accomplished” and “arrogant”, respectively. Participants were asked to respond on a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely) on the extent to which they felt this way about their training each week. Structural validity for scores derived from the AHPS has been reported in previous research (Tracy, Cheng, Robins, & Trzesniewski, 2009). Furthermore, scores derived from the AHPS have demonstrated a pattern of relationships in the expected direction with constructs theoretically and empirically linked to pride (Tracy & Robins, 2007b), with support for estimates of internal consistency reported previously (Carver et al., 2010; Tracy & Robins, 2007b; Weidman et al., 2016).

3.3.2.2 Training Progress

Each week participants completed two items pertaining to training progress consistent with previous research assessing training progress in long-distance runners (Weidman et al., 2016). The items included “to what extent have you followed your training plan over the past week” and
“to what extent did you meet your training goals over the past week?” Participants responded to the items using a 5-point Likert scale ranging from 1 (not at all) to 5 (very much). Consistent with Weidman et al. (2016), a composite score was created by averaging the two items.

### 3.3.3 Data Analysis

Descriptive statistics and correlations were calculated. Estimates of internal consistency were calculated. Multilevel models were used to accommodate the nested nature of the data (weeks nested within people; Snijders & Bosker, 1999). First, separate multilevel models were estimated to test the first premise that training progress predicts authentic and hubristic pride. Next, a lead variable was created for training progress to permit estimation of associations between the current week’s pride and training progress the following week. A third multilevel model was then estimated to test hypotheses about the within- and between-person associations and cross-level interactions between authentic pride and training progress after controlling for hubristic pride, age, and gender.

Consistent with established methods for separating between- and within-person associations, between-person scores for each of the multilevel models were calculated as the intraindividual mean for the corresponding variable across the seven weeks of the study. Next, within-person deviations were calculated by subtracting each weekly score from the corresponding intraindividual mean score (Schwartz & Stone, 1998). This procedure yielded between-person scores to identify people who reported different levels on average, as well as within-person scores to identify the weeks when each person reported more or less of the corresponding variable than usual. The between-person variables were grand-mean centered to facilitate interpretation. These time-invariant (mean-level) and time-varying (weekly deviations) variables were entered to test hypotheses that i) training progress predicts authentic and hubristic pride and ii) that authentic pride predicts subsequent training progress within the multilevel modeling framework.

### 3.4 Results

Community-based runners training for either a half or full marathon (N = 131) participated in the study (78% women; $M_{age} = 35.41$ years; $SD_{age} = 9.79$ years). The majority of participants indicated that their race as “Caucasian” (75%) and their current marital status as “single” (48%).
Most participants were training for a half-marathon (67%) and all had participated in a race before (100%).

Participants generally reported authentic pride about their training each week above the mid-point of the scale ($M = 3.22, SD = 1.09$). Conversely, participants reported almost no hubristic pride ($M = 1.01, SD = 0.30$). On average, participants reported meeting their weekly training goals to a moderate extent ($M = 3.61, SD = 1.01$). As shown in Table 3.1, internal consistency estimates for the authentic and hubristic subscales and the training progress items ranged from .90 to .96. Intraclass correlation [ICC] estimates were calculated to estimate the proportion of between-person variance in each score (relative to total variance). The weekly design captured substantial within- and between-person variability in both authentic (ICC = .58) and hubristic (ICC = .26) pride as well as the extent to which participants met their training goals each week (ICC = .35).

Authentic pride was normally distributed, however hubristic pride was positively skewed. Given the degree of positive skew evident in hubristic pride, a dummy variable was created to indicate whether a person reported any hubristic pride greater than the lowest value (0 = no hubristic pride [76%], 1 = any hubristic pride [24%]).

Correlations among the within- and between-person variables are shown in Table 3.1. Estimates at the within-person level are provided for descriptive purposes and should not be interpreted inferentially because the data violate assumptions of independence between observations. At the within-person level, authentic and hubristic pride were positively related to one another ($r = .15$). Both authentic ($r = .50$) and hubristic ($r = .11$) pride were positively related to training progress. A similar pattern of relationships emerged at the between-person level. Authentic and hubristic pride were positively related ($r = .18, p < .05$). Both facets were related to training progress, with authentic pride demonstrating a moderate to strong relationship ($r = .50, p < .001$) and hubristic pride demonstrating a small relationship ($r = .15, p < .05$).
Table 3.1 Descriptive Statistics, Intraclass Correlations, and Bivariate Correlations between Pride and Training Progress

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>ICC</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Authentic Pride</td>
<td>3.22</td>
<td>1.09</td>
<td>.96</td>
<td>.58</td>
<td>--</td>
<td>.18*</td>
<td>.50**</td>
</tr>
<tr>
<td>2. Hubristic Pride</td>
<td>1.01</td>
<td>0.30</td>
<td>.90</td>
<td>.26</td>
<td>.15</td>
<td>--</td>
<td>.15*</td>
</tr>
<tr>
<td>3. Training Progress</td>
<td>3.61</td>
<td>1.01</td>
<td>.92</td>
<td>.35</td>
<td>.50</td>
<td>.11</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. M = Mean; SD = Standard Deviation; α = internal reliability estimate; ICC = Intraclass correlation. Correlations below the diagonal (lower matrix) are based on weekly-level data that disregards nesting within people. Correlations above the diagonal (upper matrix) are based on person-level data that aggregates ratings within a person over time. *p < .05, **p < .001

3.4.1 Does Training Progress Predict Pride?

The results from the first models predicting authentic and hubristic pride from training progress are presented in Table 3.2. As expected, training progress positively predicted authentic pride on average ($\beta = 0.56$, $p < .001$). Further, on weeks when training progress was greater than usual, participants reported greater authentic pride than usual ($\beta = 0.45$, $p < .001$). Also in line with the hypotheses, training progress did not predict hubristic pride at either the between-person level ($\beta = 0.06$, $p > .05$) or the within-person level ($\beta = 0.01$, $p > .05$).
Table 3.2 Multilevel Model Coefficients Predicting Pride from Training Progress

<table>
<thead>
<tr>
<th>Variable</th>
<th>Authentic Pride</th>
<th>Hubristic Pride</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Fixed Effect (within)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.22**</td>
<td>0.32</td>
</tr>
<tr>
<td>Training Progress</td>
<td>0.45**</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Fixed Effect (between)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training Progress</td>
<td>0.57**</td>
<td>0.09</td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Gender</td>
<td>0.32</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>Random Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance Intercept</td>
<td>0.53</td>
<td>--</td>
</tr>
<tr>
<td>Residual Variance</td>
<td>0.32</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note. SE = Standard error

*p < 0.05, **p < 0.01

3.4.2 Does Pride Predict Training Progress?

A multilevel model was estimated to test within- and between-person associations between authentic pride and training progress. As seen in Table 3.3, there was a negative association between authentic pride and training progress the following week at the within-person level ($\beta = -0.43$, $p < .001$). Weekly deviations in hubristic pride did not predict training progress over the following week ($\beta = -0.03$, $p > .05$). At the between-person level, authentic pride was positively associated with future training progress ($\beta = 0.37$, $p < .001$) whereas hubristic pride was not significantly associated with future training progress ($\beta = 0.10$, $p > .05$). The interaction between within-person authentic pride and between-person authentic pride was not significant ($\beta = -0.10$, $p > .05$). Age ($\beta = 0.01$, $p > .05$) and gender ($\beta = -0.06$, $p > .05$) did not predict training progress over the next week.
### Table 3.3. Multilevel Model Coefficients Predicting Training Progress the Following Week from Pride

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Effect (within)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>3.61**</td>
<td>0.08</td>
</tr>
<tr>
<td>Authentic Pride</td>
<td>-0.43**</td>
<td>0.10</td>
</tr>
<tr>
<td>Hubristic Pride</td>
<td>-0.03</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Fixed Effect (between)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authentic Pride</td>
<td>0.37**</td>
<td>0.07</td>
</tr>
<tr>
<td>Hubristic Pride</td>
<td>0.10</td>
<td>0.21</td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.06</td>
<td>0.17</td>
</tr>
<tr>
<td>Within-person pride x between-person pride</td>
<td>-0.10</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Random Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance Intercept</td>
<td>0.32</td>
<td>--</td>
</tr>
<tr>
<td>Residual Variance</td>
<td>0.76</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note. SE = Standard error

*p < 0.05, **p < 0.01

### 3.5 Discussion

The aim of this study was to test the relationship between pride and training progress among adults training for a long-distance race. As hypothesized, greater training progress was associated with greater authentic pride at both the between-person and within-person level. Low authentic pride during a given week was expected to promote training progress the following week after controlling for individuals’ dispositional tendencies to experience authentic pride. Corroborating Weidman et al.’s (2016) contentions, low authentic pride on a given week was associated with greater training progress the subsequent week. Consistent with previous research demonstrating the adaptive benefits of authentic pride at the between-person level (Carver et al., 2010; Mack, Kouali, Gilchrist, & Sabiston, 2015; Williams & DeSteno, 2008), greater authentic pride on average was associated with greater training progress at the between-person level. Hubristic pride did not predict subsequent training progress at either level of analysis.

Theories examining relationships between emotions and behaviour generally emphasize a process-based perspective whereby phenomena of interest are separated in time and differences
may occur both between- and within-persons (Stenling et al., 2017). Insights from analyses at the between-person level of analysis are dominant in sport and exercise psychology literature and are often assumed to reflect processes at the within-person level of analysis (Stenling et al., 2017). However, processes at the between person level do not necessarily reflect processes at the within-person level (Brose et al., 2015; Dunton, 2016). The current findings revealed different directional associations at the within- and between-person levels of analysis when testing the relationship between authentic pride and subsequent training progress. Thus, associations among authentic pride and achievement behaviour may not be equivalent within- and between-persons.

These results provide support for the contention that pride is a barometer of competence. Consistent with previous research, achievement was positively associated with experiences of authentic pride (Tracy & Robins, 2007b; Weidman et al., 2016). This finding was consistent across both levels of analysis (i.e., both between and within people). This suggests that those who experience greater achievement, on average, also report greater authentic pride, on average. Further, when individuals reported greater achievement than usual on a given week, they also reported greater authentic pride than usual which supports previous contentions that pride fluctuates in response to performance in real-life achievement contexts (Weidman et al., 2016). These results provide further support for the notion that pride is an emotional response to success in achievement domains like sport and exercise.

It was also hypothesized that feelings of authentic pride provide feedback to the individual about how they are doing in goal-pursuit and provide information to help individuals adjust their behaviours accordingly (Carver & Scheier, 1990). Low authentic pride on a given week was associated with improvements in training progress the subsequent week. This finding provides support for the hypothesis and previous theorizing that low authentic pride provides information to the individual that he or she is not achieving and that changes are needed to experience achievement in the future (Weidman et al., 2016). This finding extends current theorizing on the relationship between emotions and goal pursuit. Low feelings of pride represent a discrepancy between a current state and a goal state and act to motivate behaviour similar to that which is outlined in control-process accounts (Carver & Scheier, 1990; Leary, Tambor, Terdal, & Downs, 1995). Extending the tenets of control-process accounts where negative affect is indicative of discrepancies, we found that low feelings of pride act to motivate behaviour to reduce discrepancies between current states and goal states. In this way, authentic pride can have
functional downstream effects on achievement outcomes. The information provided by low feelings of authentic pride can thus be adaptive for individuals’ goal pursuits.

Conversely, greater authentic pride was associated with decreased training progress the following week. This finding is consistent with theoretical accounts that positive emotions signal sufficient progress has been made towards a goal and that an individual need not invest continued resources towards pursuit of that goal (Carver & Scheier, 1990; Weidman et al., 2016). Researchers have shown that perceiving progress towards a goal is associated with reduced effort in the pursuit of that goal, leading to less effective self-control on subsequent occasions, and efforts may be redirected towards other goals that the individual is concurrently pursuing (Fishbach & Dhar, 2005; Louro, Pieters, & Zeelenberg, 2007; Martin et al., 1993). As pride conveys information about the relative functioning of the self and acts as a barometer of competence and achievement (Tracy & Robins, 2007a; Tangney et al., 2007; Weidman et al., 2016), greater authentic pride thus results in reduced goal pursuit whereas low authentic pride indicates a lack of competence and that continued effort towards goal pursuit is warranted.

The lack of significant findings between hubristic pride and training progress is in line with previous findings (Weidman et al., 2016). While authentic pride is experienced as a result of a specified event and accomplishment pertaining to a behaviour, hubristic pride has no specified target and is an unconditional positive view of one’s self as a whole (Tracy & Robins, 2007a). Thus, the emotional experience associated with hubristic pride is tied to the person rather than a specific behaviour or event. Accordingly, there was no theoretical or practical basis on which to suggest that changes in this more global emotional experience would be related to changes in specific achievement behaviours. Issues around the measurement of hubristic pride may also explain the lack of significant findings. Hubristic pride is often skewed on the low end of the scores, likely due to self-report and social desirability responses (see Conroy et al., 2015; Holbrook, Piazza, Fessler, 2014; Sabiston et al., 2010) which can make the assessment and examination of hubristic pride difficult.

Although the affect-as-information hypothesis has most often been applied to affect, the central tenets also apply to specific discrete emotions as well. Though affective information provides valuable information about the ways in which how we are feeling guide behaviour and decision making, there is value in exploring discrete anticipated emotions given their different functions
in adapting to changing relational circumstances (Campos, Shiota, Keltner, Gonzaga, & Goetz, 2013; Lazarus, 2000). For example, pride is postulated to motivate individuals to engage in hedonically-costly behaviour (e.g., effortful training behaviours), in the pursuit of longer range goals and perceptions of status which is in contrast to other positive emotions such as happiness or enjoyment which are associated with satisfying short-term hedonic pleasure (Katzir, Eyal, Meiran, & Kessler, 2010). As such, beyond simply feeling good, it is important to consider the specific emotions that individuals are experiencing as there are important implications that differ as a function of the emotion experienced.

Although people experience a range of emotions, much of the extant literature examining emotional experiences in sport and exercise has been devoted to the regulation of negative emotions (Cerin, 2003; Hanin, 2000). The current results highlight the importance of regulating positive emotions as individuals pursue their goals. More specifically, it is important to regulate feelings of pride during goal striving as there may be implications for subsequent goal progress. For example, pride provides feedback to the individual that he or she is achieving and he or she can shift their attention to other goals. However, it may be less adaptive in situations when the individual is still engaged in training and has yet to achieve a higher-order goal (e.g., completing a race). In such instances when a higher order goal, relative to weekly subordinate goals, is still being pursued, it is important to regulate feelings of pride to help keep on track with training while disengagement may be less detrimental after a higher order goal has been achieved.

The current study has several strengths including the micro-longitudinal design that allowed for examination of associations both within- and between-persons and recruitment of a community based sample that strengthens the external validity of the study’s findings. Separating between and within-person variance in pride help to delineate whether it is a feature of the person or a feature of a moment in time (or an interaction) that is driving the associations with behaviour. A focus on positive rather than negative emotion also brings to light the importance of regulating positive emotions in sport. However, participants were primarily female, experienced runners so caution should be taken when generalizing conclusions to men or participants in other sports or goal pursuits. As well, we also used an observational design so causal conclusions about the relationship between training progress and pride cannot be made. Finally, we did not control for affect in our models. Future research examining these associations may wish to include positive
affect in their analyses to provide further support for the relationship between authentic pride and training progress.

3.5.1 Conclusion

According to Tracy and Robins (2007a), pride may be the most important human emotion for motivating competence-related behaviour. The current study provides support for a novel understanding of how this happens. Previous work has not separated the between-and within-person variation using the repeated measurements of authentic and hubristic pride. Implications stemming from this line of research point to the importance of investigating emotions that may be conducive to performance but have received less empirical attention in sport contexts (i.e., positive emotions). Coaches and athletes should be mindful of the need to regulate both negative and positive emotions when engaged in training. Moreover, coaches and trainers should strive to provide honest feedback to athletes so athletes can regulate their training behaviours accordingly. In sum, feelings of authentic pride can be adaptive for goal striving by signaling when strategies or effort need to be adjusted.
Chapter 4: Bridging Text

The main findings from Chapter 3 can be summarized as:

1. On average, progressing towards goals is associated with experiences of authentic pride, on average. Further, on weeks when participants made greater progress towards their goals than usual, they experienced greater authentic pride than usual. This effect was specific to authentic pride and supports Weidman et al.’s (2016) claim that pride functions as barometer of competence.

2. Greater authentic pride on average was associated with greater training progress. The results extend our current understanding of the association between pride and achievement behaviours to show that on weeks when participants experienced lower authentic pride than usual, they made greater training progress towards their goals the following week. This provides further support that emotions such as pride provide feedback to the individual that helps them in their goal pursuit (Carver & Scheier, 1990; Weidman et al., 2016).

3. This study was the first to demonstrate the importance of separating between- and within-person variation when examining associations between pride and achievement behaviour. The implications associated with each level of analysis are in opposing directions. As such, practical recommendations that stem from findings at the between-person level are incompatible with recommendations that stem from findings at the within-person level.

Based on the findings from this longitudinal study, regulating experiences of pride are important for individual’s achievement striving. However, examination of experiences of pride on achievement behaviour do not take into account recent theoretical accounts of how emotions motivate behaviour. Proponents of this view argue that it is the anticipation of emotion, rather than the experience of emotion, that is instrumental in guiding behaviour (Baumeister et al., 2007). As such, Chapter 4 presents an intensive longitudinal study that examines both experienced and anticipated emotions as predictors of achievement related behaviours.
Chapter 4

4 Experienced and Anticipated Pride and Shame as Predictors of Goal-Directed Behaviour

4.1 Abstract

This study examined how experienced and anticipated pride and shame were related to time spent training and effort expended towards training the following week. Participants ($N = 158$, 76% women; $M_{\text{age}} = 35.51$, $SD = 10.29$ years) training for a marathon/half-marathon completed a weekly online questionnaire for five weeks leading up to a race. In the multilevel models, time spent training was positively predicted by race proximity, age, and effort expended that week. Effort expended towards training was predicted by current week’s effort, the amount of time spent training that week, and was greater for participants who usually reported experiencing more pride than others. Neither anticipated pride or shame predicted time or effort, nor did experienced shame. The findings indicate that it is functional to foster high levels of pride when training for a long-distance race. Further work is needed to ascertain the relationship between anticipated emotions on goal-directed behaviour.
4.2 Introduction

Sport and exercise contexts are achievement domains that may be affected by various emotional and affective experiences. Specifically, affective experience is a predictor of the quality (e.g., effort) and quantity (e.g., time) of physical activity behaviour (Ekkekakis, Hall, & Petruzzello, 2005). Unique emotional experiences relate to differential outcomes. For example, pride results from an individual engaging in, or presenting with, valued behaviours and/or characteristics and provides feedback that the individual is competent and warrants high status (Pekrun, Elliot, & Maier, 2006; Tracy & Robins, 2007a; Weiner, 1985). Feelings of pride are thought to be functional when pursuing goals that incur short term (often hedonic) costs such as expending effort (Williams & DeSteno, 2008) and directs motivation towards competence pursuits. Conversely, shame stems from appraisals that the self has not lived up to a set of standards and generally signals incompetence (Tangney, Stuewig, & Mashek, 2007). Shame is experienced as highly aversive and is associated with efforts to withdraw or hide from shame-eliciting situations (Pekrun et al., 2006; Weiner, 1985). In sum, both pride and shame energize and direct behaviour and hold considerable implications for the regulation of behaviour in sport and exercise contexts.

Despite evidence that these self-conscious emotions regulate behaviour, researchers have focused on examining the experience of currently felt emotions despite claims that anticipated emotions also regulate behaviour (Baumeister et al., 2007). Because of their forward-looking nature, anticipated emotions have been implicated in guiding behaviour in the service of goal pursuit (Greitemeyer, 2009). Anticipated emotions may be particularly useful in instances where individuals perceive their actions to be instrumental to goal progress through the investment of time and effort (e.g., adhering to a training plan). For example, researchers have found that anticipated positive and negative affect demonstrate small to moderate positive associations with effort, persistence, and performance when engaged in goal pursuit (Greitemeyer, 2009; Morewedge & Buechel, 2013). Nonetheless, there are conflicting notions about the utility of anticipating positive outcomes. For example, Oettingen and Mayer (2002) found that anticipating success can be detrimental to fulfilling one’s goals, particularly for goals that require sustained effort over time. A central tenet of this work is that anticipating positive outcomes brings pleasure in the moment but ultimately reduces effort and undermines goal attainment in the long run. However, researchers have not controlled for experienced emotions when examining the regulatory function of anticipated emotions. Moreover, researchers in sport and exercise have
primarily adopted cross-sectional designs that do not allow for examination of both between- and within-person associations. Moving forward, it will be important to extend existing results to real-world physical activity behaviours before anticipated emotions can be targeted by interventions.

4.2.1 Study Purpose

The purpose of this study was to examine how shame and pride, both experienced and anticipated, were related to the quality (effort expended towards training) and quantity (time spent training) one week later in a sample of long-distance runners. Both between- and within-person associations were examined. At the between-person level, it was hypothesized that (1) experiences of shame would show a negative relationship with both outcomes, (2) pride would be positively associated with both time and effort, and (3) anticipated shame and pride would both be positively related to time and effort. We extend these hypotheses to the within-person level of analysis in this study to test whether the associations reflect dynamic processes or more stable individual differences. Because of sex- and age-related differences in both pride and shame (as well as age related difference in function that may affect time and effort) we adjusted for participants’ age and gender in the analyses (Ogles & Masters, 2000; Orth, Robins, & Soto, 2010).

4.3 Method

4.3.1 Participants and Procedure

After receiving ethical clearance from a university-based Research Ethics Board, men and women residing in the Greater Toronto Area and training for a marathon/half-marathon were recruited for the study. Only participants competing in a race that took place in the Fall were eligible to participate in the study. All individuals were given a letter that included information about the study, the researcher’s contact information, as well as a link to complete the initial survey. Individuals completing the baseline survey were emailed a survey to complete each week for five weeks leading up to their race (i.e., the five final weeks of their training). All measures were assessed each week.
4.3.2 Measures

4.3.2.1 Pride and Shame

Consistent with previous research using single-item measures of anticipated emotions (Greitemeyer, 2009; Morewedge & Buechel, 2013), participants were asked to anticipate how proud they would feel if they were successful in meeting their goal for their upcoming race and how ashamed they would feel if they did not meet their goal. Response options ranged from 1 (not at all) to 5 (extremely). To assess participants currently felt experiences of pride and shame, participants were asked to indicate how proud and ashamed they felt about their training run each week using a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely).

4.3.2.2 Training Quantity and Quality

Participants’ training quantity and quality was assessed using two items. Participants were asked to indicate the amount of time they spent training that week (in minutes) and the amount of effort they put into training that week rated on a scale ranging from 1 (none) to 7 (as much as I could).

4.3.3 Data Analysis

Descriptive statistics and bivariate correlations were calculated and are available as an online supplement. Multilevel models were used to accommodate the nested nature of the data (weeks nested within people; Snijders & Bosker, 1999) and to test hypotheses about both the within- and between-person associations between pride and shame (anticipated and experienced) and training time/effort after controlling for age, gender, current week’s effort/time, next week’s effort/time and the temporal proximity of the race (in days). Time to race was included as a predictor to detrend the data from time-structured variation in the outcomes. Consistent with standard methods for separating between- and within-person associations, the predictor variables were person-centered (e.g., Schwartz & Stone, 1998). To do this, a person’s mean level of pride and shame (both experienced and anticipated) was calculated as the mean of his or her repeated measures across the five weeks. Next, the individual’s weekly reports were subtracted from the mean to calculate the weekly deviation around his or her average level. This procedure estimated the extent to which an individual anticipated or experienced more or less of a particular emotion than usual that week. These time-invariant (mean-level) and time-varying (weekly deviations) variables were then used in the multilevel modeling framework to test our hypotheses.
4.4 Results

Participants (N = 158, 76% women; \(M_{age} = 34.84, SD = 10.44 \) years) volunteered for the study. Most participants indicated their ethnicity as Caucasian (75%), their current marital status as married/common law (48%), and their highest level of education completed as university/college (61%). Most participants were training for a half-marathon (67%) with most having competed in a race previously (80%). Most participants indicated a goal specific to finishing in a specific time (57.3%) while 22.1% had a goal to finish the race.

Given the degree of skewness evident in experienced and anticipated shame as well as anticipated pride, these variables were recoded or transformed (see Table 4.1). The results of the two multilevel models are presented in Table 4.1. In the first model (left column of estimates), participants spent less time training as the race approached (\(\beta = 1.91, p < .05\)). Time spent training each week did not predict time spent training the following week. The amount of effort participants expended was positively associated with time spent training at both the within-person level (\(\beta = 39.09, p < .001\)) and the between-person level (\(\beta = 49.74, p < .001\)). Finally, time spent training was not associated with experienced or anticipated shame or pride at either the within- or between-person level of analysis.

In the second model (right column of estimates), participants’ effort was not predicted by time to race, but participants did expend more effort following weeks when they put forth less effort towards training than usual (\(\beta = -0.24, p < .001\)). As well, participants put forth greater effort during weeks when they spent more time training than usual (\(\beta = 0.004, p < .05\)) and on average (\(\beta = 0.001, p < .05\)). Regarding the emotions, within-person levels of experienced shame or pride did not predict next week’s effort. At the between-person level, effort was greater for participants who usually reported experiencing more pride than others (\(\beta = 0.41, p < .001\)). Anticipated shame and pride were not significant predictors of subsequent effort at the within-person or the between-person level.
Table 4.1 Multilevel Model Coefficients Predicting Time Spent Training and Effort the Following Week

<table>
<thead>
<tr>
<th>Fixed Effect (within)</th>
<th>Next Week Time Spent Training</th>
<th>Next Week Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard Error</td>
</tr>
<tr>
<td>Intercept</td>
<td>60.79</td>
<td>68.48</td>
</tr>
<tr>
<td>Time to race</td>
<td>1.91*</td>
<td>0.67</td>
</tr>
<tr>
<td>Current Week Time Training</td>
<td>0.11</td>
<td>0.06</td>
</tr>
<tr>
<td>Current Week Effort</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Next Week Time Spent Training</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Next Week Effort</td>
<td>39.09**</td>
<td>5.07</td>
</tr>
<tr>
<td>Shame</td>
<td>-13.41</td>
<td>23.46</td>
</tr>
<tr>
<td>Pride</td>
<td>1.38</td>
<td>7.88</td>
</tr>
<tr>
<td>Anticipated Shame</td>
<td>-22.71</td>
<td>27.67</td>
</tr>
<tr>
<td>Anticipated Pride</td>
<td>8.72</td>
<td>22.86</td>
</tr>
<tr>
<td>Fixed effect (between)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next Week Time Spent Training</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Next Week Effort</td>
<td>49.74*</td>
<td>13.91</td>
</tr>
<tr>
<td>Shame</td>
<td>63.62</td>
<td>74.94</td>
</tr>
<tr>
<td>Pride</td>
<td>-12.32</td>
<td>16.64</td>
</tr>
<tr>
<td>Anticipated Shame</td>
<td>53.04</td>
<td>41.47</td>
</tr>
<tr>
<td>Anticipated Pride</td>
<td>33.90</td>
<td>44.05</td>
</tr>
<tr>
<td>Age</td>
<td>2.97*</td>
<td>1.52</td>
</tr>
<tr>
<td>Gender</td>
<td>17.43</td>
<td>33.89</td>
</tr>
<tr>
<td>Random Effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept Variance</td>
<td>19785.01</td>
<td>--</td>
</tr>
<tr>
<td>Residual Variance</td>
<td>10934.74</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. Given the degree of skewness evident in experienced and anticipated shame as well as anticipated pride, these variables were recoded or transformed. A binary variable was created for experienced shame to indicate whether a person reported anything greater than the lowest value (0 = no shame [89%], 1 = any shame [11%]). Anticipated shame was transformed using a Box-Cox power law transformation with \(\lambda = -0.30\). Scores were reflected to facilitate interpretation by multiplying scores by -1; higher values reflected greater levels of anticipated shame. Finally, for anticipated pride, a binary variable was created to indicate whether participants reported anything less than the maximum amount of pride (0 = less than maximum amount [29%] 1 = maximum pride [71%]).

\*p < 0.05, \**p < 0.001
4.5 Discussion

In line with calls to shift efforts towards the study of anticipated emotion (DeWall et al., 2016) this study examined how feelings of pride and shame, both experienced and anticipated, are associated with subsequent behaviour among individuals training for a long-distance race. Results support the functional role of pride in promoting adaptive outcomes even after controlling for the previous week’s behaviour.

At the between-person level, people that felt more pride during their training put forth more effort toward their training the following week. This was consistent with findings that pride motivates people to put forth greater effort and persistence towards long-term goals despite short-terms costs (Williams & DeSteno, 2008). Alternatively, because of the time-invariant nature of this relationship, it is possible that people who expended more effort felt more pride. At the within-person level, fluctuations in pride were not related with subsequent behaviour. Given that the sample comprised relatively experienced runners, there may not have been enough variation in perceptions of competence, and thus emotions, to change the subsequent week’s behaviour. Further, it is possible that the weekly sampling interval in the current study may have limited the ability to detect meaningful changes in pride. If pride changed on a faster time scale, the weekly sampling strategy may not have been sensitive to the relevant fluctuations. Finally, pride is often studied as a unitary construct in work examining both the experience and anticipation of pride, but researchers have suggested that pride may consist of two distinct facets: authentic and hubristic pride (Tracy & Robins, 2007b). Although we did not differentiate between the facets in the current study, the distributions of responses were consistent with previously reported distributions of authentic pride (Conroy, Ram, Pincus, & Rebar, 2015). Future work looking at both the experience and the anticipation of authentic and hubristic pride on training behaviour would help to extend the current findings.

The experience of shame was not found to be a significant predictor of either time or effort. Given that this was a sample of experienced runners, it is possible that those higher in shame failed to initiate to train and those that did initiate felt little shame. This is consistent with the low ratings of shame and the number of individuals reporting no shame at all (see Online Supplement). Moreover, previous research has also demonstrated that shame is associated with
efforts to withdraw or hide from shame-eliciting situations (Tangney et al., 2007). Because data collection spanned the final five weeks of training, it is possible that those higher in shame who did initiate training dropped out prior to the beginning of data collection and only those lowest in shame remained.

There exists equivocal support for the function of anticipated emotions in goal pursuit. On one hand, goal-directed behaviours are likely to be promoted by anticipating how one will feel when attaining/not attaining one’s goal. Conversely, imagined success may act to impede the effort that is necessary in order to actually experience success (Oettingen & Mayer, 2002). Despite the lack of significant findings, anticipated emotions should continue to be investigated. In the future, researchers may wish to examine a more proximal relationship between anticipated emotions and behaviour. For example, it may be that anticipated emotions have a more proximal effect on behaviour when the anticipated emotions are considered more closely in time relative to the behaviour (i.e., immediately prior to training) and when sub-goals are considered (for example, thinking about how proud you would feel after your training session today).

This study had several strengths, including the longitudinal design, community-based sample, inclusion of both positive and negative anticipated and experienced emotions in the same model and inclusion of relevant control variables. However, some key limitations of the study warrant attention. Single-items were used to assess study variables so they may not represent constructs fully and have unknown reliability. This trade-off was made to accommodate concerns about participant burden and fatigue given the intensive longitudinal design of the study (Bolger & Laurenceau, 2013). In this study, self-report measures were used to assess all constructs and those measures have known limitations (e.g., recall bias, social desirability). Finally, this study is limited by the timeframe that was used to assess the relationship between emotions and behaviour. Although the weeks leading up to the race are likely to be the most salient in terms of participants’ emotions, it is possible that it was too short of a time-period to capture meaningful relationships between emotions and behaviour or that a different pattern of relationships may exist at the beginning of training relative to the end or on a different timescale. As such, conclusions are limited to the last five weeks of training and not the entire training period. The study of the nested nature of pride and shame, both experienced and anticipated, and training behaviour is a novel contribution to existing sport and exercise psychology work. Such analyses
allow for the examination of relations across participants as well as within-person dynamics of emotion and behaviour. The results support that greater feelings of experienced pride, on average, are adaptive and subsequently facilitate increased effort. As such, it is functional to foster high levels of pride when training for a long-distance race. Alternatively, low levels of pride may indicate that people will be vulnerable to withholding effort. Thus, individuals reporting lower levels of pride should be targeted to maximize training efforts. Interventions guided by frameworks that outline the antecedents of pride are encouraged for promoting feelings of pride. The Process Model of Self-Conscious Emotions is one theoretical approach that may be useful in this regard as it provides targets for eliciting feelings of pride (e.g., attributions; Tracy & Robins, 2004; Weiner, 1985).
Chapter 5: Bridging Text

The main findings from Chapter 4 can be summarized as:

1. Results support the extant literature on the functional role of pride in promoting adaptive outcomes (Fischer & Tangney, 1995; Stipek, 1995; Williams & DeSteno, 2008), even after controlling for the previous week’s behaviour. At the between-person level, people that felt more pride during their training put forth more effort toward their training the following week. This is consistent with findings that pride motivates people to put forth greater effort and persistence towards long-term goals despite short-term costs (i.e., hedonic costs associated with effort expenditure; Williams & DeSteno, 2008) and is consistent with the findings of Study 1 (Chapter 3) highlighting the positive relationship between pride and achievement striving, on average.

2. Shame was not associated with training behaviour. Given that this was a sample of fairly experienced runners, it is possible that those higher in shame failed to initiate to train and those that did initiate felt little shame. Further, those that may have experienced greater shame may have been more likely to drop out of training earlier in the training process while those lower in shame were more likely to continue training.

3. Anticipated emotions are thought to motivate behaviour in adaptive ways (Baumeister et al., 2007) but we did not find any support for this contention. The possibility remains that anticipated emotions are indirectly, rather than directly, associated with behaviour.

Based on the findings from this longitudinal study, it can be concluded that it is functional to foster high levels of pride when training for a long-distance race. Alternatively, low levels of pride may indicate that people will be vulnerable to withholding effort. Thus, individuals reporting lower levels of pride should be targeted to maximize training efforts. However, anticipated pride was not a significant predictor of behaviour. Rather than directly predicting behaviour as postulated by Baumeister et al. (2007), it is possible that anticipated emotions play a more salient role in predicting behavioural intentions. As such, Chapter 5 presents a prospective design to examine the predictive effects of pride on intentions to be physically active and participants’ subsequent engagement in physical activity over a two-week period.
Chapter 5

4.6 Intentions Mediate the Association between Anticipated Pride and Physical Activity in Young Adults

Abstract

Drawing from the affect and health behavior framework (AHBF), anticipated affective responses are associated with intentions which, in turn, are associated with health behavior. Emerging research has explored how the anticipation of negative emotions, such as regret, may be motivational or discouraging for physical activity behavior. Relatively less research has been afforded to the anticipation of positive emotions, such as pride. Different facets of pride have been identified. Authentic pride is associated with effort and a sense of achievement while hubristic pride is associated with talent/ability and feeling superior to others. Guided by the AHBF, the aim of the current study was to examine the association between anticipated authentic and hubristic pride and engagement in LTPA, and test intention as a mediator of this association. Participants (N = 148) were young adults who completed self-report questionnaires at two time points separated by two weeks. Mediation analyses were conducted to test hypotheses. Overall, the results provide support for the AHBF. Intentions significantly mediated between anticipated authentic (point estimate = 7.80, BCa CI = 2.78 to 16.16) and hubristic (point estimate = 9.89, BCa CI = 4.10 to 19.57) pride and LTPA. The overall model accounted for 11% of the variance in LTPA. Results highlight the importance of targeting hedonic outcomes of LTPA as an important predictor of intentions and indirectly of behavior. Anticipating pride that results from either effort or superiority may be valuable targets for intervention.

4.7 Introduction

Participation in physical activity has shown to extol numerous physical and psychological benefits (Trost, Owen, Bauman, Sallis, & Brown, 2002; Warburton, Nicol, & Bredin, 2002). However, the majority of adults do not report engaging in recommended physical activity levels
(Colley et al., 2011). As such, identifying modifiable factors that promote engagement is needed. Using theoretically based investigations, researchers have noted certain modifiable factors that have demonstrated utility in the prediction of physical activity behavior. However, the predictive utility of some of these theories has recently come under scrutiny (Sniehotta, Presseau, & Araújo-Soares, 2014). Criticisms lodged at existing theories pertain to the exclusion of crucial variables (e.g., affect/emotion) and little consideration of existing work in behavioral economics (Sniehotta et al., 2014). Theories and frameworks that may remedy such shortcomings can usefully extend our knowledge of physical activity participation.

The affect and health behavior framework (AHBF; Williams & Evans, 2014) may help to better understand health behaviors such as participation in physical activity. The AHBF outlines interrelationships among a set of affect-related determinants of health behavior that include both reflective and automatic affective processes and is delineated by a focus on immediate versus post-behavior affective response. Reflective affective processing includes both anticipated affective responses and affective attitudes (although these have been referred to collectively as affective judgements in previous studies and meta analyses; Nasuti & Rhodes, 2013; Rhodes, Fiala, & Conner, 2009). Based on the tenets of AHBF, anticipated affective response is positioned as predicting intentions which in turn predict behavior. Further, the authors argue that positive affect is directly associated with health behaviors such as physical activity.

A number of prominent theories include intentions as an important proximal antecedent to behavior (Ajzen, 1991; Bandura, 1988; Prochaska & DiClemente, 1983). Evidence from correlational studies provide support for the relationship between intentions and physical activity with effect size estimates moderate to large in magnitude (Downs & Hausenblas, 2005; Hagger, Chatzisarantis, & Biddle, 2002). Further, intentions as a mediator between other correlates of physical activity and behavior has received support (Ajzen & Fishbein, 2005; Hagger et al., 2002). However, these have primarily been cognitive in nature and researchers are now beginning to recognize the importance of affective constructs in the prediction of health behaviors.

Providing support for this notion, affective attitudes (the extent to which people view exercise as enjoyable, pleasant, satisfying, or exciting) have yielded more promising results in predicting
intentions and behavior than instrumental attitudes and recent findings point to the importance of affective experiences in maintaining regular engagement in physical activity (Lowe, Eves, & Carroll, 2002; Nasuti & Rhodes, 2013; Rhodes & Conner, 2010; Rhodes et al., 2009; Rhodes & Kates, 2015; Williams & Evans, 2014). For example, moderate effect sizes have been noted between affective judgments (the overall pleasure/displeasure, enjoyment, and feelings states expected from engaging in a behavior) and physical activity behavior (Nasuti & Rhodes, 2013; Rhodes et al., 2009). Although affective judgments comprise a range of affective phenomena, researchers have primarily focused on the experiential component (i.e., whether exercise is enjoyable/pleasurable or not) and less is known about the utility of anticipating emotions that result from behavioral engagement or avoidance.

Anticipated affective responses are conceptually similar to outcome expectancies in other social-cognitive models (e.g., Bandura, 1998; Ajzen, 1991; Prochaska & DiClemente, 1983). The results of the extant literature examining the relationship between outcome expectancies and behavior have yielded equivocal or negligible relationships with behavior (Rhodes, 2017; Williams, Anderson, & Winett, 2005). However, this finding is primarily in reference to expected instrumental outcomes (e.g., expected health benefits). The equivocal findings may be explained in light of findings on biases in temporal discounting which lead people to prefer gains that are immediate rather than gains that unfold over time (e.g., preferences for watching television now at the expense of health later; Ainslie, 1975; Chapman & Elstein, 1995; Trope & Liberman, 2003). As such, consideration of more immediate benefits of physical activity may be appropriate targets to modify behavior. Given the relatively quick onset and ties to goal-directed and socially valued behaviors, investigations into the affective outcomes that result from engagement in physical activity may be relevant hedonic factors to explore. In this way, emotions may be useful insofar as they are more immediate forms of reward than are more distal consequences of behavior (e.g., improved health).

Anticipated emotions are thought to motivate behavior in a way that is analogous to beliefs about the benefits of physical activity (e.g., avoiding illness, maintaining health and functionality) but offer a more immediate form of reinforcement (Tangney, Stuewig, & Mashek, 2007). However, researchers examining anticipated affective outcomes of physical activity engagement have primarily examined anticipated negative affect or anticipated regret associated with not
performing a behavior (Abraham & Sheeran, 2003; Rivis, Sheeran, & Armitage, 2009; Sandberg & Conner, 2008; Wang, 2011). As such, less is known about the utility of anticipating discrete positive emotions associated with performance of a behavior. There is evidence that not all anticipated positive emotions or affective states facilitate goal pursuit equally. For example, the anticipation of pride but not happiness is associated with inhibitory control (Katzir, Eyal, Meiran, & Kessler, 2010) and pride but not positive affect was associated with persistence on a tedious task (Williams & DeSteno, 2008). Thus, the anticipation of pride may be more useful in pursuit of goals that require self-control and where there are different consequences as time unfolds (e.g., physical activity, DeSteno, 2009).

Pride is an achievement-oriented emotion that results from an individual engaging in socially valued behaviors or presenting with socially valued characteristics and is thought to facilitate acceptance of short-term displeasures for the sake of future benefits to the self (DeSteno, 2009; Mascolo & Fischer, 1995; Williams & DeSteno, 2008). Two facets of pride have been identified: authentic pride results from effort and is associated with a sense of achievement and accomplishment whereas hubristic pride results from attributions to ability and is associated with a sense of superiority and arrogance (Tracy & Robins, 2004, 2007). Pride is argued to facilitate choices that delay immediate enjoyment or satisfaction (e.g., feeling good) for the possibility of long-term rewards (e.g., status, health; Williams & DeSteno, 2008; DeSteno, 2009). When the two facets are examined separately, there is evidence for a disparate pattern of associations. Authentic pride is associated with greater self-control and increased perseverance while hubristic pride is associated with greater impulsivity and decreased perseverance (Carver, Sinclair, & Johnson, 2010). Further, Ho, Tong, and Jia (2016) found that authentic pride was associated with delayed gratification while hubristic pride was not. However the results of these studies were on global assessments of pride. Of interest, when experiences of pride specific to the body have examined (e.g., body-related pride, fitness-related pride), both authentic and hubristic pride have demonstrated positive associations with physical activity behavior and are associated with more autonomous reasons for engaging in physical activity (Castonguay, Pila, Wrosch, & Sabiston, 2014; Castonguay, Sabiston, Kowalski, & Wilson, 2016; Mack, Kouali, Gilchrist, & Sabiston, 2015). However, these studies have focused on the experience of pride and the relationship between the anticipation of pride, intentions, and physical activity behavior has not yet been examined.
4.7.1 Purpose

The purpose of this research was to prospectively examine relationships between anticipated authentic and hubristic pride and physical activity and examine if intentions mediated this relationship. Consistent with the AHBF, positive affect was controlled in the analysis. Given the focus on engagement in physical activity, feelings of pride specific to one’s fitness were of interest rather than on participants’ global assessments of pride (Castonguay, Gilchrist, Mack, & Sabiston, 2013; Castonguay et al., 2016; Mack et al., 2015). It was hypothesized that anticipated authentic and hubristic pride would positively predict physical activity behavior indirectly via intentions.

4.8 Methods

4.8.1 Participants and Procedure

Participants were recruited from undergraduate classes at a large metropolitan university in Canada. Employing a non-probability based prospective survey design and convenience-sampling procedures, participants were asked to complete an online questionnaire at Time 1 and invited to participate again two weeks later (Time 2). Data collection commenced following University Ethics Board approval and all participants provided informed consent.

4.8.2 Measures

4.8.2.1 Intentions (Time 1)

Consistent with previous work examining intentions and anticipated emotions (Wang, 2011), three items were used to assess intentions to participate in physical activity over the following two weeks: “I intend to regularly participate in physical activity in the next two weeks,” “I want to regularly participate in physical activity in the next two weeks,” and “How likely is it that you will regularly participate in physical activity in the next two weeks?” Response options ranged from 1 (very unlikely) to 7 (very likely).
4.8.2.2 Anticipated Pride (Time 1)

Participants were asked to complete the 8-item Authentic and Hubristic Pride-Fitness subscales of the Body-Related Self-Conscious Emotions - Fitness instrument (BSE-FIT; Castonguay et al., 2016) as a domain-specific measure of pride. A portion of the original stem was modified to reflect the change from experienced pride to anticipated pride and response options were modified to reflect the change from frequency to intensity. Participants were asked to anticipate how proud they would feel if they successfully enacted their intentions (authentic sample item: “Proud about my effort to improve my fitness”; hubristic sample item: “Proud of my superior fitness”) on a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely) with higher scores reflecting higher levels of pride. Pride subscales were computed by averaging responses across the items for authentic and hubristic pride. In line with previous research (e.g., Damien & Robins, 2013; Holbrook, Piazza, & Fessler, 2014; Tracy & Robins, 2007), we computed measures of hubristic-free authentic pride and authentic-free hubristic pride by saving the standardized residuals from regression equations predicting authentic pride from hubristic pride and vice versa. These measures allowed us to examine each emotion’s unique correlates while controlling for the overlap between the two scales.

4.8.2.3 Physical Activity Behaviour (Time 2)

Participants completed the Godin Leisure-Time Exercise Questionnaire (GLTEQ; Godin & Shephard, 1985) as a measure of leisure time physical activity (LTPA). Participants were asked to report the number of times they engaged in mild, moderate, and strenuous physical activity for greater than 15 minutes during the previous two weeks. A total physical activity score was calculated by estimating metabolic equivalent units (METS) by multiplying the frequencies of mild, moderate, and strenuous activity by three, five and nine respectively and summing the scores. Higher scores are reflective of greater energy expenditure.

4.8.2.4 Positive Affect (Time 2)

The short form of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to assess positive affect over the previous two weeks. The five-items assessing positive affect were included to control for positive affective valence (excited, enthusiastic, alert, inspired, and determined) with Likert scale response options ranging from 1 (very slightly or not at all) to 5 (extremely) with higher scores reflective of higher levels of
positive affect. Scores for positive affect were created by computing the mean value across the five items.

4.8.3 Analyses

Inspection of missing data and non-response error was assessed. Percentage of participants omitting an entire instrument was noted. Individual cases were removed from subsequent analysis if all information beyond demographics was not provided. Individuals providing data at Time 1 who did not provide data at Time 2 were classified as dropouts from the study and were removed from further analyses. An independent samples t-test comparing those with complete data against those who did not complete the study was conducted to determine if there were any significant differences on the main variables of interest. Univariate normality (i.e., means, standard deviation, skewness and kurtosis) of the data was inspected and the data were screened for outliers. Internal consistency reliability estimates (Cronbach’s α, Cronbach, 1951) were computed to determine reliability for all scores from study variables with the exception of the GTLEQ. Descriptive statistics were calculated for relevant demographic and study variables.

Pearson bivariate correlations were also calculated to determine patterns of association between both facets of pride, intentions, and behavior. Mediation analyses (Model 4) with bootstrapping procedures advanced by Preacher and Hayes (2008) were employed to examine the role of the intentions in mediating the anticipated pride – physical activity relationship while controlling for positive affect. Evidence for mediation in the bootstrap samples (k = 5,000) is observed with the absence of zero in the 95 per cent bias corrected and accelerated confidence interval (BCa CI; Efron, 1987; Efron & Tibshirani, 1993).

4.8.4 Results

Participants were 159 young adults. The majority of participants indicated that their cultural origin was “Caucasian” (n = 72; 45%). Five individuals did not provide data at the second test administration and were removed from further consideration. There were no differences in study variables between individuals who completed both assessments and those who only completed one. Interpretation of GLTEQ-LTPA scores showed evidence of six outliers (z > [3.00]). Those cases were subsequently deleted from further analyses. This resulted in a final analytical sample of 148 participants (n_{female} = 94; M_{age} = 19.39 years).
Descriptive statistics and bivariate correlations are presented in Table 1. Intentions were negatively skewed so this variable was log transformed (Tabachnick and Fidell, 2001). Overall, this sample reported strong intentions to engage in LTPA and was highly active. Participants reported anticipating a moderate amount of pride if they were successful in enacting their intentions to engage in physical activity behavior. Inspection of bivariate correlations demonstrated that both facets of pride were moderately to strongly correlated ($r = .68$, $p < .001$). Both authentic and hubristic facets of pride were moderately correlated with intentions ($r_{authentic} = .42$, $p < .001$, $r_{hubristic} = .52$, $p < .001$). Neither anticipated authentic ($r = .06$, $p = .22$) nor hubristic ($r = .11$, $p = .09$) pride were associated with LTPA. Both facets were positively related to positive affect ($r_{authentic} = .39$, $p < .001$, $r_{hubristic} = .38$, $p < .001$).

### Table 5.1 Descriptive Statistics and Internal Consistency Reliability Estimates

<table>
<thead>
<tr>
<th>Variables</th>
<th>$M$</th>
<th>$SD$</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Authentic Pride</td>
<td>3.59</td>
<td>0.92</td>
<td>1-5</td>
<td>--</td>
<td>.68**</td>
<td>.42**</td>
<td>.06</td>
<td>.39**</td>
</tr>
<tr>
<td>2. Hubristic Pride</td>
<td>3.27</td>
<td>0.98</td>
<td>1-5</td>
<td>--</td>
<td>.52**</td>
<td>.11</td>
<td>.38**</td>
<td></td>
</tr>
<tr>
<td>3. Intentions</td>
<td>5.79</td>
<td>1.44</td>
<td>1-7</td>
<td>--</td>
<td>.33**</td>
<td>.29**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. LTPA METS</td>
<td>95.84</td>
<td>77.31</td>
<td>0-292</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Positive Affect</td>
<td>3.20</td>
<td>0.92</td>
<td>1-5</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: $M =$ Mean. $SD =$ Standard Deviation. LTPA METS = reflect estimates of energy expenditure expressed in METS Females = 0, males = 1

* $p < .05$, ** $p < .001$

Mediation analyses examined whether intentions mediated the relationship between anticipated pride and LTPA. These results are presented in Table 2. Both anticipated authentic (point estimate = 0.06, BCa CI = .03 to .09) and hubristic (point estimate = 0.07, BCa CI = 0.04 to 0.10) pride predicted intentions to engage in physical activity. The overall model accounted for 21% of the variance in intentions. Intentions significantly predicted engagement in LTPA (point estimate = 136.49, BCa CI = 56.31 to 216.66). Both anticipated authentic (point estimate = 7.80,
Table 5.2 Results of the Moderated Mediation Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Point Estimate</th>
<th>SE</th>
<th>BCa CI</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentions</td>
<td></td>
<td></td>
<td></td>
<td>.21**</td>
</tr>
<tr>
<td>Anticipated authentic</td>
<td>.06</td>
<td>.01</td>
<td>.03 to .09</td>
<td></td>
</tr>
<tr>
<td>pride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated hubristic</td>
<td>.07</td>
<td>.01</td>
<td>.04 to .10</td>
<td></td>
</tr>
<tr>
<td>pride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LTPA METS</td>
<td></td>
<td></td>
<td></td>
<td>.11*</td>
</tr>
<tr>
<td>Anticipated authentic</td>
<td>-9.73</td>
<td>7.70</td>
<td>-22.06 to 8.39</td>
<td></td>
</tr>
<tr>
<td>pride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated hubristic</td>
<td>-6.83</td>
<td>7.57</td>
<td>-24.70 to 5.24</td>
<td></td>
</tr>
<tr>
<td>pride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentions</td>
<td>136.49</td>
<td>40.55</td>
<td>56.31 to 216.66</td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>10.48</td>
<td>6.03</td>
<td>-1.44 to 22.40</td>
<td></td>
</tr>
<tr>
<td>Indirect Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated authentic</td>
<td>7.80</td>
<td>3.31</td>
<td>2.78 to 16.16</td>
<td></td>
</tr>
<tr>
<td>pride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated hubristic</td>
<td>9.89</td>
<td>3.86</td>
<td>4.10 to 19.57</td>
<td></td>
</tr>
<tr>
<td>pride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $SE = $ standard error, BCa CI = Bias Corrected and Accelerated Confidence Intervals. LTPA METS = reflect estimates of energy expenditure expressed in METS

Females = 0, males = 1

** $p < .001$

4.9 Discussion

Emerging evidence has documented the importance of affective constructs as important predictors of physical activity (Magnan, Shorey Fennell, & Brady, 2017). Interest in affective predictors of physical activity follow from criticisms of a reliance on cognitive predictors of behavior and a lack of predictive ability of the largely cognitive based theories used to understand and predict behavior (Sniehotta, et al., 2014). The inclusion of anticipated emotions in models of health behavior represents an understudied but potentially important aspect for understanding and predicting physical activity behavior. Limited research has been conducted on the utility of anticipated pride despite stated relevance to achievement, goal-directed behaviors,
and adaptive intertemporal choice (DeSteno, 2009). Therefore, this study sought to examine intentions as a mediator between anticipated authentic and hubristic pride and LTPA using the AHBF as the guiding framework (Williams & Evans, 2014). The findings provide support for the AHBF. Intentions mediated the relationship between both anticipated authentic and hubristic pride and LTPA, after controlling for positive affect. That both anticipated authentic and hubristic pride were indirectly associated with behavior after controlling for positive affect provides stronger support that it is not simply affective valence that is driving the effect but that the findings are specific to pride (Williams & DeSteno, 2008).

The AHBF does not specify which anticipated emotions or affective responses may be useful to anticipate for motivating health behavior. The results support that pride is an important emotion to anticipate for guiding health behavior. Experiences of pride provide internal feedback that an individual’s self or behavior is valued and not only make people feel good, but feel good about themselves (Tracy, Shariff, & Cheng, 2010). As a result, feelings of pride reinforce and encourage individuals to engage in future behaviors conducive to pride (Tracy & Robins, 2007). The results of this study support that authentic pride plays in integral role in shaping individuals’ intentions in meaningful and adaptive ways through anticipating how we would feel in response to a given behavior or outcome. Specifically, anticipated pride positively predicted intentions to engage in physical activity even after controlling for positive affect and this in turn was associated with behavioral engagement. Neither anticipated authentic nor hubristic pride directly predicted behavior. This finding is in line with previous research and theorizing that outcome expectancy variables are stronger predictors of intentions and have less of an influence on behavior as well as previous findings that affective judgements are stronger predictors of intentions than behavior (Hall & Fong, 2007; Rhodes et al., 2009).

The current findings indicate that both the anticipation of authentic and hubristic pride were indirectly associated with behavior through intentions. Previous research has demonstrated the beneficial and adaptive nature of pride that results from effort and achievement (i.e., authentic pride, Carver et al., 2016; Ho et al., 2016; Rebar & Conroy, 2013; Williams & DeSteno, 2008). However, support for hubristic pride in motivating physical activity is still equivocal and research in this area is still in its infancy (Castonguay et al., 2016; Mack et al., 2015; Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011; Sabiston et al., 2010). Hubristic pride results
from attributions to natural ability or making downward comparisons with others, not effort (Castonguay et al., 2013; Tracy & Robins, 2004). As a result, individuals need not necessarily engage in behaviors to experience hubristic pride. Rather, individuals may choose to compare themselves to less active others as a means of feeling proud of themselves or by showing off to demonstrate their superior abilities. Since the present study was only carried out over two weeks, it is possible that different associations may emerge had a longer timeframe been used. Whether intentions mediate between hubristic pride and behavior over longer periods of time should be examined.

Consideration of affective aspects of behavior is particularly relevant to physical activity. Although it is well-known that engagement in physical activity is associated with a host of physical and psychological benefits (Warburton et al., 2006), the majority of benefits do not occur at the time of the behavior with most not occurring months or even years into the future, while the costs associated with exercise (e.g., effort, inconvenience, discomfort) are much more immediate (Hall & Fong, 2007). The results of the current study are consistent with hedonic theories and speak to the importance of positive hedonic outcomes of physical activity relative to long-term reasons for action – such as health benefits, in promoting behavior (Rhodes, 2016; Williams & Evans, 2014). Experiences of pride are important targets when attempting to modify physical activity behaviors because they are relatively immediate forms of feedback and act to reinforce behavior, thereby increasing the likelihood of subsequent engagement in physical activity (Tangney et al., 2007; Lowe et al., 2002; Williams et al., 2012; Williams et al., 2008). Moreover, experiences of pride are thought to be most relevant for behaviors that have different consequences as time unfolds, specifically for behaviors that require delaying immediate rewards (e.g., feeling good) for the possibility of longer term rewards (e.g., status, self-worth, satisfaction, fitness, health; DeSteno, 2009). For example, anticipated pride may play a salient role in motivating individuals to persist through higher intensity workouts where affective experiences may be negative but may result in subsequent feelings of pride and benefits to the self (Decker & Ekkekakis, 2017; DeSteno, Gross, & Kubansky, 2013). However, research is only beginning to emerge on the functional role of pride in guiding behavior relative to diffuse affective states or discrete negative emotions focused on inaction (e.g., guilt, regret; DeSteno et al., 2013).
These findings corroborate and extend previous research that proximal outcomes of behavior (e.g., emotions) are relevant predictors of intentions to be physically active (Hall & Fong, 2007; Trope & Liberman, 2003; Williams & Evans, 2014; Woolley & Fishbach, 2016). Based on the results of this study and previous theorizing, consideration of positive affective outcomes of behavior appear to be important targets when attempting to modify physical activity intentions because they are relatively immediate forms of feedback and act to reinforce behavior, thereby increasing the likelihood of subsequent engagement in physical activity (Tangney et al., 2007; Lowe et al., 2002; Williams, Dunsiger, Jennings, & Marcus, 2012; Williams et al., 2008). Thus, making salient opportunities to anticipate and experience pride may be one route through which to promote physical activity.

To date, much of what is known about pride and its associated outcomes stems from individuals’ dispositional tendencies or proneness to experience pride in general across domains or situations (Damien & Robins, 2012; Mosewich, et al., 2011; Sabiston et al., 2010; Tracy et al., 2009; Tracy & Robins, 2007; Williams & DeSteno, 2009). While findings at this level of analysis often indicate disparate associations between authentic and hubristic pride, recent research that has assessed fitness-related pride provides support for a similar pattern of relationships between authentic and hubristic pride and MVPA (Castonguay et al., 2016; Castonguay et al., 2015; Mack et al., 2015). The results of the current study are in line with these findings whereby both fitness-related authentic and hubristic pride demonstrated a similar pattern of relationships with intentions. However, in the current study, neither facet of pride was associated with physical activity behavior. Thus, it is possible that the anticipation of authentic and hubristic pride are associated with behavior differently compared to the experience of pride. Furthermore, certain differences in study design and analyses may explain the discrepant findings. The current study utilized a prospective design whereas both Mack et al., (2015) and Castonguay et al., (2016) utilized cross-sectional designs. Further, despite the high correlation noted between the two facets, neither study controlled for shared variance between the two facets as has been recommended previously (Tracy & Robins, 2007). Finally, Mack et al. (2015) ran separate models for authentic and hubristic pride so the two facets were not included in the same model.

4.9.1 Limitations and Future Directions

One of the limitations of this study was the convenience sample of undergraduate students that were recruited as participants. As such, the findings are limited in generalizability. Moreover,
data collection procedures relied exclusively on self-report data. Although self-report is the most commonly used measures of physical activity, it is not without its limitations (e.g., recall bias, social desirability; Welk, 2002). Consideration of additional modalities that act to complement self-report is warranted (e.g., accelerometer data). Finally, this was a fairly active sample. Differences in the associations between study variables may differ for less active individuals (Magnan, Kwan, & Bryan, 2013). As such, conclusions are limited to active individuals.

The results of the current prospective study support that intentions are positive predictors of behavior (Sheeran & Abraham, 2003; Sheeran & Webb, 2016). Despite the purported importance of intentions in predicting behavior, interventions targeting intentions have been met with limited success (Rhodes & Dickau, 2012). Previous research addressing past behavior as a moderator of the intention-behavior relationship has yielded equivocal support (Dean, Farrell, Kelley, Taylor, & Rhodes, 2007; Norman, Conner, & Bell, 2000; Sheeran & Abraham, 2003). Nonetheless, other moderators of the intention-behavior relationship have been put forth. For example, intention stability, habit strength, and self-schemas have all been found to bridge the intention-behavior gap (Conner, Sheeran, Norman, & Armitage, 2000; de Bruijn & Rhodes, 2011). Moreover, the stability of intentions have been found to differ both between people and within-people (Conroy, Elavsky, Hyde, & Doerkson, 2011). Further work is needed in order to build upon these initial findings and provide a more complete account of the mechanisms through which intentions are translated into action. As well, intensive longitudinal designs that examine moderators of this relationship would provide greater insight into the dynamic nature of the relationship between intentions and behavior.

Researchers are beginning to take note of the importance of affective predictors of behavior and various models have been advanced that include differing affective constructs (Magnan et al., 2017). Although this study examined a portion of the processes outlined in the AHBF, Williams and Evans (2014) provide a review of a number of affective constructs such as affective response, incidental affect, affect processing, and affectively charged motivation that were not tested in this study. This model provides a number of directions for future research using a dual-process framework that considers both automatic and reflective aspects of behavioral engagement. Further distinctions between anticipatory emotions (currently experienced emotions about the prospect of a future outcome or behavior) and anticipated emotions (the anticipation of emotion that will occur in the future given a certain outcome) have also been described in greater
detail elsewhere (see Sala, Baldwin, & Williams, 2016; Loewenstein & Lerner, 2003; Magnan et al., 2017) and may also be of interest to consider in future research examining the predictors of health behavior. With a large majority of research focused on affective attitudes associated with engagement in physical activity (e.g., enjoyment), researchers are encouraged to broaden the scope of affective constructs assessed that may provide additional information into the affective processes underlying participation and maintenance of physical activity behaviors. Further consideration of how these affective phenomena (e.g., anticipated pride, affective attitudes, affective associations) operate to predict behavior in the same model would also provide valuable insight.

4.9.1.1 Conclusions

Researchers have demonstrated previously that the experience of pride is associated with participation in physical activity (Mack et al., 2015; Sabiston et al., 2010). A novel contribution of the current research is the consideration of anticipated pride in predicting intentions to be physically active. The present results indicate that targeting the anticipation of authentic and hubristic pride is one avenue that may help to promote participation in physical activity by way of intentions. Given that experiences of pride arise in response to success or achievement and are experienced as relatively fleeting, thinking about how you would want to feel may be more under the individual’s control. Further work on the role of outcome expectancies has been put forth as one way to improve physical activity interventions (Rhodes, 2016; Williams et al., 2005). One way to accomplish this aim may be through mental contrasting about present and future selves, although research is needed to support this supposition (Oettingen & Gollwitzer, 2010). Further, health messages tailored to feelings of pride that arise from engagement in physical activity may be one strategy for increasing participation in health behaviors.
The main findings from Chapter 5 can be summarized as:

1. The anticipation of pride is a positive predictor of intentions to engage in LTPA.
2. Intentions positively predicted participation in LTPA.

Targeting anticipated pride appears to be important in predicting individuals’ intentions to be physically active. Theoretically, the positive emotions that arise from participating in physical activity may be more salient predictors of behaviour than targeting the long-term benefits because of the immediacy of the experience relative to the behaviour. Thus, emotions may be useful insofar as they are more immediate forms of reward than are more distal consequences of behaviour (e.g., improved health). Interventions guided by frameworks that outline the antecedents of anticipated pride are encouraged for promoting feelings of pride. The Process Model of Self-Conscious Emotions is one theoretical approach that may be useful in this regard as it provides targets for eliciting feelings of pride (e.g., Tracy & Robins, 2004). Although some research has been undertaken that examines the antecedents of pride, this has been focused exclusively on the experience of pride and it remains to be seen if the process model can be applied to the anticipation of pride.
Chapter 6

5 Associations between Actual and Ideal Self-Perceptions and Anticipated Pride among Young Adults

5.1 Abstract

This study examined associations between actual and ideal fitness-related self-discrepancies and anticipated authentic and hubristic pride. Participants ($N = 130$) read a hypothetical scenario and were asked to anticipate their feelings of authentic and hubristic pride and provide reports of actual and ideal self-perceptions. Actual and ideal selves were predicted anticipated authentic but not hubristic pride. The congruence between actual and ideal selves was positively, linearly associated with anticipated authentic pride ($b = 0.43, p < .001$). When ideal selves were greater than actual selves, participants reported anticipating more authentic pride ($b = -0.70, p < .001$). Experiencing congruence between actual and ideal selves may be important cognitive appraisals related to the anticipation of authentic pride.
5.2 Introduction

Sport and exercise contexts are achievement domains in which individuals are subject to a number of emotions, and these experiences hold potential to modify individuals’ achievement striving. However, evaluations of current behavior or selves are not necessary for emotions to have effect on behavior (Tangney, Stuewig & Mashek, 2007). Individuals can anticipate their emotional experiences when thinking about themselves or their behaviors in the future, which in turn is theorized to regulate behavior (Baumeister, Vohs, DeWall, & Zhang, 2007; Tangney et al., 2007). Anticipated emotional responses direct behavior in service of goal pursuit and are positively associated with effort, persistence, and performance (Greitemeyer, 2009; Morewedge & Buechel, 2013). Within sport and exercise contexts, support for the utility of anticipated affective responses in guiding intentions and behavior has been documented (Abraham & Sheeran, 2003, 2004; Bagozzi & Pieters, 1998; Dunton & Vaughan, 2008; Loehr & Baldwin, 2014; Perugini & Bagozzi, 2001; Ruby, Dunn, Perrino, Gillis, & Viel, 2011), and researchers are beginning to acknowledge anticipated affective phenomena as important predictors of motivation and behavior (Magnan, Shorey Fennell, & Brady, 2017; Williams & Evans, 2014; Rhodes, Fiala, & Conner, 2009). These results illustrate the utility of anticipated emotions in guiding goal-directed behavior and support Baumeister et al.’s (2007) contentions that anticipated emotions are important predictors of behavior.

5.2.1 Pride

Sport and exercise contexts are goal-directed, achievement based contexts that frequently permit evaluations of one’s competence. Feelings of pride are evoked when individuals make self-evaluations of competence and attribute the source of their competence to the self (Tracy & Robins, 2004; Weiner, 1985). In other words, pride is an emotional reaction that occurs when thinking about and evaluating ourselves as having lived up to some kind of standard or attained a personally or socially relevant goal (Fischer & Tangney, 1995; Tracy & Robins, 2007). Researchers have suggested that pride consists of two distinct facets – authentic pride and hubristic pride (Tracy & Robins, 2004, 2007). Authentic pride results from attributions specific to effort or hard work (“I won because I practiced”), whereas hubristic pride results from attributions to ability or superiority (“I won because I’m the best”; Tracy & Robins, 2004, 2007). Tracy and Robins (2004) contend that pride, relative to other emotions, is associated with future
self-representations, or who one would like to be in the future, and directs motivation towards
demonstrating competence (Barrett & Campos, 1987; Fredrickson, 1998; Frijda, 2007; Lazarus,
1991). Supporting this notion, the anticipation of pride that will occur when thinking about the
self in the future has been positively associated with self-control, performance, effort, and
increased motivation toward productivity and success (Patrick, Chun, & MacInnis, 2009;
Verbeke, Belschak, & Bagozzi, 2004). With evidence emerging around the utility of anticipated
pride in guiding goal-directed behavior, an understanding of the antecedents is warranted as this
may provide useful targets for modifying the anticipation of pride.

5.2.2 Process Model of Self-Conscious Emotions

The meaning that is ascribed to a future self (e.g., a proud self) is inherently tied to one's basis of
self-knowledge including current and idealized self-perceptions (Markus & Nurius, 1986). In
other words, the emotions we anticipate experiencing when thinking about ourselves in the future
are always in reference to other aspects of our self-concept. Thus, in order to understand how
individuals may anticipate feeling about a future oriented self, it is necessary to understand other
aspects of the individual’s self-concept because it is these other aspects of self-knowledge that
gives the future self meaning.

The process model of self-conscious emotions (Tracy & Robins, 2004) provides a theoretical
understanding of the antecedents that give rise to experiences of pride and may provide a useful
theoretical framework for understanding the antecedents of anticipated pride. For an event to
elicit a pride response it must be deemed relevant to identity goals and attention must be turned
inward and directed toward the self, allowing for self-evaluations to be made. Pride results when
individuals view themselves or their behaviors as congruent with who they are (actual self-
concept) or who they would like to be (ideal self-concept), whereas discrepancies between actual
and ideal selves are theorized to lead to negative emotions such as guilt and shame (Higgins,
1987; Tracy & Robins, 2004). In this way, actual and ideal self-representations provide an
evaluative context against which one can gauge the functioning of future selves (as being in line
with actual and ideal self-perceptions or not; Higgins, 1987; Markus & Nurius, 1986; Tracy &
Robins, 2004). Although researchers have addressed how congruence or incongruence between
actual and ideal self-representations are related to the experience of pride (e.g., Castonguay,
Brunet, Ferguson, & Sabiston, 2012), little research has examined how congruence or discrepancies between self-representations predict anticipated emotions when thinking about selves in the future.

Furthermore, consideration of discrepancies/congruence across specific domains is warranted as the importance that individuals ascribe to different domains of the self varies and contributes uniquely to overall self-worth. The physical self domain has been shown to be the strongest predictor of the self-system and has demonstrated utility in predicting a number of behavioral and psychological outcomes (e.g., physical activity, dietary behavior, affect, anxiety; Crocker, Sabiston, Kowalski, McDonough, & Kowalski, 2006; Fox & Corbin, 1989). The physical self subsumes both an appearance and ability subdomain with varying self-perceptions comprising each subdomain (e.g., perceptions of attractiveness, body fat, sport competence, endurance) depending on the theoretical framework and instrumentation used (Fox & Corbin, 1989; Marsh, Richards, Johnson, Roche, & Tremayne, 1994). However, researchers examining self-discrepancies have primarily limited their investigations to global self-assessments; although research on discrepancies in body shape and weight have examined more domain-specific self-discrepancies (Brunet et al., 2012; Castonguay et al., 2012; Solomon-Krakus et al., 2017). While domain-specific, these discrepancies tap into only one part of the physical self (i.e., appearance) and are generally focused on body dissatisfaction or negative evaluations of the self. Yet, individuals report a multitude of emotions about their physical self that are not simply negative in nature. Individuals also report feeling proud of their bodies, both their appearance and what their bodies can do (Castonguay, Gilchrist, Mack, & Sabiston, 2013). However, less is known about how discrepancies/congruence in relation to ability and competence are related to positive evaluations of the self.

Research examining discrepancies between actual and ideal selves have typically utilized simple difference scores (i.e., ideal ratings minus actual ratings; Bessenoff & Snow, 2006; Markland, 2009; McKinley, 1998; Sabiston, Crocker, & Munroe-Chandler, 2005). There are a number of limitations associated with the use of simple scores to calculate discrepancies (Edwards, 2002). Further, existing research has focused on discrepancies rather than agreement – an important distinction to make in the prediction of pride, which is predicated on congruence rather than discrepancy (Tracy & Robins, 2004). Polynomial regression and response surface methods have been proposed as superior alternatives to the use of difference scores (Cafri, Van den Berg, &
Brannick, 2010; Shanock, Baran, Gentry, Pattison, & Heggestad, 2010). Using the actual and ideal scores as individual predictors, associations between anticipated pride and (a) the degree of agreement (i.e., extent to which actual and ideal self-perceptions are similar to one another), (b) the direction of the discrepancy (i.e., when actual self-perceptions are larger/smaller than ideal perceptions), and (c) the degree of the discrepancy (i.e., extent to which actual and ideal self-perceptions are discrepant from one another) between actual and ideal selves can be examined (Cafri et al., 2010). Castonguay et al. (2012) previously examined the degree and direction of the discrepancy between weight-related actual and ideal self-states in the prediction of emotions including pride. Consistent with the theoretical tenets of the process model, greater congruence between actual and ideal selves was associated with authentic pride. Further, when actual selves were greater than ideal selves, participants experienced less authentic pride. However, no theoretically grounded studies have investigated the associations between actual and ideal self-representations in the prediction of anticipated pride.

**Study Purpose**

A primary focus of existing research examining emotions has been on the *experience* of emotions, with less known about individuals’ *anticipated* emotions when thinking about themselves in the future. Given that the anticipation of positive affective states is linked to positive health outcomes (e.g., physical activity; Dunton & Vaughan, 2008), further research exploring the antecedents of anticipated pride is warranted. The aim of the present study was to test the relationship between current and ideal self-representations and anticipated authentic and hubristic pride using a scenario based methodology. Guided by the process model of self-conscious emotions (Tracy & Robins, 2004), this study examined whether self-reported actual and ideal self-representations were associated with anticipated pride. Further, the extent and direction of self-discrepancies/congruence may be important in predicting individuals’ anticipated emotional responses when thinking about themselves in the future. It was hypothesized that anticipated pride would be greater when the agreement between actual and ideal selves was greatest and this relationship would be linear in nature. Based on previous findings (Castonguay et al., 2012), it was also hypothesized that when ideal selves were greater than actual selves, anticipated pride would be greater.
5.3 Methods

5.3.1 Participants and Procedure

The University Research Ethics Board approved the study protocol, and all participants provided informed consent prior to participating. Young adults between the ages of 18 and 25 were recruited through in-class presentations at a mid-size university in Canada. Consenting participants completed a questionnaire package either in class or online. All questionnaires were presented in the same order. Participants read a scenario depicting a future self and reported their anticipated emotional response. Participants also responded to questions concerning how they currently saw themselves (actual self) their actual and ideal selves. The questionnaire package also included questions pertaining to participants demographics including age, sex, height (metres) and weight (kg) for descriptive purposes. Height and weight were collected to determine participants’ body mass index (BMI) as an individual’s weight divided by their height in meters squared.

5.3.2 Measures

5.3.2.1 Scenario and Manipulation Check

Participants were instructed to read and imagine themselves in a hypothetical scenario that vividly described an event commonly reported as eliciting experiences of pride in physical activity contexts. The scenario was created based on findings from a previous study with a separate sample of young adults who were asked to report an open-ended narrative of personal experiences that elicited experiences pride (see Castonguay et al., 2013). Inductive content analysis was used to identify common themes and the current scenario was informed from those findings. A similar protocol of scenario development has been used in previous research focused on guilt and shame (i.e., Crocker et al., 2014), and the scenario was reviewed, and deemed appropriate, by six physical self and self-conscious emotion researchers. The following scenario was provided to all participants:

You would like to improve your fitness and get in shape for a race that is coming up in 3 months. You have never raced but you have thought about it frequently over the past year. You decide to participate in kick boxing lessons twice a week and train at the gym 2
additional days in order to try and build up your cardiovascular fitness. Three months later, you sign up for the race and complete it in an excellent time.

After reading the scenario, participants completed a manipulation check to ensure the scenario was relevant to the individual (Tracy & Robins, 2004). On a scale from (1) *not at all* to (5) *extremely*, participants were presented with two-items to assess scenario relevancy: “How likely is this type of situation to happen to you?” and “Were you able to see yourself in this situation?” To ensure the final sample consisted of participants who imagined the scenario as relevant to them, only participants who received a minimum mean score of two on the relevancy items were included in the analytical sample.

### 5.3.2.2 Anticipated Pride

After reading the scenario, participants were asked to anticipate how they would feel in that scenario using items from the Authentic and Hubristic Pride Scale (Tracy & Robins, 2007). Four items (i.e., successful, confident, accomplished, achieving) measured authentic pride and four items (i.e., like showing off, arrogant, superior, egotistical) measured hubristic pride. Average scores across the items were calculated for authentic and hubristic pride.

### 5.3.2.3 Actual and Ideal Selves

Participants responded to single-items assessing their actual and ideal self. To measure participants’ actual self-concept, participants were asked to respond on a 5-point Likert scale (1 = *not at all* to 5 = *extremely*) the extent to which they saw themselves as someone who was in shape and worked on improving their fitness. To assess participants’ ideal self, they were asked to respond on the same 5-point Likert scale the extent to which being in shape and improving their fitness was consistent with how they would like to see themselves.

### 5.3.3 Data Analysis

#### 5.3.3.1 Preliminary Data Analysis

Inspection of missing data and non-response was assessed. Individuals reporting that the scenario was not at all reflective of who they wanted to be or indicated that the scenario was not at all relevant to them were deleted. Means, standard deviations, skewness, kurtosis, Cronbach alpha
coefficients, and Pearson product moment correlations with corresponding confidence intervals were calculated for the main study variables.

### 5.3.3.2 Main Data Analysis

Polynomial regression analysis with response surface methods were used to test the main study hypotheses (Cafri et al., 2010; Edwards, 2002). Prior to testing study hypotheses, actual (A) and ideal (I) self scores were centered. These centered scores were then squared to create a squared actual self term (A x A) and a squared ideal self term (I x I). Finally, an interaction term was created by multiplying the centered actual and ideal self scores (A x I). These five independent predictors were then entered into separate linear regression analyses to predict anticipated authentic and hubristic pride.

Subsequently, the results from the linear regression analyses were transformed into four surface values ($a_1, a_2, a_3, a_4$) using four equations representing the predictors in the polynomial regression model (Shanock et al., 2010). First, linear and non-linear associations between actual and ideal selves and anticipated pride were assessed. Specifically, $a_1 (b_A + b_I)$ reflects the linear relationship between actual and ideal selves and anticipated pride, and $a_2 (b_{AxA} + b_{AxI} + b_{IxI})$ reflects the nonlinear relationship between actual and ideal selves and anticipated pride. Subsequent analyses assessed issues of discrepancy between actual and ideal selves and anticipated pride. Specifically, $a_3 (b_A - b_I)$ examined how the direction of the discrepancy between actual and ideal selves is related to anticipated pride while $a_4 (b_{AxA} - b_{AxI} + b_{IxI})$ examined how the degree of the discrepancy between actual and ideal selves is related to anticipated pride (see Brunet, Sabiston, Castonguay, Ferguson, & Bessette, 2012, and Castonguay et al. (2012) for examples of previous studies utilizing these analytic techniques in body image contexts).

### 5.4 Results

One-hundred and forty-seven young adults consented to participate in the study. Two participants did not complete questions beyond the scenario and were removed from the analyses. Fourteen participants reported that the scenario was not relevant to them and were excluded from the analyses. Of those retained, 26.9% reported that the scenario was likely to
happen to them ‘a little bit, 40.8% reported the likelihood as being somewhat likely, 23.9%
reported the likelihood as ‘a lot’, and 8.5% reported that the scenario was extremely likely to
happen to them. Further, 23.8% of participants were able to see themselves in the scenario ‘a
little bit, 36.2% somewhat saw themselves in the scenario, 29.2% saw themselves in the scenario
a lot, and 10.8% reported that they were able to see themselves in the scenario extremely. One
outlier was noted for authentic pride and was subsequently removed from the analysis (z > 3.00).
This resulted in a final analytical sample of N = 130 (71 females; 59 males). Participants were
21.30 years on average (SD = 1.94). The average BMI for all participants was 23.30 (SD = 4.12).

Overall there were minimal missing data (<1%) and mean replacement was used to replace
missing data. Descriptive statistics and bivariate correlations for the main study variables are
presented in Table 1. Cronbach alpha coefficients for anticipated authentic (.88) and anticipated
hubristic (.77) pride demonstrated support for the internal consistency of the items.

Table 6.1 Descriptive Statistics and Bivariate Correlations between Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M (SD)</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Actual self</td>
<td>3.19 (0.95)</td>
<td>1.00-5.00</td>
<td>--</td>
<td>.50</td>
<td>.15</td>
<td>-.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.36,.62]</td>
<td>[-.02,.31]</td>
<td>[-.19,.15]</td>
</tr>
<tr>
<td>2. Ideal self</td>
<td>3.68 (0.86)</td>
<td>2.00-5.00</td>
<td>--</td>
<td>.51</td>
<td></td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.37,.63]</td>
<td></td>
<td>[-.13,.21]</td>
</tr>
<tr>
<td>3. Authentic pride</td>
<td>4.23 (0.81)</td>
<td>1.25-5.00</td>
<td>--</td>
<td></td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.08]</td>
<td>[-.09,.25]</td>
</tr>
<tr>
<td>4. Hubristic pride</td>
<td>2.27 (0.90)</td>
<td>1.00-5.00</td>
<td>--</td>
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Note: M = Mean, SD = Standard deviation.

The polynomial regressions accounted for 29% and 1% of the variance in anticipated authentic
and hubristic pride, respectively. Based on the response surface values for anticipated authentic
pride, there are four main findings to interpret. The first addresses the linear relationship between
congruence in actual and ideal selves and anticipated pride. A significant linear relationship was
found for the agreement (e.g., congruence) between actual and ideal selves and anticipated pride
(β1 = 0.43, p < .001). That is, when actual and ideal selves were in agreement, anticipated
authentic pride increased as actual and ideal selves increased. In other words, when individuals
wanted to be someone who was fit and in shape, and also felt that that was who they currently were, the more pride they anticipated they would feel in response to the scenario. The second finding concerns the non-linear association between the congruence in actual and ideal scores and anticipated pride. No significant non-linear relationship was found between agreement in actual and ideal selves and anticipated authentic pride ($a_2 = -0.09, p = .28$). Because the linear relationship was significant, it was expected that the non-linear relationships would not be significant (Shanock et al., 2010). The latter two findings concern the discrepancies between actual and ideal selves. When there were discrepancies reported, anticipated authentic pride was greater when the direction of the discrepancy was such that participants’ ideal self was greater than their actual self ($a_3 = -0.70, p < .001$). In other words, when participants felt that they currently were not as fit and in shape as they wanted to be, they reported anticipating more pride in response to the scenario. The final finding pertains to the degree of discrepancy. In other words, does it matter how much of a discrepancy there was between actual and ideal scores? Based on the results, there was no significant relationship between anticipated authentic pride and the degree of the discrepancy between actual and ideal selves ($a_4 = -0.20, p = .20$). So, when ideal selves were greater than actual selves, this discrepancy was associated with greater anticipated authentic pride and the degree of this discrepancy did not influence this finding. Based on the non-significant variance accounted for in hubristic pride, the surface values for hubristic pride were not interpreted (Edwards, 2002; Shanock et al., 2010).

### 5.5 Discussion

Using Tracy and Robins’ (2004) process model of self-conscious emotions as the guiding framework, this study examined the agreement and direction/degree of discrepancy between actual and ideal self-concept and anticipated authentic and hubristic pride. Greater agreement between actual and ideal self-perceptions was associated with greater anticipated authentic pride. Additionally, when participants’ ideal selves were greater than their actual selves, anticipated authentic pride was greater. These findings support the hypotheses and offer preliminary support for the application of the process model of self-conscious emotions in the context of sport and exercise as well as in the prediction of anticipated emotions, specifically authentic pride. With researchers espousing the utility of anticipated emotions for regulating behavior in recent years (Baumeister et al., 2007; Tangney et al., 2007; Williams & Evans, 2014), the results provide support for antecedents of anticipated pride. Specifically, the results provide additional insight
into understanding how the various self-perceptions that individuals have of themselves operate in tandem to predict the anticipation of pride.

Anticipated authentic pride was related to the agreement between current self-perceptions and individuals’ ideal self-perceptions. This suggests that individuals’ anticipation of pride that results from hard work and effort is related to the congruence between how he or she currently views his/herself (actual self) and perceptions of his/her ideal self. This supports the central tenets of the process model of self-conscious emotions that congruence between actual and ideal self-states are associated with positive emotional experiences. These findings also extend the tenets of the process model to include the anticipation of positive affective states as outcomes of the congruence between self-perceptions. Results build on previous theoretical propositions that congruence between actual and ideal self-states are associated with positive affect by specifying the distinct positive emotions that are generated in the process of self-evaluation (Carver & Scheier, 1998; Tracy & Robins, 2004). The findings are in line with previous research examining weight-related self-discrepancies in the prediction of authentic pride, such that greater agreement between actual and ideal weight was positively associated with authentic pride (Castonguay et al., 2012). It has been suggested that congruence between actual and ideal self-ratings help to maintain current behaviors that contribute to ideal self-states (e.g., engaging in physical activity so that actual fitness is in line with ideal fitness; Cafri et al., 2010). As such, encouraging individuals to think about the ways in which their current self-perceptions are in line with their ideal self-perceptions may help to increase the anticipation of pride and subsequent health promoting behaviors (Cafri et al., 2010; Castonguay et al., 2012; Patrick et al., 2009).

Based on the bivariate correlations and results of the polynomial regression and response surface analyses, anticipated authentic pride is strongly predicted by participants’ ideal self-perceptions. When participants’ ideal selves were greater than their fitness-related actual selves, anticipated authentic pride was greater. This finding is in contrast to tenets of the process model that suggests that positively valenced emotions result from congruence between self-perceptions but not discrepancies. However, this finding is consistent with previous research that also examined discrepancies between actual and ideal self-states in the prediction of pride (Castonguay et al., 2012). Taken together, these findings suggest that both the experience and the anticipation of pride are highly reliant on movement towards an ideal self. While other self-conscious emotions
like guilt arise from reflecting on past selves, Tracy and Robins (2004) argue that pride is often linked with future self-representations – in other words, with the selves we hope to become (Markus & Nurius, 1986). Envisioning a self we hope to become (e.g., a competent, achieving self) underscores individuals’ hopes, goals, aspirations, and motives and is theoretically proposed to regulate intentions and behavior (Fischer & Tangney, 1995; Hooker & Kaus, 1994; Markus & Nurius, 1986). This idea is consistent with the notion of goals directing behavior; however, in the case of emotions associated with possible selves, the goal to be approached (or avoided) is the self (e.g., a proud self; Markus & Nurius, 1986; Oyserman & Markus, 1990).

Actual and ideal self-states and discrepancies explained a greater proportion of the variance in authentic pride experiences compared to hubristic pride experiences. It is possible that the low proportion of variance accounted for in hubristic pride may be due to the nature of the attributions that give rise to hubristic pride (i.e., elicited in response to global attributions and not on specific behavioral attributions and personal accomplishments; Tracy & Robins, 2004; 2007). Given the scenario based methodology utilized in this study, it is possible that participants viewed the pride eliciting scenario as a reflection of effort rather than on one’s global, innate abilities. This is supported by the responses to the authentic and hubristic pride items such that participants reported greater authentic pride in response to the scenario than hubristic pride, on average. The tendency to report greater authentic pride relative to hubristic pride is commonly reported in studies assessing the two facets of pride (Mack, Kouali, Gilchrist, & Sabiston, 2015; Sabiston et al., 2010; Tracy & Robins, 2007). Further issues around the difficulty in assessing hubristic pride have also been raised, in particular the social desirability of reporting such emotional experiences as “smug” or “arrogant” may bias reports of hubristic pride (Holbrook, Piazza, & Fessler, 2014).

The current findings not only extend the literature on self-concept and anticipated emotions, but also add to existing self-discrepancy literature through the use of polynomial regression and response surface values. There are a number of issues related to the use of simple difference scores (Edwards, 2002). By implementing a more sophisticated analytical approach for analyzing discrepancies in self-perceptions it is possible to examine the extent to which actual and ideal fitness-related self-perceptions were associated with anticipated pride, thus overcoming problems associated with ambiguous interpretations and confounded effects (Cafri et al., 2010; Edwards,
2002; Shanock et al., 2010). Of specific importance to the present study, the use of polynomial regression and response surface values allows for examination of the congruence between actual and ideal self-perceptions and their association with pride—a central tenet of the process model of self-conscious emotions (Tracy & Robins, 2004). First, it was found that actual and ideal self-states were differentially related to the two facets of pride. Similar findings have been reported in previous research (Brunet et al., 2012; Cafri et al., 2010; Castonguay et al., 2012), providing support for the independent nature of these constructs and importance in retaining the information that each provides rather than sacrificing this information through the use of simple difference scores (Cafri et al., 2010). Second, this analytic approach also allows for examination of whether anticipated pride was greater when actual scores were lower than ideal scores and whether the degree of the discrepancy was meaningful, thus permitting an examination of the direction and degree of the discrepancy as important predictors of anticipated pride. A reliance on simple difference scores would not have permitted such nuanced findings (Shanock et al., 2010). The information that is gained through the use of polynomial regression and response surface values contributes to the existing body of research on self-discrepancies in body-related contexts.

There are limitations of the current study that should be acknowledged. Results are based on data collected from a self-selected convenience sample of undergraduate students. As such, the generalizability of the findings is limited. Future research is needed to test the purported relationships with samples of varying ages and abilities. Second, the use of a cross-sectional design limits any causal inferences that can be made. Finally, although the analytic technique that was used in the current study improves upon previous self-discrepancy research, there are limitations with the use of single-items for creating discrepancy scores (Cafri et al., 2010). However, single items measuring actual and ideal selves are commonly used in research assessing discrepancies (Markland, 2009). Moving forward, researchers are encouraged to include actual and ideal ratings that are assessed with multiple items.

Researchers may wish to test the process model in the prediction of anticipated shame and guilt. Although previous research has examined the discrepancy between self-perceptions (e.g., actual: ideal) in the prediction of the experience of shame and guilt (Brunet et al., 2012; Castonguay et al., 2012; Higgins, 1987), whether a similar pattern of results holds for the anticipation of these
emotions remains to be seen. Further, as noted by Tracy and Robins (2004), individuals’ identities are comprised of a range of self-representations that are not limited to actual and ideal self-perceptions. It would be of interest to examine discrepancies/congruence between other aspects of individuals’ identities and how this may relate to outcomes of interest in sport and exercise contexts (e.g., emotions, behavior, commitment, adherence). For example, individuals can hold both personal/individual self-representations as well as relational/social/collective self-representations. Given the social identities that emerge among groups (e.g., sports teams, running groups, Bruner, Dunlop, & Beauchamp, 2014), it would be of interest to examine discrepancies between individual and collective representations to see how this may relate to individual and team behaviors (e.g., antisocial behaviors, cohesion, performance, etc.). The use of polynomial regression and response surface values can also be usefully applied to examine the effects of differences between anticipated and experienced emotions. This would allow researchers to examine questions about whether the discrepancy or congruence between how an individual anticipates feeling and how they actually feel impacts subsequent behavior or goal-striving.

The current study provides important insights into understanding how congruence between self-perceptions relates to anticipated pride. Specifically, much of the previous discrepancy research has focused on appearance or weight related discrepancies in the prediction of negative emotional experiences or negative health behaviors (Brunet et al., 2012; Castonguay et al., 2012; Markland, 2009, Sabiston et al., 2005). This study builds on the extant literature by assessing a domain other than appearance and provides a better understanding of how self-perceptions are associated with positive emotional experiences (i.e., pride). In turn, the results provided support for tenets of the process model of self-conscious emotions (Tracy & Robins, 2004) in the prediction of anticipated pride. Further, previous research examining associations between actual and ideal selves and pride have only considered authentic pride (Castonguay et al., 2012). This study builds on that by considering both facets of pride. This study also builds on the extant literature that has examined the antecedents of the experience of pride to include an understanding of the antecedents of anticipated pride (Tracy & Robins, 2004). An understanding of the predictors of positive emotions in these contexts may be one strategy for promoting emotional well-being and health behaviors among young adults.
Chapter 7

6 General Discussion

An understanding of how emotions regulate behaviour in sport and exercise contexts has been overshadowed by research on cognitive predictors of behaviour (e.g., beliefs about one’s ability). Although there is evidence to show that behaviour can be explained using theories that rely on cognitions, they account for only a portion (i.e., \( d = .15 \)) of variance in behaviour (e.g., Rhodes & Dickau, 2012). It is becoming increasingly clear that conventional theories grounded in cognitive processes are not sufficient to explain participation and performance and likely overlook some important regulatory processes. Investigations into other domains is one promising route through which to accomplish this aim (Williams, 2008; Rhodes & Kates, 2015) and may lead to a better understanding of the factors regulating behaviour in these contexts (Rhodes et al., 2009). Biddle (2000) maintains that targeting emotional experiences holds potential as a promotion strategy geared towards modifying engagement in physical activity.

Sport and exercise contexts represent an achievement domain that may be subject to and affected by various emotional experiences. The competence-based activities in these contexts invite self-evaluations of competence (or incompetence) and the associated attributional processes can evoke emotions such as pride or shame. Despite a focus on negative emotions in these contexts, individuals experience a range of emotions from feelings of anger and shame to happiness and pride. However, at present, relatively little is known about the role positive emotions play in regulating physical activity behaviour (McCarthy, 2011).

With shame and guilt largely elicited as a result of failure or social transgression, pride is a positive emotion that provides internal feedback that an individual’s self or behaviour is valued (Tracy et al., 2010). Consequently, experiencing pride not only makes people feel good, but feel good about themselves. These feelings fuel the development of self-esteem and maintenance of a positive self-concept (Tracy & Robins, 2007b). As a result, feelings of pride are thought to reinforce and encourage individuals to engage in future behaviours conducive to feelings of pride (Tracy & Robins, 2007b). From this perspective, examining feelings of pride are particularly
important because of their role in psychological functioning and motivation towards achievement behaviours.

However, DeWall and colleagues (2016) argued that it is the *anticipation* of emotion that is important in regulating behaviour (Baumeister et al., 2007). For example, athletes log countless hours of training based on the prediction that training will lead to a successful performance and subsequently elicit feelings of pride. In fact, researchers have suggested that our ability to forecast our emotions (i.e., to imagine how we would feel in the future), provides the impetus or motivation to put forth the effort necessary to actually achieve our goals and experience those emotions (Baumeister et al., 2007; DeWall et al., 2016). Despite previous theorizing about the role of emotions in directing goal-pursuits (e.g., Carver & Scheier, 2002; Lazarus, 1991b), and the emergence of previous work examining anticipated emotions (e.g., anticipated regret), there is still much to be learned in terms of how anticipated emotions guide goal-directed and the unique effect that certain anticipated emotions may have in energizing behaviour.

This line of research aims to address a number of calls for investigations into (a) anticipated emotions, (b) positive emotions, and (c) domain-specific self-conscious emotions (DeWall et al., 2016; Tangney & Tracy, 2012). The study of anticipated emotions is an emerging area of interest that may hold potential in providing further insight into the affective antecedents of physical activity behaviour (Williams & Evans, 2014). Although some researchers have posited the impact of anticipated emotions on behaviour such as physical activity (Perugini & Bagozzi, 2001), at present it remains unclear to what extent anticipated pride usefully guides goal-directed physical activity behaviour. The present research also aimed to address calls from researchers to grow the existing literature on pride (Tangney, 1999; Tangney & Tracy, 2012) and holds the potential to advance the literature in a number of ways. First, greater attention has been paid to negative emotions, both basic and self-conscious, leaving pride and its associated outcomes less understood (Tangney & Tracy, 2012). Further, researchers that have investigated positive self-conscious emotions have focused on pride at the global level with investigations into pride experienced in particular domains limited. As a consequence, our understanding of the outcomes associated with pride in a given domain are restricted. Thus, the overarching purpose of this program of research was to examine the role of pride for achievement striving in sport and exercise contexts. To accomplish this aim, four studies were conducted that examined (a) the
regulatory function of pride in promoting goal progress, (b) the utility of both the experience and anticipation of emotion in regulating goal-directed behaviours, (c) the association between domain specific anticipated pride and physical activity behaviour, and finally, (d) the antecedents of anticipated pride.

In Study 1, an intensive longitudinal design was used to examine participants’ experiences of pride and training progress over seven weeks. Authentic pride was of specific interest in this study because it is the facet of pride that is associated with achievement that results from one’s own effort and behaviours (Tracy & Robins, 2004; 2007). There were two primary objectives of this study. The first objective was to examine the commonly held assumption that pride is a response to achievement outcomes. The second objective was to test recent postulates about how pride is related to achievement striving. Recently, Weidman et al. (2016) argued that feelings of pride act as a source of information about an individual’s functioning and competence. Low feelings of pride provide feedback that the individual is not achieving and changes are needed in order to achieve and feel a sense of pride. Thus, this theoretical account of how pride is related to achievement is a within-person account – it specifies relationships within people and how they unfold over time. However, a primary limitation of Weidman et al.’s (2016) work was that they tested their hypotheses between people, rather than looking at the relationships within people. This is an important distinction to make because a) testing between-person differences does not test the specified relationships, and b) it cannot be assumed that relationships at one level of analysis are the same at another level of analysis (Curran & Bauer, 2011). To move this line of research forward, Study 1 examined the purported associations within-person. Authentic pride was positively associated with goal progress. This is consistent with other theoretical accounts that specify relationships between goal progress and affect (Carver & Scheier, 1989) but extends these findings to specify a specific discrete emotion that is experienced (i.e., pride). Secondly, the results also support Weidman and colleagues’ contentions that low pride is associated with achievement striving. On weeks when participants felt less proud than usual, they reported making greater progress towards their goals than usual. This finding supports Weidman et al.’s theorizing but provides a more appropriate test of their hypotheses. The main findings of Study 1 support contentions that pride is motivational (Williams & DeSteno, 2008) and the desire to experience pride is associated with behaviours or strategies that result in greater progress towards one’s goals.
Study 2 extends suppositions inherent, but not explicitly stated, in Study 1. According to Weidman et al. (2016), people are motivated to experience pride and change their behaviours in ways that are likely to result in experiences of pride. This line of theorizing runs parallel to recent work by Baumeister et al. (2007) and DeWall et al. (2016) that highlights the importance of the anticipation of emotion in guiding goal directed behaviours. Further, the anticipation of emotion is thought to motivate people to invest time and effort towards their goals (Bagozzi et al., 1999). The objective of Study 2 was to examine the anticipation of both pride and shame in predicting time and effort spent training for a long-distance race while controlling for the experience of these emotions over the course of training. We did not find support for the utility of anticipated emotions in guiding either time or effort. Results support the extant literature on the functional role of pride in promoting adaptive outcomes (Fischer & Tangney, 1995; Stipek, 1995; Williams & DeSteno, 2008), even after controlling for the previous week’s behaviour. At the between-person level, people that felt more pride during their training put forth more effort toward their training the following week. This is consistent with findings that pride motivates people to put forth greater effort and persistence towards long-term goals despite short-term costs (i.e., hedonic costs associated with effort expenditure; Williams & DeSteno, 2008). Alternately, because of the time-invariant nature of this relationship, it is possible that people who expended more effort felt more proud.

The results of Study 2 demonstrate that anticipated pride was not directly associated with behaviour. Although it has been suggested that anticipated emotions directly predict behaviour (Baumeister et al., 2007; DeWall et al., 2016), it is possible that anticipated emotions are a better predictor of intentions and intentions, in turn, are associated with behaviour. This notion is consistent with central tenets of Affect and Health Behavior Framework (2014). Despite the known health benefits that engagement in physical activity confers, research in behavioural economics has shown that people prefer outcomes that are more proximal in time rather than outcomes that are more distal in time (Ainslie, 1975; Trope & Liberman, 2003). The emotions that result from behavioural engagement are thus important factors to target because of their relatively immediate onset relative to other benefits of physical activity (e.g., health; Tangney et al., 2007). Study 3 was a prospective design that examined whether intentions mediated the relationship between anticipated pride and physical activity behaviour. Anticipated pride was
positively associated with intentions to engage in physical activity over the following two weeks and intentions were, in turn, associated with behavioural engagement. The results of Study 3 are consistent with hedonic theories and speak to the importance of positive hedonic outcomes of physical activity relative to long-term reasons for action – such as health benefits, in promoting physical activity behaviour (Rhodes, 2016; Williams & Evans, 2014). These findings extend what is currently known about the relationship between pride and physical activity by integrating anticipated pride in this relationship and the focus of pride in a specific domain.

Although Study 3 provides insight into the outcomes associated with the anticipation of pride, less is known about the antecedents that give rise to anticipated pride. Understanding the antecedents would provide useful targets for interventions aimed at modifying physical activity behaviour. Using the process model of self-conscious emotions (Tracy & Robins, 2004) as the guiding framework, the aim of Study 4 was to examine how actual and ideal self-perceptions were associated with anticipated pride. Further, in line with recent research examining discrepancies between actual and ideal selves in the prediction of self-conscious emotions (Brunet et al., 2012; Castonguay et al., 2012), Study 4 also sought to examine how the congruence between self-perceptions was associated with the anticipation of pride. The results provide support for the importance of ideal selves in the prediction of anticipated pride as well as the congruence between actual:ideal self-perceptions. When individuals’ actual self-perceptions were positive and congruent with their ideal self-perceptions, anticipated authentic pride was greater. Additionally, it was found that authentic pride was greater when ideal self-perceptions were greater than actual self-perceptions. This study extends previous research examining self-discrepancies around the body (Castonguay et al., 2012) through the consideration of both facets of pride with a focus on fitness and performance goals rather than appearance or weight-based self-perceptions. The results also provide targets for modifying the anticipation of authentic pride.

In summary, these four studies extend the extant literature on pride in sport and exercise contexts. The motivating nature of authentic pride was supported across the first three studies and a better understanding of the antecedents of anticipated authentic pride was provided. Low feelings of authentic pride were associated with greater training progress the following week while greater feelings of pride were associated with less progress. Conversely, a positive
association was found at the between-person level and highlights the need for examining associations at the within-person level of analysis. When examining training behaviours, neither anticipated pride nor shame were significant predictors. Nor was the experience of shame a significant predictor. Further, the anticipation of authentic pride was associated with intentions to engage in physical activity, supporting tenets of TST and other recent frameworks that highlight anticipated emotions as important yet understudied constructs in physical activity contexts (e.g., Williams & Evans, 2014). Information was also gained into the antecedents of anticipated fitness-related pride and the importance of ideal selves emerged. Targeting individuals’ ideal selves may be one way in which to promote the anticipation of pride.

6.1 Conceptual Implications

There are a number of conceptual contributions and implications of this program of research. For example, conceptualizing emotions from an anticipated rather than retrospective point of view is a novel contribution to the literature in sport and exercise. As well, although pride is commonly studied as a disposition, experiences of pride may differ across domains of study. The current program of research provided further information on experiences of body-related pride. Recently researchers have urged others to consider other aspects of the body aside from appearance. Studies three and four thus focused on fitness-related pride.

6.1.1 Anticipated Emotions

Despite the stated importance of self-conscious emotions for regulating behaviour (Tracy & Robins, 2004), these emotional experiences have almost exclusively been discussed as responses to competence outcomes. Notably absent from conceptions of achievement emotions are anticipated emotions. For example, in Pekrun, Elliot, and Maier's (2006) taxonomy of achievement emotions, pride is viewed as emotions experienced regarding a competence outcome that is evaluated retrospectively. That is, pride is a common emotional response to competence-related outcomes. Anticipated pride is similar to the taxonomy of emotions presented by Pekrun et al. (2006) but differ in that it is prospective in nature (not retrospective) and the focus is on the outcome not the activity itself. Thus, unlike enjoyment which is focused on the activity, anticipated pride is focused on whether there is potential to demonstrate competence. Further, pride is thought to override hedonic displeasures (e.g., forgo enjoyment) in
the pursuit of competence (Magnan et al., 2017). Thus, anticipated pride holds considerable potential in contexts such as sport and exercise where success and the demonstration of competence is increased through the investment of time and effort.

6.1.2 Future Conceptions of the Self

The emotions an individual anticipates are positioned in the future and are an evaluation of the competence of a future self. Although much of the extant research on pride and self-concept has been focused on understanding current identity, individuals have a range of self-representations that are important to their identity. From early adolescence, issues of identity are at the forefront of an individual’s development (Erikson, 1968). As adolescents and young adults explore their identities, they consider not only who they are now (i.e., actual selves) or who they would like to be (i.e., ideal selves), but consider their future selves (i.e., possible selves) as important components of their self-concept (McGuire & Padawe-Singer, 1976). These future selves underscore individuals’ hopes, fears, goals, aspirations, and motives and are theoretically proposed to regulate intentions and behaviour (Hooker & Kaus, 1994; Markus & Nurius, 1986). This idea is consistent with the notion of goals directing behaviour, however, in the case of a future self, the goal to be approached (or avoided) is the self (Markus & Nurius, 1986; Oyserman & Markus, 1990).

Similar to research addressing possible selves, the anticipated emotions associated with future selves are thought to be important for motivating and guiding behaviour – in other words, they function as incentives that guide behaviour in adaptive ways. They do so by providing a context of additional meaning for the individual's current or ideal functioning. Actual and ideal selves are evaluated and interpreted with reference to future self-representations (Markus & Nurius, 1986). For example, thinking about scenarios where our future self is inconsistent with how we see ourselves, or how we’d like to see ourselves, may lead one to anticipate experiencing negative emotions. Conversely, when imagining a future self that is consistent with how we see ourselves, or how we’d like to see ourselves, an individual is likely to anticipate positive emotions (Tracy & Robins, 2004). Although researchers have addressed how discrepancies between self-perceptions are related to emotions like pride, guilt, and shame (e.g., Castonguay et al., 2012), little research has been done to address how self-discrepancies are associated with anticipated emotions when thinking about selves in the future. This is an important area of research given
that Tracy and Robins (2004) argue that pride is often linked to future self-representations, or who one would like to be in the future.

### 6.1.3 Fitness-Related Pride

Homan and Tylka (2014) have noted that although exercise reduces women’s body dissatisfaction (Campbell & Hausenblas, 2009; Hausenblas & Fallon, 2006; Reel et al., 2007), there has been little research that has explored whether exercise is associated with positive body image. Examinations of body-related pride are highly relevant to the study of positive body image, given the goal-directed nature of pride that is associated with engagement in adaptive health behaviours (e.g., MVPA) and well-being (Sabiston et al., 2010; Castonguay et al., 2014; Mack et al., 2015).

Tangney and Tracy (2012) have urged researchers to explore individuals’ experiences of authentic and hubristic pride in specific domains (Tangney & Tracy, 2012). Multidimensional models of the self position the physical self as comprised of both an appearance domain and an ability domain (Fox, 1997; Shavelson et al., 1976). However, to date, the majority of body image research has been focused on appearance related dimensions and researchers have called for investigations to move beyond the study of appearance and to consider body functionality (Cash & Pruzinsky, 2002). Research focused on body functionality has emerged and has demonstrated promise in promoting positive body image (Frisen & Holmqvist, 2010; Wood-Barcalow et al., 2010). However, this research has been primarily focused on body appreciation, a cognitive evaluation of one’s abilities, and does not tap into the emotions one experiences when thinking about and evaluating their body’s functionality – an important aspect of positive body image.

When assessed at the domain level, the associations between fitness-related hubristic pride and physical activity run counter to what is typically reported when pride is examined at the global level (Mosewich et al., 2011). Further, the magnitude of association between the two facets is larger than typically reported (Tracy & Robins, 2007b). The possibility remains that authentic and hubristic pride are experienced to a similar extent when the specific domain of fitness is considered. This finding is in line with participant responses to the BSE-FIT in Study 3 and previously reported findings of a similar magnitude (Castonguay et al., 2016; Mack et al., 2015). The sample in Study 3 were kinesiology students where a focus on the physical self and fitness is likely made salient. Thus, the possibility exists that for kinesiology students, these two facets of
pride may operate in tandem given the specific focus on the individual’s fitness (e.g., pride is derived from both effort and a sense of superiority).

The results of Study 3 noted positive associations between the anticipation of pride (one aspect of positive body image; Webb et al., 2015) and participation in LTPA. Notably, the anticipation of positive emotions that reflect evaluations of one’s fitness, rather than one’s appearance, is more in line with current conceptions of positive body image and thus represent one avenue for promoting positive body image. These findings extend current findings on the relationship between positive body image and engagement in health enhancing behaviour. Most conceptualizations of positive body image have focused predominantly on cognitive dimensions, or on appearance evaluations, at the expense of understanding affective dimensions of body image – such as how one feels about the body’s function (i.e., fitness-related pride; Castonguay et al., 2013). However, caution should be taken in promoting fitness-related hubristic pride as it is incompatible with current conceptions of positive body image (Tylka & Wood-Barcalow, 2015). Even though the focus is on positive appraisals of the body’s functionality – which is one aspect of positive body image - fitness-related hubristic pride reflects beliefs that the individual’s fitness is a result of his or her innate abilities and is superior to others. Such egotistical and narcissistic tendencies are not in line with current conceptions of positive body image (Tylka & Wood-Barcalow, 2015; Webb et al., 2015).

6.2 Theoretical Implications

Despite previous theorizing about the role of emotions in goal-directed behaviour (e.g., Carver & Scheier, 2002; Lazarus, 1991), and the emergence of previous work examining anticipated emotions (e.g., Bagozzi et al., 1998) and pride (Weidman et al., 2016), there is still much to be learned in terms of how emotions guide goal-directed behaviour. The findings from this program of research hold important implications around the emotions that should be targeted to promote engagement in physical activity and enhance performance.

6.2.1 Low Pride Regulates Achievement Behaviour

According to functionalist accounts of emotion, pride developed to help individuals attain and maintain status (Cheng et al., 2010). Status is attained is through the demonstration of
competence - those who possess skills and appear competent are given status among their social group (Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Henrich & Gil-White, 2001). The proximal function of pride – or the route to attaining status - is the regulation of achievement behaviour (Cheng et al., 2010; Tracy & Robins, 2004). Although pride is often implicated in achievement pursuits, there has been a dearth of research that has examined specifically how this occurs. According to control-process accounts, self-conscious emotions function as regulators of behaviour that provide feedback about the relative functioning of the self. In other words, they provide feedback to the individual about the individual (Tangney, 2003). Emotions motivate behaviour by signaling when there is a discrepancy (or congruence) between goal states (e.g., Leary et al., 1995) or by providing feedback about progress towards goals (Carver & Scheier, 1990; Larsen, 2000). This theorizing has primarily been tested by examining the information that negative emotions provide (e.g., discrepancies between current states and goal states, making slower progress than expected) which are posited to provide the motivation to make changes in goal pursuit.

A novel theoretical contribution of the present research is the informational value that low feelings of pride provide to individuals engaged in goal pursuit (Study 1). The results of Study 1 provided the impetus for examining anticipated emotions in Study 2. The results of Study 1 demonstrated that low feelings of authentic pride provide feedback to alter strategies when engaged in goal pursuit to increase the likelihood of achieving in the future. This feedback hypothesis is consistent with contemporary theorizing around the function of emotions and the relationship between emotions and behaviour (Baumeister et al., 2007; DeWall et al., 2016). This perspective views emotion as indirectly related to behaviour such that emotion primarily serves as a feedback system. Through this process, people learn to anticipate which actions will result in which emotions. That is, individuals behave in ways to produce a desired emotional state. Thus, emotions are adaptive in that they provide feedback and help us learn lessons such that we are better able to select behaviours in the future that lead to adaptive and productive outcomes that bring about desired emotional outcomes (Keltner & Buswell, 1997; Tracy & Robins, 2004, 2007b). As such, emotions guide our behaviours in meaningful and adaptive ways through anticipating how we would feel (e.g., proud) in response to a given behaviour or outcome (e.g., goal achievement).
Although anticipated emotions are thought to motivate behaviour in adaptive ways (Baumeister et al., 2007) we did not find any support for this contention in Study 2. There are conflicting perspectives on the utility of anticipating emotions as a means of regulating behaviour. For example, Oettingen and Mayer (2002) found that anticipating success can be detrimental to fulfilling one’s goals, particularly for goals that require sustained effort over time (e.g., training for a long-distance race). A central tenet of this work is that anticipating positive outcomes brings pleasure in the moment but ultimately leads to a lack of goal attainment in the long run through reduced effort towards goal attainment (Kappes & Oettingen, 2011). Despite the lack of significant findings, anticipated emotions should continue to be investigated. For example, there are other emotions such as guilt or embarrassment that may be relevant in guiding behaviour. Further, anticipated emotions may be indirectly related to behaviour through intentions, as was found in Study 3.

6.2.2 Targeting Hedonic Outcomes of Behaviour

A central premise of outcome expectancy based models is that behaviour is regulated through an understanding that current actions are associated with consequences in the future. However, such theories have received scrutiny based on existing literature demonstrating biases in how much people value certain outcomes depending on the temporal dispersion of the outcomes – or at what point benefits to the self are obtained. These biases lead people to prefer gains that are immediate rather than gains that are obtained more distally (Ainslie, 1975; Chapman & Elstein, 1995). Because of this, outcomes that are more proximal in time are given more weight in the decision-making process than are outcomes that occur farther into the future (Ainslie, 2013; Hall & Fong, 2013; Trope & Liberman, 2003). Consideration of the temporal aspects of behaviour is particularly relevant to the study of physical activity. Although it is well-known that engagement in physical activity is associated with a host of physical and psychological benefits (Warburton et al., 2006), the majority of benefits do not occur at the time of the behaviour with most not occurring months or even years into the future, while the costs associated with exercise (e.g., effort, time, discomfort) are much more immediate (Hall & Fong, 2007). As such, rather than targeting the benefits of physical activity that occur more distally (e.g., health), consideration of more immediate benefits may be appropriate targets to modify behaviour. Given the relatively quick onset and ties to goal-directed and socially valued behaviours, investigations into the emotions that result from engagement in physical activity have been suggested as relevant
hedonic factors to explore (Williams, 2008; Rhodes and Kates, 2015). The results of Study 3 provide support for the importance of targeting anticipated emotional outcomes associated with behavioural engagement. Anticipated authentic, but not, hubristic pride positively predicted intentions to engage in physical activity. Conversely, the results of Study 2 did not support the utility of anticipated pride or shame in predicting subsequent time or effort spent training. However, there were a number of differences between the studies that may help to explain the discrepant findings (e.g., sample, measurement, goals, etc.).

Building on these findings, researchers may also wish to examine the relationship between anticipated emotions and behaviour at various points in the goal-striving process. Although anticipating emotions in response to an individual’s ultimate goal (i.e., running a personal best; being physically active) is consistent with previous research (Abraham & Sheeran, 2003, 2004; Bagozzi & Pieters, 1998; Dunton & Vaughan, 2008), it may be that anticipated emotions have a more proximal effect on behaviour when the anticipated emotions are in response to behaviours that build towards the ultimate goal (e.g., targeting anticipated emotions immediately prior to a training session; Woolley & Fishbach, 2016). Finally, researchers may wish to examine the effect of anticipated emotions during the behaviour (i.e., during a training session) to further probe the relationship between anticipated emotion and effort. Thus, while previous research has demonstrated the importance of the temporal unfolding of outcomes associated with behaviour, the temporal dispersion is varied and continually unfolds over time and thus holds potential to regulate behaviour differentially at various points in this process.

6.2.3 Process Model of Self-Conscious Emotions

Based on the process model of self-conscious emotions, self-conscious emotions arise when the self reflects upon and evaluates the self (Tracy & Robins, 2004). The congruence (or incongruence) between evaluations of individuals’ various self-perceptions in part determines individuals’ emotional reactions. The findings from Study 4 extend previous research (Crocker et al., 2014; Tracy & Robins, 2004) to include the anticipation of pride as an important outcome associated with evaluations of the physical self. The findings are also in line with related theoretical accounts concerning actual and ideal selves and the association to emotion in the regulation of goal striving such that positive affective states result from congruence between actual and ideal selves (Carver & Scheier, 1990; Leary et al., 1995). Finally, the findings also
highlight the importance of the ideal self in the promotion of anticipated authentic pride. The salience of the ideal self is consistent with the development of self-conscious emotions (Lewis & Sullivan, 2005). Generally speaking, the society in which we live provides the standards dictating what kind of person we should be and how we should behave. We come to internalize these beliefs in the form of ideal self-representations – or the standards to which we should aspire if we wish to feel proud of ourselves. Thus, the anticipation of pride motivates action toward the goals embodied in these ideal self-representations.

Although the process model of self-conscious emotions makes reference to various self-representations in its conceptualization of identity-goal congruence, it does not predict whether the self-conscious emotion process works differently when different types of self-representations are activated (e.g., past, present, or future selves). Tracy and Robins (2004) have suggested that congruence between any self-representations will likely produce a positive emotional experience and incongruence between self-representations will likely produce negative emotions, it is possible that the particular self-representations activated may influence the subsequent processes specified by the model and ultimately elicit different emotions. The results of Study 4 indicate that when future self-representations are activated, the more this future self is in line with individuals’ ideal self, the greater authentic pride they anticipate. Further, the greater degree of congruence between actual and ideal selves was positively associated with the anticipation of authentic, but not hubristic pride. These results provide only partial support for Tracy and Robins’ (2004) suppositions that congruence between self-perceptions will produce positive emotional experiences. Rather, the activation of future self-representations seems to be tied more closely to authentic pride than hubristic pride. However, it is possible that appraisals that take place beyond appraisals of congruence (e.g., controllability, stability, globality) may influence which facet of pride is anticipated (Tracy & Robins, 2004). Taken together, the findings provide novel information pertaining to the relationship between self-representations and anticipated pride.
6.3 Practical Implications

6.3.1 Positive Emotions Should be Regulated, Too

Despite the apparent importance and adaptive function that positive emotions serve (Tugade, Fredrickson, & Barrett, 2004), the bulk of the existing literature examining emotions in sport and exercise contexts has centered on anxiety or broad affective states (Hanin, 2000; Woodman & Hardy, 2001), especially as it relates to the anxiety-performance relationship, and this continues to remain a primary area of interest in sport psychology (Cerin, 2003; Woodman et al., 2009). The focus on anxiety, and negative emotions more generally, has led to a narrow view of emotions and their subsequent outcomes and functionality for performance and participation. Addressing this gap in the literature, Cerin (2003) extended existing findings around athletes’ emotional experiences. Cerin (2003) found that a variety of emotional states were considered facilitative to athletes’ performance beyond anxiety. As well, Lane, Beedie, Devonport, and Stanley (2011) found that some athletes employ strategies aimed at increasing both pleasant and unpleasant emotions. These findings attest to the value of investigations aimed at emotions other than anxiety as they are not only experienced by athletes but also are viewed as helpful for performance. The results of Study 1 build on these findings to provide information concerning the manner in which pride regulates goal progress. Consistent with Weidman et al. (2016), we found that authentic pride acts as a barometer of achievement that promotes responses that lead to improved progress towards one’s goals.

These findings point to the importance of regulating positive emotions, in addition to negative emotions, when engaged in goal-pursuit. These findings also challenge current theoretical premises that positive emotions should be up-regulated in order to build resources that individuals can draw upon in times of need (Fredrickson & Branigan, 2005). Gruber, Mauss, and Tamir (2011) proposed that positive emotions may be subject to boundary conditions depending on the amount experienced, when it is experienced, how it is pursued, and which types are experienced. This line of research highlights that positive emotions must be regulated appropriately to produce beneficial outcomes. Either too much positive emotion or too much variability in positive emotional responding can be maladaptive (Gruber, Kogan, Quoidbach, & Mauss, 2013; Gruber, Johnson, Oveis, Keltner, 2008). Although the results of Study 1 provide support that pride confers benefits for goal striving, it is important to be aware of one’s emotions
to appropriately regulate behaviour. Based on the results of Study 1, a constant promotion of pride is unlikely to facilitate achievement. Further, the conditions in which pride is experienced (i.e., during goal striving or after goal attainment) is an important factor for the regulation of pride. Thus, implications exist for both athletes, exercisers, and coaches alike. Individuals engaged in goal pursuit are encouraged to pay attention to their pride and regulate accordingly. While not dissuading reveling in feelings of pride, it is recommended that individuals not get caught up in these feelings as this may lead to coasting and subsequently reduced goal progress. Rather, individuals are encouraged to shift their attention on what needs to be accomplished next. Further, athletes, exercisers, and coaches working with athletes are encouraged to recognize times of low pride as a potential opportunity for goal-regulation. Using the desire to feel proud of oneself can help motivate efforts towards goal-directed behaviours. Thinking about behaviours that would facilitate goal pursuit and are in line with individual’s ideal selves would be helpful in this regard. Building off these implications, information on emotional intelligence (i.e., the understanding and management of affective states) may serve to benefit individuals engaged in goal pursuit (Dunn, Brackett, Ashton-James, Schneiderman, & Salovey, 2007; Hoerger, Chapman, Epstein, & Duberstein, 2012; Mayer, Salovey, & Caruso, 2004).

6.3.2 The Potential Dark Side of Pride

Pride motivates people to engage in behaviour that is both personally and socially valued (Tracy 2007a, 2007b). Within the extant literature, and what has been presented herein, this is typically conceptualized in a positive light. For example, feelings of pride are associated with engagement in physical activity at levels commensurate for health benefits and people report feeling proud both of what their bodies can do as well as what their bodies look like (Castonguay et al., 2015; Castonguay et al., 2016; Mack et al., 2015). Implications stemming from this line of research generally espouse the benefits of authentic pride and provide suggestions for ways in which to harness one’s potential through experiences of pride. Although pride is considered a positive emotion and experienced as pleasurable, it is likely that the pursuit of pride, even authentic pride, may not always be so adaptive, and the domain of the body is one example where this is likely to be quite true.

For example, Goss and Gilbert (2002) suggest that pride may have an important role in the onset and maintenance of some eating disorders. Restriction, both of foods and other desires/impulses,
is often culturally encouraged as a means of weight-management. Success at these forms of control can be linked to pride and self-esteem, whereas losing control can be associated with shame and guilt (Goss & Gilbert, 2002; Skårerud 2007; Troop & Redshaw, 2012). For example, Skårerud (2007) found that pride in self-control, being able to restrict when others cannot, pride in appearance, and in the use of thinness as a means of control and resistance were common themes among females with anorexia. Elsworthy (2006) found that pride in eating disordered behaviour was also implicated in the maintenance of the disorder. Although pride is typically touted as being functional for adaptive and pro-social reasons, what the pride is about and for whom seems to be an important caveat when considering the implications of pride.

6.4 Methodological and Statistical Implications

6.4.1 Assessing Associations at Different Levels of Analysis

Despite the fact that the majority of psychological theories guiding work in sport and exercise psychology posit within-person processes, the research conducted to test these theories often rely on cross-sectional designs and analyses of between-person differences. Yet, these data do not permit examination of processes that occur within-persons (Molenaar, 2004). Further, it is entirely possible that associations differ at different levels of analysis, not just in magnitude but in direction as well (Brose et al, 2015; Curran & Bauer, 2011). Thus, conclusions at one level of analysis cannot be extrapolated to another level of analysis. The results of Study 1 illustrate this. At the between person level, pride was positively associated with training progress – a relationship that is in line with existing research on pride and achievement outcomes (Weidman et al., 2016; Williams & DeSteno; 2008). However, there was a negative relationship at the within-person level. Such a finding would be obscured had the variation at the different levels been aggregated. To date, relatively few studies have examined physical activity behaviour and emotions using intensive longitudinal designs (defined as five or more occasions; Bolger & Laurenceau, 2013). The intraclass correlations across both Study 1 and 2 demonstrate that emotions, training progress, and behaviour differ both between individuals and within-persons over time. This pattern suggests that both emotions and behaviour reflect both relatively consistent individual differences and dynamic processes within the individual. Thus, the use of multilevel modelling is appropriate to examine the between- and within-person relationships between behaviour and emotions.
6.4.2 State Assessments of Pride

This program of research further extends the extant research on pride through consideration of state assessments of pride. To date, the majority of what is known about pride and the associated outcomes stems from individuals’ dispositional tendencies or proneness to experience pride (Damien & Robins, 2012; Mosewich et al., 2011; Sabiston et al., 2010; Tracy et al., 2009; Tracy & Robins, 2007b). The notion underlying assessments of trait pride is that, although people have the capacity to experience pride at various times in their lives, there are individual differences in the degree to which people are prone to experience pride across a range of situations – with some people being more prone to experiencing pride than others (Tangney et al., 1996). Although trait assessments of pride have evinced useful information about the correlates of pride, particularly around tendencies to experience either authentic or hubristic pride, they are not well suited to test questions about how pride regulates behaviours. By definition, affective dispositions are not expected to vary considerably. Rather, they provide aggregate level information about people’s tendencies to experience pride and should not be subjected to analyses about processes that occur within-person. But if we are interested in knowing how it is that pride begets achievement then it is necessary to examine state experiences of pride and subsequent behaviour. Through this, we are able to gain greater insight into the proposed functionality of pride.

6.4.3 Congruence between Self-Perceptions: Polynomial Regression and Response Surface Values

The process model of self-conscious emotions has provided greater insight into the antecedents of self-conscious emotions, including pride, (Tracy & Robins, 2004). Central postulates of this model concern the congruence between self-representations as an important predictor of pride while discrepancies between self-representations lead to either guilt or shame (Tracy & Robins, 2004). While any number of self-representations are relevant to individuals’ emotional experience, Tracy and Robins (2004) afford particular attention to actual and ideal selves in the prediction of self-conscious emotions. Calculation of simple difference scores is typically computed to assess discrepancies by subtracting individuals’ ideal scores from their actual scores (Bessenoff & Snow, 2006; Markland, 2009; McKinley, 1998; Sabiston et al., 2005). However, this approach has been criticized (Edwards, 2002). One approach that has been advocated for as a means of overcoming the apparent limitations of simple difference scores is the use of
polynomial regression and response surface values. The current findings not only extend the literature on pride, but also adds to existing self-discrepancy literature through the use of polynomial regression and response surface values to examine the importance of congruence between scores in the prediction of pride. Rather than simply focusing on discrepancies between actual and ideal scores, the extent to which the two self-perceptions are in agreement is important when predicting positive self-conscious emotions like pride. The results of Study 4 provide support that actual and ideal self-states are differentially related to the two facets of pride. Similar findings have been reported in previous research (Brunet et al., 2012; Cafri et al., 2010; Castonguay et al., 2012), providing support for the independent nature of these constructs and importance in retaining the information that each provides rather than sacrificing this information through the use of simple difference scores (Cafri et al., 2010). Second, this analytic approach also allows for examination of whether anticipated pride was greater when actual scores were lower than ideal scores and whether the magnitude of this difference was meaningful, thus permitting an examination of the direction and degree of the discrepancy as important predictors of anticipated pride. A reliance on simple difference scores would not have permitted such nuanced findings (Shanock et al., 2010). The information that is gained through the use of polynomial regression and response surface values contributes to the extant research on self-discrepancies in body-related contexts.

6.4.4 Authentic and Hubristic Pride Scale

Given the dearth of research on pride relative to other self-conscious emotions it is not surprising that there are a number of measures to assess self-conscious emotions such as shame and guilt but relatively few measures exist to assess experiences of authentic and hubristic pride. The Authentic and Hubristic Pride Scale (AHPS) has been the most frequently used measure to assess the two facets of pride in the literature, and there are both trait and state scales available (Tracy & Robins, 2007). Beyond the AHPS, the State Shame and Guilt Scale (SSGS; Marschall, Sanftner, & Tangney, 1994), despite its name, includes items to assess experiences of pride. However, this measure assesses a unitary conception of pride and is not useful for distinguishing between authentic and hubristic pride. The Test of Self-Conscious Affect (TOSCA; Tangney, Dearing, Wagner, & Gramzow, 2000) also assesses situational experiences of pride although the reliability of the items tends to be low (Mosewich et al., 2011; Tangney & Dearing, 2002). Castonguay and colleagues also recently developed instruments to assess trait guilt, shame, and
authentic and hubristic pride (Castonguay et al., 2014; Castonguay et al., 2016), although these latter scales are specific to appearance and fitness evaluations and are thus limited to assessing experiences of pride in this domain. In sum, various measures exist to measure pride. The decision of which measure to used will depend on whether the two facets of pride are of interest, the state vs. trait nature of the research question, and whether a specific domain is of interest, in addition to concerns of reliability and validity.

Across two of the four studies in this dissertation, the AHPS was used to assess authentic and hubristic pride. The development of the AHPS was based on six studies that included approximately 2400 participants (Tracy & Robins, 2007b). Researchers asked participants to report any number of words that described experiences of pride. Participants were also asked to describe how they felt during a moment of pride and their dispositional tendency to feel proud. Across these studies, the two facet structure of pride reliably emerged not just in describing the semantic structure of pride, but also in people’s own reports of pride, suggesting that people do feel and report both authentic and hubristic pride. The researchers also tested for differences in valence, arousal, intensity and temporality (i.e., state or trait-like words) with no significant differences noted. Finally, the AHPS is conceptually in line with the theoretical premise that pride consists of two facets and thus reflects the underlying theoretical premise.

Responses to the hubristic pride items were notably low in each study the AHPS was used (Studies 1 and 4). However, such findings are consistent with previous research that has also used the AHPS (Gilchrist et al., 2018; Tracy & Robins, 2007b). Social conventions may affect how individuals respond to the hubristic pride items of the AHPS (Hochschild, 1979). In particular, concerns around the social desirability of the hubristic pride items have been raised given that the hubristic pride items are less socially desirable than the authentic pride items (Holbrook et al., 2014). Although social desirability may be a concern, recent research supports that experiences of authentic pride are more frequent in daily life relative to hubristic pride and that the conditions that may evoke hubristic pride occur with less frequency compared to those that evoke authentic pride (Conroy et al., 2015). Specifically, researchers have previously demonstrated that the occurrence of hubristic pride is characterized by a more burst-like pattern of responding and thus less likely to occur relative to experiences of authentic pride (Conroy et al., 2015).
6.5 Limitations

Despite the novelty and potential contribution to the literature of the present investigation, a number of limitations should be acknowledged. First, data collection procedures relied exclusively on self-report data. While self-report is the most commonly used measures of physical activity, it is not without its limitations (e.g., recall bias, social desirability; Welk, 2002). Despite potential problems, self-report measures are still deemed an acceptable method of collecting physical activity data (Welk, 2002). Future work with devices (i.e., accelerometers) that are capable of activity classification would help to extend understanding of the association between pride and physical activity behaviours.

To minimize participant burden from responding to the frequent surveys, only a few items were selected to measure pride, time spent training, and effort. Using fewer items is common to reduce burden and fatigue in intensive longitudinal designs, but this approach may be more vulnerable to random measurement error or unidentified biases in interpretation of the question (Bolger & Laurenceau, 2013; Hoeppner, Kelly, Urbanoski, & Slaymaker, 2011). Further, although the use of single item questions has their limitations, there are other important aspects to consider as well when attempting to measure individuals’ state experiences. Lengthening a scale may have an additional consequence specific to emotion research; the momentary experience of emotion is by definition a transient, short-lived phenomenon. It is possible that the emotional experience of interest may decay while in the process of completing a lengthy questionnaire. Length is therefore only one factor to consider when assessing state experiences of emotions, and consideration should be given to the costs associated with the use of longer scales (Weidman et al., 2017). Further, the use of single-item measures is commonly reported within studies examining anticipated emotions (e.g., Bagozzi & Pieters, 1998; Loehr & Baldwin, 2014; Ruby et al., 2011). Support for the use of single-item measures relative to multi-item measures of anticipated emotions have been reported (Dunn & Ashton-James, 2008; Ruby et al., 2011).

Across all studies, the samples were comprised of relatively active individuals who self-selected to participate in the research studies. Moving forward, researchers may benefit from examining these relationships among other populations such as inactive individuals or those looking to be more active where a reliance on affective states, rather than assessments of capability and past experience, may be more likely to influence behaviour.
Finally, Studies 1-3 are limited by the timeframe that was used to assess the relationship between emotions and behaviour. Within Study 2, for example, although the weeks leading up to the race are likely to be the most salient in terms of participants’ emotions, it is possible that it was too short of a time-period to capture meaningful relationships between emotions and behaviour or that a different pattern of relationships may exist at the beginning of training relative to the end. Although the use of intensive longitudinal designs is often advocated for because they improve upon the ‘snapshot’ approach cross-sectional studies, longitudinal designs are also themselves subject to a ‘snapshot approach’. That is, information can only be gleaned from the time period under investigation. It remains to be seen if the relationships would be maintained at other points in time (Bolger & Laurenceau, 2013).

6.6 Future Directions

6.6.1.1 Automatic and Reflective Affective Processes

Recently researchers have taken note of the importance of affective predictors of behaviour and various models have been advanced that include differing affective constructs (Magnan et al., 2017). For example, Williams and Evans (2014) provided a narrative review of affective constructs such as affective response, incidental affect, affect processing, and affectively charged motivation. This model provides a dual-process framework describing the ways in which affective phenomena may influence behaviour. According to dual-process models (Strack & Deutsch, 2004), as individuals engage in a behaviour (e.g., sport) and experience emotions more consistently, they form associations between the prospect of that behaviour and the experience of emotion. Neural activation involved in the mere thought of a behaviour or outcome is thought to spread to related concepts and attributes, including affective networks. This occurs in two ways: a reflective process whereby individuals are explicitly aware of their associations, but also automatically, whereby associations occur outside of conscious awareness. Investigations of affective experiences in sport and exercise have predominately targeted the slow, reflective system that operates within conscious awareness (Abraham & Sheeran, 2003, 2004). Although informative, this line of research has been criticized for explaining only a small portion of variance in behaviour (Rhodes & Dickau, 2012). According to dual-process models, some of these associations lie outside of conscious awareness and may explain additional variance in behaviour beyond what is explained by reflective processes (Conroy, Hyde, Doerksen, &
Ribeiro, 2010; Rebar et al., 2016). These associations bias information processing and represent automatic, default affective responses to a given target (e.g., participating in sport and exercise), predisposing the way people attend to, perceive, and process information about a given behaviour (Bleumke, Brand, Schwizer, & Kahlert, 2010; Lowe & Norman, 2013). These associations operate effortlessly and automatically and guide individuals to either approach or avoid behaviour (Chen & Bargh, 1999). As such, automatic associations are important to consider when attempting to predict and understand engagement in physical activity (Conroy & Berry, 2017). With a large majority of research focused on affective attitudes associated with engagement in physical activity (e.g., enjoyment), researchers are encouraged to broaden the scope of affective constructs assessed that may provide additional information into the affective processes underlying participation and maintenance of physical activity behaviours.

6.6.2 Pride and Grit

Goal striving is commonplace in sport and exercise contexts and often requires numerous hours committed to goal-pursuit. Individuals are likely to face adversities and setbacks during goal pursuit which may impact the likelihood of success. An understanding of the personal supports and resources that individuals can draw upon to improve the likelihood that these difficulties are overcome is therefore valuable. According to the broaden-and-build hypothesis (Fredrickson, 1998, 2001), people who experience and express positive emotions are more resilient (Cohn, Fredrickson, Brown, & Mikels, 2009; Fredrickson, Tugade, Waugh, & Larkin, 2003), socially connected (Gable, Gonzaga, & Strachman, 2006), better able to find benefits in adversity (Hart, Vella, & Mohr, 2008), and more likely to function at optimal levels. These resources are important for overall functioning, achievement, and performance. Grit is another possible resource that could emanate from positive emotional experiences and holds considerable relevance for goal attainment, particularly in demanding environments or in contexts where retention is problematic (Credé, Tynan, & Harms, 2016; Duckworth, Peterson, Matthews, & Kelly, 2007). Pride has been identified within the broaden-and-build theory as creating urges to further demonstrate competence – to dream big about accomplishing related goals in the future (Fredrickson, 2013). Recent evidence supports the association between pride and grit (Gilchrist et al., 2018). Specifically, experiences of pride are associated with grit, but only when success is attributed to one’s own effort (i.e., authentic pride). Attributing success to innate ability or superiority (i.e., hubristic pride) may result in reduced persistence and interest toward goal
attainment. Giving these findings, it may be important to create opportunities to experience authentic pride to develop grit.

6.6.3 Participant Differences

6.6.3.1 Gender

Gender differences in the experience of pride have been noted such that males experience more pride (and in particular hubristic pride) relative to females (Brebner, 2003; Carver et al., 2010; Conroy, Ram, Pincus, & Rebar, 2015; Orth, Robins, & Soto, 2010; Plant et al., 2000; Tracy & Robins, 2007b). However, a recent meta-analysis revealed negligible differences in assessments of pride between males and females (Else-Quest, Higgins, Allison, & Morton, 2012). Since pride is closely tied to an individual’s self-concept and their various self-representations (Tracy & Robins, 2004), achievements might be more or less likely to elicit pride if the domain in which that achievement occurred is highly gendered. In explorations of gender differences in domain-specific emotional experiences, males report experiencing pride about their fitness and ability (i.e., what their bodies could do) while females report experiencing pride in response to evaluations of their appearance. Furthermore, males reported experiencing pride in contexts such as sport more frequently than females (Castonguay et al., 2013). In line with this finding, athlete identification has been found to confer status to males but not females (Buysse & Embser-Herbert, 2004; Thirer & Wright, 1985). Further research exploring differences in fitness-related pride among males and females in contexts such as sport may help to explain the gender differences found between males and females in physical activity participation generally, and sport participation more specifically (García Bengoechea, Sabiston, Ahmed, & Farnoush, 2010; Fraser-Thomas, Côté, & Deakin, 2008; Vilhjalmsson & Kristjansdottir, 2003).

6.6.3.2 Age

The extant literature investigating relationships between pride and various outcomes have relied primarily on young adult samples (Carver et al., 2010; Mosewich et al., 2011; Sabiston et al., 2010; Tracy et al., 2009). Older adults may be one sample worthy of investigation when considering fitness-related pride. Understanding and promoting positive aspects of the physical self in older adults is important given that the proportion of seniors within Canada is expected to double by 2025 (Health Canada, 2012). There are marked physical changes that occur across the
adult life span which lead to the expectation of concomitant changes in individuals’ perceptions of and reactions to their body’s functioning. Research on body image and reasons for engaging in physical activity in older adults suggests that functional aspects of the body may be more salient for this population than for younger cohorts (Finch, 1997; Tiggemann, 2004). Thus, it appears that with age the salience of physical evaluations shift from a focus on appearance to that of physical functioning and ability (Reboussin et al., 2000). Investigating fitness-related pride in older adults is warranted as perceived well-being and engagement in physical activity is strongly related to the body’s abilities in this cohort (Reboussin et al., 2000).

6.6.4 Motives and Well-Being

This work was focused on examining behaviour as an outcome of pride but did not address other equally important outcomes such as motives or well-being. It is well documented that participation in physical activity is associated with a host of physical and psychological benefits including improvements in cardiovascular fitness, decreased blood pressure, improvements in stress and depression, and increases in self-esteem (Asci, 2003; Biddle & Asare, 2011; Rebar et al., 2015; Scully, Kremer, Meade, Graham, & Dudgeon, 1998; Warburton et al., 2006). Yet, some individuals report that exercise is actually associated with decreases in self-esteem and body satisfaction (Tiggemann & Williamson, 2000). Exercising for appearance reasons is associated with body image disturbance and greater disordered eating behaviour (Adkins & Keel, 2005; McDonald & Thompson, 1992; Vartanian, Wharton, & Green, 2012). Thus, an important distinction to make is not only on the amount or intensity of exercise for health and well-being, but on the reasons for engaging in exercise. Researchers are encouraged to consider this as research on this topic moves forward.

6.6.5 Collective Emotions

Given the various self-representations that comprise an individual’s identity (e.g., personal, relational, social representations), and their relevance for the elicitation of self-conscious emotions (Tracy & Robins, 2004), investigations examining social identity may also be of interest to researchers wishing to elucidate the effects of collective self-conscious emotions in team sports (e.g., collective pride, collective guilt). Previous research has reported associations to pro-social behaviours and performance within teams adopting a strong social identity (Bruner, Boardley, Cote, 2014; Murrell & Gaertner, 1992) which is important as this may underpin the
development of collective emotions and hold potential for mitigating negative outcomes in sport (e.g., dropout).

Based on social identity theory and self-categorization theory (Tajfel, 1978; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), research examining collective emotions is focused on the emotions that individuals experience as a function of belonging to or identifying with a particular group (von Scheve & Ismer, 2013). These emotions occur when membership or identification with a certain group is made salient and is consistent with an individual’s identity. As a result, emotions may be experienced on behalf of the group rather than on behalf of the individual (Niedenthal & Brauer, 2012). Smith, Seger, and Mackie (2007) provided support for the importance of examining individual level emotions and group level emotions separately as these were found to be qualitatively different from one another. The emotions experienced as part of a group were found to be more intense than the emotions experienced as an individual and were associated with different behavioural tendencies. The authors also found that these relationships were moderated by the person’s degree of group identification. The findings from this line of research highlight the utility of separating the emotions experienced as a function of one’s own accomplishments/failures and the accomplishments/failures of one’s team as these are likely experienced as qualitatively differently from one another. While collective emotions amongst fans of sports teams have been examined, there remains a need to examine how athletes’ emotional experiences of collective emotions impacts outcomes of interest such as performance, team dynamics, and sport commitment/enjoyment.

6.7 Conclusions

Overall, the studies presented herein have a number of strengths and the potential to contribute towards the advancement of emotion, physical activity, and body image literatures. Pride figures prominently in motivating much of human behaviour. The program of study provides a better understanding of how this occurs. The results across studies provide continued support for the functional role of authentic pride. Finally, the results speak to the importance of aligning behaviours with who one would ideally like to be in order to experience authentic pride.
References


https://doi.org/10.1016/j.psychsport.2015.10.003


https://doi.org/10.1080/15298868.2014.983963


doctoral manuscript. Coventry University.


https://doi.org/10.1016/j.learninstruc.2015.10.007


https://doi.org/10.1177/0146167208326124


https://doi.org/10.1080/17437190701492437


Harter, S. (1990). Identity and self-development. In S. Feldman & G. Elliot (Eds.), *At the


https://doi.org/10.1146/annurev.psych.56.091103.070145


(Eds.), *The handbook of narcissism and narcissistic personality disorder* (pp. 331-343). Hoboken, NJ: John Wiley & Sons, Inc.


https://doi.org/10.1207/s15327965pli1502_01


https://doi.org/10.1111/j.1467-8721.2007.00493.x


https://doi.org/10.1037/0022-3514.92.3.506


https://doi.org/10.1037/0033-295X.110.3.403


Appendices

Appendix A: Study 1 and 2 Questionnaire

What is your gender?
☐ Male
☐ Female
☐ Other
☐ Prefer not to say

How old are you (in years)? ______
How much do you weigh? ______
What is your height? ______
What is your income? ______

Choose one or more races that you consider yourself to be:
☐ White
☐ African Canadian
☐ Native
☐ Asian
☐ Southeast Asian
☐ Hispanic
☐ Pacific Islander
☐ Other

Have you participated in an organized race before? Y N

Which race are you training for?

☐ 5km

☐ 10km

☐ half-marathon

☐ marathon

☐ other

Do you follow a training program? Y N

What is your email address? ________________________
Weekly Survey

What is your email address? ________________________

Q1. How do you feel about your training run this week?

<table>
<thead>
<tr>
<th></th>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashamed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q2. How much time did you spend training this week? ______________

Q3. How much effort did you put into your training run this week?

1 None
2
3
4 A moderate amount
5
6
7 As much as I could

Q8. To what extent have you followed your training program over the past week?

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 Very much</th>
</tr>
</thead>
</table>

Q9. To what extent did you meet your training goals over the past week?

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 Very much</th>
</tr>
</thead>
</table>

Q10. Below are a number of words and phrases that describe different feelings and emotions. Read each item and then indicate the extent to which you feel this way about your training run using the scale shown below:

<table>
<thead>
<tr>
<th>Egotistical</th>
<th>1 Not at all</th>
<th>2 Somewhat</th>
<th>3 Moderately</th>
<th>4 Very much</th>
<th>5 Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egotistical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Not at all</td>
<td>2 Somewhat</td>
<td>3 Moderately</td>
<td>4 Very much</td>
<td>5 Extremely</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>-------------</td>
<td>--------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Fulfilled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accomplished</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snobbish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stuck-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pompous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conceited</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smug</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrogant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Like I have self-worth</td>
<td>1 Not at all</td>
<td>2 Somewhat</td>
<td>3 Moderately</td>
<td>4 Very much</td>
<td>5 Extremely</td>
</tr>
<tr>
<td>Like I am achieving</td>
<td>1 Not at all</td>
<td>2 Somewhat</td>
<td>3 Moderately</td>
<td>4 Very much</td>
<td>5 Extremely</td>
</tr>
</tbody>
</table>

Q11. We are interested in your goals for the upcoming race. Please report your most important goal regarding your upcoming race: _______________________________________________

Q12. If you succeed at achieving your goal, please indicate how you anticipate feeling:

<table>
<thead>
<tr>
<th>Proud</th>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 Very much</th>
</tr>
</thead>
</table>

Q13. If you do not succeed at achieving your goal, please indicate how you anticipate feeling:

<table>
<thead>
<tr>
<th>Ashamed</th>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 Very much</th>
</tr>
</thead>
</table>
Appendix B: Study 3 Questionnaire

Time 1

1. During a typical week, how many times do you do the following kinds of exercise for more than 15 minutes during your free time? (write on each line the appropriate number)

A. Mild (minimal effort)
(e.g., yoga, archery, fishing from a river bank, bowling, horseshoeing, golf without using a cart, snowmobiling, easy walking)

B. Moderate (not exhausting)
(e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, alpine skiing, easy swimming, popular and folk dancing)

C. Strenuous (heart beats rapidly)
(e.g., running or jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long-distance bicycling)

2. Please indicate how you anticipate feeling if you regularly participate in physical activity over the next two weeks.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Moderately</th>
<th>Very much</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proud of the effort I place on my fitness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Proud of the effort I place on my fitness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Proud of my fitness efforts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Statement</td>
<td>Very unlikely</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>I intend to regularly participate in physical activity in the next 2 weeks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I intend want to regularly participate in physical activity in the next 2 weeks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How likely is it that you will regularly participate in physical activity in the next 2 weeks?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
4. This scale contains a number of words describing different feelings and emotions. Please indicate to what extent you generally feel this way, that is, how you feel on average.

<table>
<thead>
<tr>
<th></th>
<th>1 Very slightly or not at all</th>
<th>2 A little</th>
<th>3 Moderately</th>
<th>4 Quite a Bit</th>
<th>5 Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excited</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Enthusiastic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Alert</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Inspired</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Determined</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Time 2**

1. During the past **two weeks**, **how many times** did you do the following kinds of exercise for more than 15 minutes during your free time? (write on each line the appropriate number)

   A. Mild (minimal effort)

   (e.g., yoga, archery, fishing from a river bank, bowling, horseshoeing, golf without using a cart, snowmobiling, easy walking)

   __________

   B. Moderate (not exhausting)

   (e.g., fast walking, baseball, tennis, easy bicycling, volleyball, badminton, alpine skiing, easy swimming, popular and folk dancing)

   __________

   C. Strenuous (heart beats rapidly)

   (e.g., running or jogging, hockey, football, soccer, squash, basketball, cross country skiing, judo, roller skating, vigorous swimming, vigorous long-distance bicycling)

   __________

What is your gender identity?
□ Male
□ Female

How old are you (in years)? ______
How much do you weigh? ______
What is your height? ______
Choose one or more races that you consider yourself to be:
☐ White
☐ African Canadian
☐ Native
☐ Asian
☐ Southeast Asian
☐ Hispanic
☐ Pacific Islander
☐ Other
Appendix C: Study 4 Questionnaire

Scenario:
You would like to improve your fitness and get in shape for a race that is coming up in 3 months. You have never raced but you have thought about it frequently over the past year. You decide to participate in kick boxing lessons twice a week and train at the gym 2 additional days in order to try and build up your cardiovascular fitness. Three months later, you sign up for the race and complete it in an excellent time.

We are interested in understanding how you would feel in the situation. During this situation, I would feel…

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>A lot</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>…like I did something wrong</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>…successful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>…mad at self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>…like showing off</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>… mortified</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>…arrogant</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>…disgraced</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>…confident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>…superior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>…ashamed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>…egotistical</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>…humiliated</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>…accomplished</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>…inappropriate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>…achieving</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>…regret</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17</td>
<td>…proud</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>…guilty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Part of the situation previously described suggests you are able to reach your fitness and performance goals

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>A little bit</th>
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<th>A lot</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>How reflective is this description of who you want to be?</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>To what extent does this description match who you are right now?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
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</tbody>
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Finally, a couple of questions about the situation:

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>How likely is this type of situation to happen to you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Were you able to see yourself in this situation?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. All situations presented to you suggest you are someone who wants to get into shape and/or improve your fitness.

<table>
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</tbody>
</table>

**Final Section. Personal Information**

1. What is your gender (check one)? □ Male □ Female

2. How old are you? ________ years

3. What is your current height? ________ in feet and inches OR ________ cm

4. What is your current weight? ________ in pounds OR ________ in kilograms

5. Based on the categories from the Canadian Census, how do you describe yourself? PLEASE CHECK ALL THAT APPLY:

- □ White/Caucasian
- □ Chinese
- □ Japanese
- □ Korean
- □ Aboriginal/First Nation (e.g., North American Indian, Metis, Inuit)
- □ Filipino
- □ South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)
- □ South East Asian (e.g., Cambodian, Indonesian, Vietnamese)
- □ Black (e.g., African, Haitian, Jamaican, Somali)
- □ West Asian/Middle East (e.g., Afghani, Arab, Iranian)
☐ Other ethnic/cultural group, please specify:

___________________________________