SUPPORTING ATHLETES’ WELL-BEING IN THEIR COMPETING JOURNEYS:
IDENTIFYING FACTORS THAT PROMOTE A POSITIVE BODY IMAGE

by

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Abstract

Recent research emphasizes the importance of identifying positive psychological factors that promote positive body image. The present study explored factors that promote positive body image in varsity athletes. The research specifically aimed at better understanding the identified relationship between self-compassion and positive body image by investigating personal growth initiative (PGI) as a mediator. Furthermore, this study examined the relative strength of the factors of PGI: using resources, intentional behaviour, planfulness and readiness for change.

Varsity athletes \( (N=88) \) completed online questionnaires measuring self-compassion, positive body image, and PGI. Results from a simple mediation model indicate that PGI partially mediates the relationship between self-compassion and positive body image. The findings of a multiple mediation analysis examining the relative effects of the factors of PGI suggest that planfulness is the strongest mediator in the relation between self-compassion and positive body image. The present findings offer new knowledge on factors that contribute to a positive body image in varsity athletes. This study also informs future research investigating factors that can shape interventions aimed at promoting a positive body image in athletes.
Lay Summary

In addition to societal pressures to conform to ideal body types, varsity athletes are also exposed to an athletic environment that is highly competitive and evaluative, and that holds specific athletic ideal body types. As such, this research aimed at identifying factors that promote positive body image in varsity athletes. The results of this study suggest that self-compassion and personal growth initiative are two positive psychological factors that are worthy of further investigation as they may be conducive to positive body image.
Preface

This thesis is original, independent and unpublished intellectual work by the author, L.A. Botia.

The research project was conceptualized, designed, researched and analyzed by Master of Arts student, L. Alejandra Botia, with the support of research supervisor, Dr. Richard Young and committee members, Dr. Rhea Owens and Dr. Daniel Cox.

The results of this thesis were presented as a poster:


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Chapter 1: Introduction

Young adults who engage in competitive sports invest a great deal of physical and mental energy into what is a critical source of meaning, passion, and personal identity to them (Adie, Duda, & Ntoumanis, 2008; Baker, Safai, & Fraser-Thomas, 2014; Kristiansen & Roberts, 2010; Stinson, Blumenfield-Jones, & Dyke, 1990). With impressive commitment, discipline and initiative, athletes pursue a path they envision will lead to athletic excellence, sometimes regardless of physical or psychological costs (Baker et al., 2014; Wilding, Hunter-Thomas, & Thomas, 2012). While there are myriad benefits to being an athlete, the competitive environment often constitutes challenges and stressors (Botta, 2003; Hanton, Fletcher, & Coughlan, 2005; Kristiansen & Roberts, 2010; Mellalieu et al., 2009). Pressures to conform to an ideal body image has been identified as one of the stressors that can negatively impact athletes as they are constantly evaluated on their performance and appearance (American Psychiatric Association, 2013; de Oliveira Coelho et al., 2010; Greenleaf, 2002; Mosewich et al., 2009). These body ideal pressures are heightened by a culture that normalizes and even romanticizes the idea that ‘pain is gain’ when it comes to being a varsity athlete. Furthermore, pressures around body image and athletic performance can be compounded by body ideals held by specific sports as some emphasize a ‘lean’ body image and others do not (Coppola, Ward, & Freysinger, 2014; de Bruin et al., 2011). Therefore, the importance of understanding factors that can support athletes in relation to the detrimental consequences that accompany body image ideal pressures is paramount. Informed by previous literature, the present study examined self-compassion and PGI, defined below, as potential promoting factors of positive body image in a mediation model. Research on positive body image has only begun to emerge in the past decade and there is still substantial progress to be made in terms of understanding its predictors and outcomes (Avalos, Tylka, & Wood-Barcalow, 2015). Identifying factors that promote positive body image in varsity
athletes can inform the planning and implementation of interventions that support them in their competing journeys by helping them identify existing strengths and resources.
Chapter 2: Literature Review

Positive Body Image

Recent literature emphasizes the value of investigating positive body image. This positive psychological construct has been defined as:

An overarching love and respect for the body that allows individuals to (a) appreciate the unique beauty of their body and the functions that it performs for them; (b) accept and even admire their body, including those aspects that are inconsistent with idealized images; (c) feel beautiful, comfortable, confident, and happy with their body, which is often reflected as an outer radiance, or a “glow;” (d) emphasize their body’s assets rather than dwell on their imperfections; and (f) interpret incoming information in a body-protective manner whereby most positive information is internalized and most negative information is rejected or reframed (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010 p. 112).

Positive body image has been identified as a protective factor that is associated with increased resiliency and a reduced risk of developing negative body image and eating disorders (Andrew, Tiggemann, & Clark, 2015; Cash & Pruzinsky, 2002; Ferreira, Pinto-Gouveia, & Duarte, 2013; Sandoz et al., 2013; Tiggemann & McCourt, 2013). Findings regarding the protective aspects of positive body image are crucial because negative body image is one of the most common concerns for young people (Neumark-Sztainer et al., 2002; Presnell, Bearman, & Stice, 2004; Stice & Whitenton, 2002), including athletes (American Psychiatric Association, 2013; Filaire et al., 2007; de Sousa Fortes et al., 2015; Holm-Denoma et al., 2009).

A possible explanation as to how positive body image serves as a protective factor could be its associations with wellness outcomes for individuals experiencing pressures to conform to an ideal body image (Tylka & Iannantuono, 2016). Previous findings have indicated associations
between positive body image and higher self-esteem, optimism, well-being, healthier attitudes and practices related to food, exercise and proactive coping (Avalos et al., 2005; Lowery et al., 2005; Tylka & Wood-Barcalow, 2015). A positive psychological construct that has been investigated in more depth in relation to positive body image is self-compassion (Homan & Tylka, 2015; Wasylkiw, MacKinnon, & MacLellan, 2012; Pisitsungkagarn, Taephant, & Attasaranya, 2014).

**Self-Compassion and Positive Body Image**

Self-compassion has been conceptualized as a personal resource that allows oneself to experience thoughts and emotions in a kind and understanding manner. Self-compassion promotes a sense of shared humanity, promoting an acknowledgement that human beings share similar experiences (Neff, 2003). Self-compassion allows the self to feel safe and kindly encourages the self to adopt a proactive action-driven approach toward well-being, including positive body image (Ferreira et al., 2013; Neff, 2004). Neff (2003) defines three components of self-compassion:

1) self-kindness versus self-judgment. Self-kindness highlights being caring and understanding with oneself as opposed to being critical or judgmental.

2) a sense of common humanity versus isolation. Common humanity emphasizes that humans are imperfect, and that it is okay to make mistakes. It connects one’s own imperfections to those of others and acknowledges the shared flawed condition of humanity. The goal of this component of self-compassion is to gain a broader perspective on personal flaws and challenges.
3) mindfulness versus over identification. Mindfulness includes self-awareness; it alludes to being present in the moment in a clear and balanced way. It involves neither ignoring nor ruminating on aspects of the self that one does not like.

Research has found that self-compassion is positively related to positive body image and negatively associated with unhealthy eating behaviours in the general population and in athletes (Braun, Park, and Gorin, 2016; Ferreira et al., 2013; Homan & Tylka, 2015; Neff & Vonk, 2009; Wasylkias et al., 2012). Additionally, self-compassion has been identified as a potential resource in sports that can help athletes cope during challenging times (Mosewich et al., 2011).

The pressures for athletes to meet external and internal expectations to conform to an ideal body image might be counteracted by self-compassion as it gives the athlete an opportunity to relate to herself/himself in a compassionate manner that is independent of critical evaluations (Neff & Vonk, 2009). For example, Ferreira et al. (2013) and Mosewich et al. (2011) identified self-compassion as important in lowering levels of self-criticism. These findings are key since higher levels of self-criticism (i.e., a negatively related construct of self-compassion) have been related to lower levels of positive body image (Ferreira et al., 2013).

In a sample of women with eating disorders, Ferreira et al. (2013) found that lack of contentment and kindness toward oneself (i.e., a component of self-compassion) partially mediated the relationship between negative body image and the tendency to control it via dieting. Self-compassion has also been found to neutralize shame and self-judgment in women experiencing negative body image and eating disorders, as it encourages individuals to engage in self-acceptance, which is related to lower levels of self-criticism and a higher positive body image (Ferreira et al., 2013; Homan & Tylka, 2015; Neff & Vonk, 2009).
Additionally, self-compassion is applicable to various aspects of one’s life, for example, women who adopt a stance of self-compassion toward their bodies report increased feelings of connectedness (Berry et al. 2010). This aspect of connectedness allows women to realize that the negative feelings experienced regarding their body-image are shared with other women. In turn, this realization allows women to free themselves from the need to protect their self-worth (i.e., fear that they do not meet an “ideal” body image) and from the threat of social rejection, since they already feel a sense of social connectedness with others who share similar experiences (Berry et al., 2010).

Thus, instead of resorting to methods such as disordered eating or extreme exercising to regulate the threat of social rejection related to one’s body weight, self-compassion can be used as a strategy to regulate one’s negative emotions, behaviours, and cognitions (Gilbert, 2009); and in turn promote positive body image (Homan & Tylka, 2015; Wasylkias et al., 2012; Pisitsungkagarn et al., 2014). In this manner, self-compassion encourages a healthy relationship with oneself, allowing oneself to feel worthy of appreciating one’s body (i.e., a key component of positive body image), independently of one’s self-evaluations according to societal standards and judgments (Neff & Vonk, 2009; Homan & Tylka, 2015).

To the investigator’s knowledge, research examining the relationship between self-compassion and positive body image in males is scant. However, while most research on body image focuses on females as there is a higher prevalence of eating disorders and body image dissatisfaction among this gender (Baum, 2006), it is crucial to investigate factors that promote positive body image in males as well (O’Neil, 2008; Pope et al., 2000; Sundgot-Borgen & Torstveit, 2004). Body image dissatisfaction in males has been associated with poor
psychological adjustment, eating disorders, steroid use, and exercise dependence (Hausenblas & Symons Downs, 2001; Galli et al., 2014).

**Self-Compassion as a promoter of positive body image.** Seeing as self-compassion promotes positive body image, potentially by encouraging a proactive-driven approach toward wellness (Ferreira et al., 2013; Neff, 2004; Cook-Cottone, 2015), PGI (i.e., a skill-set for self-development and growth) may be relevant in mediating positive body image as it involves actively engaging in intentional behaviour and planning toward well-being.

**Self-Compassion and PGI as Related to Positive Body Image in Athletes**

**Personal growth initiative.** PGI is a multidimensional construct that has been defined as a “developed set of skills for self-improvement and includes cognition and behavior (Robitschek, 1998) that a person carries into life experiences. This skill set constitutes a global inclination to intentionally improve one’s self across life domains (Robitschek, 2003); (Robitschek et al., 2012, p.1)”.

Additionally, PGI involves the use of a person’s skills and resources that yield to intentional personal changes that promote positive development and growth (Weigold & Robitscheck, et al., 2011; de Freitas et al., 2016). PGI is a skill set that can be thought of as being on a continuum (Robitschek & Hershberger, 2005). People may develop high levels of PGI or may have lower levels of this skill set (Robitschek, 2003).

PGI encompasses four dimensions, discovered from investigating the factor structure of the construct. The four found correlated factors of PGI were identified as readiness for change, planfulness, using resources, and intentional behavior (Robitschek et al., 2012). The cognitive aspect of this skill set is represented by readiness for change and planfulness; while using resources and intentional behavior encompass the behavioral skill set of PGI. Readiness for change alludes to the ability to identify or create situations that have the potential of encouraging
personal growth; planfulness refers to the personal ability to strategize and facilitate individual personal development (Robitschek, 2012; de Freitas et al., 2016); Intentional behaviour denotes an evaluation of the willingness and personal motivation to achieve goals that promote personal change; and using resources emphasizes the use of personal and external resources to promote personal growth; (Robitschek et al., 2012; de Freitas et al., 2016).

People with higher levels of PGI have been found to make use of personal resources, overcome stressful situations, be goal-oriented, adapt easier to new situations and find adequate solutions when facing challenging situations (Blackie et al. 2015; de Freitas et al., 2016; Schwarz et al., 2015; Weigold et al., 2014). PGI has also been found to be conducive of psychological, social and emotional well-being, a greater sense of autonomy, mastery, and finding a purpose in life; and related to lower levels of psychological distress (Robitschek et al., 2012; Weigold et al., 2014). Gathered these research findings, Robitschek (2012) and Blackie et al. (2015) propose that PGI can be described as a protective factor against psychological distress and as a facilitator of well-being.

**PGI and athletes.** PGI focuses on intentional engagement toward growth and personal development (Robitschek & Keyes, 2009). Thus, this construct is a relevant one to investigate in athletes as one of the reasons they participate in sports is continued growth and development (Hagger & Chatzisarantis, 2007; Kilpatrick, Hebert, & Bartholomew, 2005; Ferguson et al., 2014). Additionally, PGI includes transferable and general skills for personal growth that individuals can apply in a variety of circumstances conducive to growth (Robitschek, 1999). The transferability of these skills is possible because of the similarity of the process of PGI in various life domains (Robitschek et al., 2012). Thus, athletes may be able to transfer a proactive and
intentional approach toward personal growth and development from their ‘athletic’ life domain to the area involving ‘positive body image’.

Furthermore, research suggests that having high levels of PGI is conducive to mastering athletic skills and that athletes are more goal-oriented than non-athletes (Robitschek et al., 2012; Schwarz et al., 2005). Thus, it is fair to propose that athletes likely display high levels of PGI.

**Self-compassion and PGI.** The interaction between self-compassion and PGI might be helpful in promoting a positive body image in athletes. Both constructs promote mindful and intentional action toward positive development and self-growth (Ferguson et al., 2014; de Freitas et al., 2016), as well as flourishing (i.e., having an awareness of one’s experience and meeting one’s internal needs and external demands without compromising one’s experience or mental health) (Cook-Cottone, 2015; Seligman, 2011). While self-compassion has been found to be related with positive body image, no prior research has directly assessed the relationship between PGI and positive body image. However, Cook-Cottone, (2015) emphasizes the importance of intentional engagement in the planning and executing of actions that promote positive body image.

**PGI as a mediator.** The potential relationship between self-compassion and positive body image in varsity athletes may be partially explained by PGI. Self-compassion encourages individuals to engage in mindfulness and self-awareness. This self-awareness has been found to enable individuals to more readily recognize their limitations and unhealthy behaviours (e.g., disordered eating, self-criticism) (Berry et al., 2010) that may interfere with building a positive body image. While being self-aware is also an important component of PGI (Ryff, 1989; Neff, 2003), it is only when this mindful awareness is accompanied by active and intentional engagement in the process of personal growth, that this construct is associated with psychological well-being (Blackie et al., 2015; Robitschek et al., 2012). Thus, without the active
and intentional components of PGI, a varsity athlete may be aware that they are experiencing a negative body image but may not act in intentional ways that will promote a positive body image.

Indeed, Cook-Cottone (2015) provides a strong foundation for this hypothetical explanation in a study investigating the role of positive body image in the treatment of eating disorders. This study refers to some of the components of PGI and self-compassion (Cook-Cottone, 2015). The research suggests that if one is striving toward attaining a positive body image, it is critical to be aware of internal and external aspects of the self (i.e., a component of self-compassion), as well as to be actively engaged in mindful self-care (i.e., a component of PGI which is key in the process of intentional involvement toward personal growth and well-being). Cook-Cottone posits that behaviors that are mindful and focused on self-care translate commitment and awareness to action (i.e., a process needed in PGI).

According to this model, a shift toward a more positive body image requires action. This shift can be illustrated by changing one’s attitude, from one that is judgmental to one that encompasses appreciation and honor for the physical self (Cook-Cottone, 2015). This appreciation and honor for one’s body can be gained through self-compassion (e.g., treating oneself in a kind and protective manner) and PGI (e.g., intuitive eating, rest, practices that facilitate a mind-body connection such as yoga, and daily body appreciation practices) (Cook-Cottone et al., 2006; Keyes, 2007; Tylka, Russell, & Neal, 2015; Tylka, 2012).

While this previous research did not exactly investigate the mediating role of PGI in the relationship between self-compassion and positive body image, it does provide a strong foundation for it. The model by Cook-Cottone (2015) informs the present research which proposes that while self-compassion and positive body image may be related in athletes, being
mindful and self-compassionate towards oneself might not be sufficient in promoting positive body image in athletes. However, if PGI mediates the relation between self-compassion and positive body image by promoting intentional action and planning, athletes may be better equipped to mindfully build a positive body image.

Furthermore, self-compassion is associated with athletes’ involvement in active and intentional engagement, taking initiative, and assuming responsibility for their actions, emotions and thoughts (Ferguson et al., 2014). Active and intentional engagement are the key components of PGI (Robitschek et al., 2012; Robitschek & Keyes, 2009). Thus, it is possible that athletes who report higher levels of self-compassion are more likely be actively engaged and take initiative towards building a positive body image through utilizing PGI. Indeed, PGI encourages individuals to act in intentional ways and to make use of their personal resources to promote well-being (Robitschek et al., 2012). As such, it is also possible that PGI mediates the relationship between self-compassion and positive body image as one of its four factors is ‘using resources’. Since self-compassion has been identified as a personal resource (Neff, 2003), individuals displaying high levels of PGI may be more likely to take intentional action towards improving their lives, including their mental and physical health, by engaging in self-compassionate behavior related to constructing a positive body image.

**Current Study**

The present study explores factors that promote positive body image. Specifically, it seeks to investigate whether the association between self-compassion and positive body image identified in the literature applies to varsity athletes. This study seeks to further understand the mechanisms of this relationship in varsity athletes by investigating PGI as a potential mediator. An enhanced understanding of the relation between self-compassion and positive body image
can inform interventions focused on preventing negative body image in varsity athletes. Figure 1 below illustrates the predicted mediation pathway of the current study. We hypothesized that: (1) there is a positive association between positive body image and self-compassion, (2) there is a positive association between PGI and positive body image in athletes, (3) there is a positive association between PGI and self-compassion, and (4) PGI mediates the relationship between self-compassion and positive body image regardless of type of sport or gender. Additionally, according to previous literature that has identified self-compassion as a personal resource (Neff, 2003), and intentional behavior as a key component of PGI (Robitschek et al., 2012), we hypothesized that, (5) using resources and intentional behaviour would have the strongest effects in a multiple mediation model comparing the relative strengths of each of the factors of PGI. Lastly, given that previous research has found differences between type of sport and positive body image (Milligan & Pritchard, 2006; Terry, Lane & Warren, 1999; Torstveit et al., 2008), we hypothesized that, (6) athletes levels of positive body image would differ according to the type of sport they belonged to, either ‘non-lean sports’ or ‘lean sports’.

![Diagram of hypothesized relationships between variables in the simple mediation model investigating the mediating role of PGI in the relation between self-compassion and positive body image.](image-url)

*Figure 1.** Hypothesized relationships between variables in the simple mediation model investigating the mediating role of PGI in the relation between self-compassion and positive body image.*
Figure 2. Hypothesized relationships between variables in a multiple mediation model investigating the relative effects of the factors of PGI. Using Resources and Intentional Behaviour are bold to emphasize that it was hypothesized that these two factors of PGI would be stronger mediators relative to the others.
Chapter 3: Method

Participants

A total of 96 adults from North American universities participated in the study. The inclusion criteria required that participants were between 17 and 35 years old, varsity athletes currently participating and competing in their sport at a university team in North America, self-identified varsity athletes for at least three months, and fluent in English. Participants who completed less than 60% of the questionnaires were excluded from the analysis. As a result, the total sample was composed of 88 varsity athletes.

Procedure

Once the study received ethics approval through the UBC Behavioural Research Ethics Board, participants were recruited from Amazon’s Mechanical Turk (MTurk) and by directly contacting head coaches from varsity teams at universities across North America. MTurk is a crowdsourcing Internet marketplace that enables researchers to recruit participants to perform online tasks, known as Human Intelligence Tasks or HITs, in exchange for monetary compensation. MTurk is an appropriate, effective and efficient way of recruiting participants from diverse samples (Buhrmester, Kwang, & Gosling, 2011; Paolacci & Chandler, 2014). MTurk allows researchers to selectively recruit workers according to their recruitment criteria (e.g., varsity athletes). For the current study, efforts were made to make the instructions as clear as possible and to visually inspect for low-quality responses (see Mason & Suri, 2012). Participants recruited through MTurk were redirected to the online study on Qualtrics, UBC’s survey tool. These participants received an honorarium of $2.50 USD for completing the 20-30-minute online study.
As mentioned above, participants were also recruited directly by contacting the head coaches via e-mail at their respective institutions (see Appendix B). The institutions included universities in Canada and the United States of America that are represented by varsity sport teams. For the purpose of this study, a varsity sport team refers to a principal group of athletes who participate in varsity competitions against similar teams at other universities. The e-mail included an e-letter with information describing the purpose and nature of the study, as well as a detail outline of the procedures involved. The e-mail also included an invitation to distribute an attached flyer with information about the study to the varsity athletes on the head coach’s team (see Appendix C). All content shared with head coaches and participants contained information regarding the nature, risk, potential benefits, rights to withdraw and confidentiality of the study (See Appendix A). Varsity athletes recruited through this method were invited to enter a draw to win one of out five $40.00 US Amazon Gift-Cards.
Measures

Demographic and Background Questionnaire. The demographic questionnaire contained questions about participants’ age, ethnicity, sport, gender, years of participation in their sport and years of competing in their current sport (See Appendix E).

Self-Compassion (SCS; Neff, 2003). Participant’s self-compassion was measured using the total score of the 26-item Self-Compassion Scale (SCS; Neff, 2003) (See Appendix F). Through analyzing factor loadings, the three components of self-compassion were identified. In this factor analysis, items that had a loading lower than 0.40 were excluded from any final versions of the subscales. The first component identified was Self-Kindness vs. Self-Judgment which demonstrated adequate fit to the data (NNFI=.88; CFI=0.91), as a two-factor model, with an internal consistency reliability of .78 for the five-item Self-Kindness subscale and .77 for the five-item Self-Judgment subscale. A second component found was Common Humanity vs. Isolation, which fit the data (NNFI=.99; CFI=.99) as a two-factor model, with an internal consistency reliability of .80 for the four-item Common Humanity subscale and .79 for the four-item isolation subscale. Finally, the third component identified was Mindfulness vs. Over-Identification which fit the data (NNFI=.94; CFI=.96), with an internal consistency reliability of .75 for the four-item Mindfulness subscale and .81 for the four-item Overidentification subscale (Neff, 2003).

Thus, the final version of the self-compassion scale includes these final three components (Neff, 2003): Self-kindness vs. Self-judgment (i.e., being caring toward oneself, instead of critical); a sense of Common Humanity (i.e., emphasizes that humans are imperfect and connects individual flaws with a sense of the general flawed condition of humanity); and Mindfulness vs. Over-identification (i.e., being in the present moment and not ruminating on aspects of the self.
that one does not like). These three components of self-compassion yielded the final six subscales: 1) self-kindness (e.g., “I’m tolerant of my own flaws and inadequacies”); 2) self-judgment (e.g., “I’m disapproving and judgmental about my own flaws and inadequacies”); 3) common humanity (e.g., “When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people”); 4) Isolation (e.g., “When I fail at something that’s important to me I tend to feel alone in my failure”); 5) mindfulness (e.g., “When I’m feeling down I try to approach my feelings with curiosity and openness”); 6) Over-Identification (e.g., “When I’m feeling down I tend to obsess and fixate on everything that is wrong”). The SCS (Neff, 2003) uses a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). An overall score for self-compassion is obtained by retrieving each of the means of the six subscales, and then summing them. Responses to negatively worded items are reverse coded.

A study investigating the psychometric properties of the subscales of self-compassion, with a sample of university students, found that the internal consistency for the SCS was .78 for the five-item Self-Kindness subscale and .77 for the five-item self-judgment subscale (Neff, 2003). Internal consistency reliability has been found to be .80 for the four-item Common Humanity subscale and .79 for the four-item Isolation subscale. Internal consistency reliability was found to be .75 for the four-item Mindfulness subscale and .81 for the four-item Overidentification subscale (Neff, 2003).

Research evaluations of the SCS have demonstrated a high internal reliability ($\alpha = .90$; Neff, 2003) and test-retest consistency (0.93; Neff, 2003). Additional findings suggest that the SCS is a reliable measure for use with athletes (Mosewich et al., 2011). Adequate discriminant validity for the SCS has been reported, $r = -.08$ ($\alpha = .93$; Neff, 2003; Neff, Kirkpatrick et al., 2007). A study found that the SCS has adequate construct validity (Neff et al., 2007) when
comparing it to therapists’ ratings of participants’ self-compassion. Additionally, Buddhist monks, who are trained to be self-compassionate, report higher degrees of self-compassion in comparison to the general population (Neff, 2003).

**Personal Growth Initiative (PGI-II).** Participant’s PGI was measured using the overall score of the Personal Growth Initiative Scale-II (PGI; Robitschek et al., 2012) (See Appendix H). The scale is composed of 16 items and four subscales (de Freitas et al., 2016). The subscales represent the theoretical factors of PGI, which are Readiness for Change (e.g., “I can tell when I am ready to make specific changes in myself”), Planfulness (e.g., “I set realistic goals for what I want to change about myself”), Using Resources (e.g., “I ask for help when I try to change myself”), and Intentional Behavior (e.g., “When I get a chance to improve myself I take it”). The four-factor structure was found through utilizing CFA testing for multigroup invariance, followed by a chi-square difference test comparing the two initial models. This investigation yielded evidence of an internally stable four-factor structure with a SRMR of .09 and a robust RMSEA of .07.

The PGI Scale-II uses a 6-point Likert scale, which ranges from 0 (disagree strongly) to 5 (agree strongly). PGI has demonstrated good test-retest reliability (Robitscheck et al., 2012) with findings indicating \( r = .82 \) at one week; \( r = .67 \) at two weeks; \( r = .70 \) at four weeks; and \( r = .62 \) after four weeks. Findings demonstrated adequate concurrent and discriminant validity. The described Cronbach’s alphas are: \( \alpha=.84 \) for Planfulness; \( \alpha=.80 \) for Using Resources; \( \alpha=.83 \) for Readiness for change; and \( \alpha=.89 \) for Intentional Behaviour. These findings were retrieved using a university undergraduate student sample and a community sample (Robitschek, 2012), and replicated with African American samples (Weigold et al., 2014).
Positive Body Image (BAS-2). Participant’s positive body image was measured using the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015) (See Appendix G). The BAS-2 contains 10 items, which participants respond to by using a response scale ranging from 1 (never) to 5 (always). Participants are instructed to indicate whether the question is true about them never, seldom, sometimes, often, or always. The scale assesses positive body image by asking items such as, “I respect my body”; “I am comfortable in my body”; “I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors)”. An overall score for positive body image is obtained by averaging participants’ responses of items 1-10 (Tylka & Wood-Barcalow, 2015). The BAS-2 proved to be stable with test-retest reliability as demonstrated by ICCs of .90 for participants who completed the measure twice, three weeks apart (Tylka & Wood-Barcalow, 2015). The BAS-2 was internally consistent, demonstrated by alphas of .94 for women and .93 for men. Additionally, and in support of the BAS-2 psychometrically sound properties regarding convergent and discriminant validity, the BAS-2 was found to be related to body fat dissatisfaction, appearance evaluation, moderately muscularity dissatisfaction, slightly to height dissatisfaction, and negatively to body dissatisfaction. The BAS-2 was also strongly and positively correlated with self-esteem and proactive coping for women and men (Tylka & Wood-Barcalow, 2015). The findings for the incremental validity for the BAS-2 suggest that it is different from high levels of appearance evaluation and low levels of body dissatisfaction, for women and men (Tylka & Wood-Barcalow, 2015).
Data Analysis

The present study used a quantitative approach to investigate whether PGI mediates the relation between self-compassion and positive body image. To accomplish this, several correlations were run with unstandardized coefficients to ensure that all variables of interest were associated with one another and to check for multicollinearity. Afterward, all coefficients were standardized, and the mediation analysis procedure described by Preacher and Hayes (2008) was followed. In order to perform the procedure, a bootstrapping method using the PROCESS Macro, version 3, model 4, for SPSS, version 25.0 (Hayes, 2013) was implemented. Bootstrapping uses a resampling method that assesses with bias corrected confidence intervals. The intervals are interpreted as significant if the upper and lower bound of the bias corrected 95% confidence intervals (95% CI) do not contain zero (Preacher & Hayes, 2008). This method was used to investigate the mediating effect of PGI between self-compassion and positive body image. First, a simple mediation model was used to examine the conditional indirect effect of PGI in the relation between self-compassion and positive body image.

Subsequently, a multiple mediation analysis including the four factors of PGI was conducted to assess the relative indirect effect of each variable. Gender, type of sport and recruitment method were variables that were controlled for in each model examined. Type of sport was analyzed as two groups: lean and non-lean. Sports were classified in one of two categories, lean or non-lean, according to methods used in previous literature (see Wells et al., 2015). The category of ‘lean sports’ emphasizes the capacity of gaining a competitive advantage by being leaner to maximize athletic performance or places a high aesthetic value on being lean (Nagel et al., 2000; Schwitzer et al., 2001). ‘Non-lean’ sports do not focus on aesthetics aspects and do not place a high value on leanness. For the present study, lean sports included cross
country/track and field, swimming, volleyball, tennis, nordic skiing and curling and the non-lean sports were football, basketball, soccer, hockey and rugby.
Chapter 4: Results

Demographics and Sample Characteristics

Participants were 48% women, 51% men, and 1% non-binary; they were Caucasian 94%, African American 1%, Asian 1%, Hispanic 3%. The mean age was 22.97 years ($SD = 4.35$) and ranged from 19 to 36 years. Further demographic information and sample characteristics are presented in Table 1.
Table 1

*Sample Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>48 (48%)</td>
</tr>
<tr>
<td>Male</td>
<td>51 (51%)</td>
</tr>
<tr>
<td>Non-binary</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
</tr>
<tr>
<td>19 to 25</td>
<td>71 (81%)</td>
</tr>
<tr>
<td>26 to 32</td>
<td>11 (12%)</td>
</tr>
<tr>
<td>33 to 36</td>
<td>6 (7%)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>83 (94%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>Asian</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>African American/Black</td>
<td>2 (2%)</td>
</tr>
<tr>
<td>Type of Sport</td>
<td></td>
</tr>
<tr>
<td>(Non-Lean)</td>
<td></td>
</tr>
<tr>
<td>Basketball</td>
<td>24 (27%)</td>
</tr>
<tr>
<td>Hockey</td>
<td>8 (9%)</td>
</tr>
<tr>
<td>Football</td>
<td>9 (10%)</td>
</tr>
<tr>
<td>Soccer</td>
<td>2 (2%)</td>
</tr>
<tr>
<td>Rugby</td>
<td>6 (7%)</td>
</tr>
<tr>
<td>Total Non-Lean</td>
<td>49 (56%)</td>
</tr>
<tr>
<td>(Lean)</td>
<td></td>
</tr>
<tr>
<td>Track &amp; Field</td>
<td>10 (11%)</td>
</tr>
<tr>
<td>Swimming</td>
<td>17 (19%)</td>
</tr>
<tr>
<td>Nordic Skiing</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>Curling</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Tennis</td>
<td>7 (8%)</td>
</tr>
<tr>
<td>Volleyball</td>
<td>39 (44%)</td>
</tr>
<tr>
<td>Total Lean</td>
<td></td>
</tr>
</tbody>
</table>

**Type of Recruitment**

| MTurk          | 27 (31%)   |
| Direct (Head Coaches) | 61 (69%) |

**Preliminary Analyses**

Preliminary analyses were conducted to screen for missing data and identify univariate and multivariate outliers. Boxplots displayed four univariate outliers in the data, though no extreme values were identified. There were no multivariate outliers identified using Mahalanobis
Distance. We did not observe any invalid or differential response patterns when examining the outliers. To corroborate our visual review of the outliers, we ran the analyses twice, including and excluding the outliers, and ensured that there were no notable differences. As such, all the data was retained. All measures demonstrated normality when assessing for non-normality testing through inspecting univariate histograms, as well as reviewing skewness and kurtosis statistics and the Shapiro-Wilks test. Additionally, we checked that the assumption of homoscedasticity withheld by inspecting a scatterplot of the standardized residuals and standardized predicted values. Residuals were normally distributed on the P-P plot.

Prior to standardizing all direct and indirect effects using z-scores to enable comparisons between and within the models tested, bivariate correlations were conducted for all the study variables with unstandardized total scores. All the variables of interest were significantly correlated with each other in the hypothesized directions (see Hypotheses 1, 2, and 3). Refer to Table 2 for a presentation of the bivariate correlations and descriptive statistics. Additionally, we controlled for gender, type of sport and type of recruitment (i.e., MTurk and recruitment method) by running bivariate correlations, performing independent samples t-tests and examining them as covariates in the mediation models. There were no significant correlations except for gender and positive body image. Specifically, being female was associated with lower levels of positive body image $r = -.238, p < .05$. However, the mediation models remained significant when controlling for gender as a covariate.
Table 2

*Bivariate correlations and descriptive statistics for primary variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Positive Body Image</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-Compassion</td>
<td>.567**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Personal Growth Initiative</td>
<td>.492**</td>
<td>.260*</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Readiness for Change</td>
<td>.346**</td>
<td>.152</td>
<td>.862**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Planfulness</td>
<td>.510**</td>
<td>.239*</td>
<td>.875**</td>
<td>.714**</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Using Resources</td>
<td>.324**</td>
<td>.163</td>
<td>.830**</td>
<td>.564**</td>
<td>.610**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>7. Intentional Behaviour</td>
<td>.522**</td>
<td>.357**</td>
<td>.797**</td>
<td>.700**</td>
<td>.664**</td>
<td>.453**</td>
<td>—</td>
</tr>
</tbody>
</table>

* M | 3.78 | 3.07 | 4.42  | 4.55  | 4.44  | 3.94  | 4.77  |
* SD| .70  | .53  | .83   | .88   | .93   | 1.32  | .81   |

*p < .05, **p < .01 (2-tailed).

**Gender and Positive Body Image**

In addition to running a bivariate correlation to explore the relationship between gender and positive body image, an independent-samples t-test was conducted to compare positive body image in males and females. There was a significant difference in the scores for females (M= 3.60, SD= 0.63) and males (M= 3.93, SD= 0.73); t(86) = 2.27, p= <0.05. While the main model remained significant when introducing gender as a covariate, our results suggest that gender influences positive body image. Specifically, males reported a higher positive body image than females.
Recruitment Method and Sport Type

Independent-samples t-tests did not indicate any significant differences between recruitment method (i.e., direct recruitment vs. MTurk) or sport type (i.e., lean vs. non-lean) regarding any of the variables of interest in this study.

Table 3

Comparison of Means for Recruitment Type and Type of Sport Using Independent Samples t-tests

<table>
<thead>
<tr>
<th></th>
<th>MTurk</th>
<th>Direct Recruitment</th>
<th>t-test</th>
<th>(lean)</th>
<th>(non-lean)</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Self-Compassion</td>
<td>3.11</td>
<td>.63</td>
<td>3.05</td>
<td>.59</td>
<td>3.12</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGI</td>
<td>4.53</td>
<td>.57</td>
<td>4.38</td>
<td>.91</td>
<td>4.46</td>
<td>.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBI</td>
<td>3.80</td>
<td>.36</td>
<td>3.76</td>
<td>.73</td>
<td>3.79</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. M= Mean. SD=Standard Deviation. MTurk: Participants recruited through MTurk. Direct Recruitment: Participants who were recruited directly by contacting head coaches. Lean Sports= Track & Field, Swimming, Nordic Skiing, Curling, Tennis, Volleyball. Non-Lean Sports= Basketball, Hockey, Football, Soccer, Rugby. None of the results on this table are significant.

Simple Mediation Model

We first ran a simple mediation model to investigate the relationship between self-compassion and positive body image through PGI (see Figure 3). As hypothesized, self-compassion was found to be correlated with positive body image in varsity athletes (see Table 2).
The total effect of self-compassion on positive body image was \( .57, p < .001 \). Furthermore, supporting Hypothesis 4, results indicate that there is a partial significant indirect effect of self-compassion on positive body image through PGI, \( b = .10, 95\% \text{ CI} [.01, .19] \).

![Diagram](image)

*Figure 3. Standardized model of PGI as a partial mediator in the relationship of self-compassion as a predictor of positive body image in varsity athletes. Type of sport, gender and recruitment method were controlled for in this model. *\( p < .05 \), **\( p < .01 \), ***\( p < .001 \).*

**Multiple Mediation Models**

**Investigating the Relative Strength of All PGI Factors.** We then ran a multiple mediation model to assess the relative strength of each factor of PGI (i.e., planfulness, intentional behaviour, mindfulness, and readiness for change) as mediators in the association between self-compassion and positive body image (see Figure 4). In investigating the indirect effects of the four factors of PGI, only planfulness was found to significantly mediate the relation between self-compassion and positive body image in this model, \( b = .08, 95\% \text{ CI} [.00, .23] \), accounting for 14% of the total effect of this model, \( P_M = .14 \) (see Table 4 for a summary of the standardized coefficients).
Figure 4. Standardized multiple mediation model of the four factors of PGI. This figure illustrates the relative effects of the factors of PGI as mediators in the relationship between self-compassion and positive body image in varsity athletes. Type of sport, gender and recruitment method were controlled for in this model. *p < .05, **p < .01, ***p < .001.

Table 4

Standardized Coefficients for Multiple Mediation Model Examining the Relationship Between Self-Compassion and Positive Body Image

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mediator (M)</th>
<th>Effect of IV on M (a)</th>
<th>Effect of M on DV (b)</th>
<th>Direct Effect (c')</th>
<th>Indirect Effect (a x b)</th>
<th>95% CI</th>
<th>Total Effect (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Body Image</td>
<td>Total effect</td>
<td>.421**</td>
<td>.146</td>
<td></td>
<td></td>
<td></td>
<td>.567***</td>
</tr>
<tr>
<td>Planfulness</td>
<td>.239**</td>
<td>.341***</td>
<td>.081*</td>
<td></td>
<td>.000-.231</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Readiness for change</td>
<td>.152</td>
<td>-.133</td>
<td>-.020</td>
<td>-.123-.043</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentional behaviour</td>
<td>.358***</td>
<td>.230</td>
<td>.082</td>
<td>-.023-.226</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>.163</td>
<td>.020</td>
<td>.003</td>
<td>-.047-.052</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: IV = positive body image; bolded confidence intervals do not include a zero, indicating a significant indirect effect. *p < .05, **p < .01, ***p < .001.
Chapter 5: Discussion

Given the competitive and evaluative nature of the athletic environment and the pressures to conform to body image ideals that athletes are exposed to, the present study intended to examine potential factors that promote positive body image. The aim of this research was to investigate the relationship between self-compassion and positive body image as mediated by PGI in varsity athletes. This study further sought to understand the mechanism of this relationship by examining the relative strength of each of the factors of PGI in mediating the relation between self-compassion and positive body image.

The present study supports previous findings on the positive relationship between self-compassion and positive body image (Neff, 2003; Neff, 2009; Tylka, 2015). The current findings also contribute new knowledge to the literature. To the author’s knowledge, no previous study has investigated the relationship between self-compassion and positive body image through PGI. Furthermore, limited research has investigated the association between self-compassion and positive body image in varsity athletes.

In a simple mediation model, PGI was found to partially mediate the relation between self-compassion and positive body image. PGI may partially mediate this relation because of its pertinency with, and complementarity to self-compassion. Both these constructs promote a mindful awareness. Self-aware individuals may be more likely to recognize their limitations and unhealthy behaviours, such as judging one’s body image through societal or environmental standards (Berry et al., 2010). In this mindful awareness, self-compassion encourages a kind and non-judgmental relationship with oneself and promotes a proactive approach toward positive body image (Ferreira et al., 2013; Freitas et al., 2016; Neff & Vonk, 2009). Meanwhile, PGI mediates the relation between self-compassion and positive body image by taking the individual beyond mindful awareness and wishful thinking toward positive body image. PGI represents the
actual intentional engagement in the planning and behaviours that promote a positive body image (e.g., practicing self-care and self-compassionate behaviours).

Furthermore, the present study supports PGI as a relevant construct to examine as a strength in varsity athletes. If athletes want to succeed in their sports, they intentionally behave in ways that will improve their performance (Galli et al., 2014; Schwarz et al., 2005). Additionally, if they also possess high levels of self-compassion, they may be more inclined to apply the skillset of PGI to intentionally act in ways that will enhance their positive body image.

The results of the multiple mediation analysis further suggest that planfulness, the personal ability to strategize and facilitate individual personal development (Robitschek, 2012; Freitas et al., 2016), plays a key role in promoting a positive body image, relative to the other factors of PGI (i.e., intentional behaviour, using resources and readiness for change). This means that having self-compassion increases planfulness, which subsequently promotes a positive body image. Planfulness may have been the strongest mediator in relation to the other factors of PGI because being strategic in facilitating positive body image requires the mindful and intentional planning of one’s growth and well-being (Robitschek, 2012; Freitas et al., 2016). Additionally, people with higher levels of PGI have been found to make use of personal resources to overcome challenging and stressful situations (Berry et al., 2010). Thus, self-compassionate athletes may be more likely to plan a life-routine and the use of personal resources that allows them to engage in intentional self-care (e.g., practicing body appreciation affirmations) toward promoting a positive body image.
Considering the Impact of Gender

In addition to controlling for age, gender, type of sport and type of recruitment by including them as covariates in the models, correlations with the primary variables were run and various independent-samples t-tests were performed to assess for differences between groups in the study. The only significant correlation that was informative to this study was between gender and positive body image. Specifically, male varsity athletes displayed a more positive body image than female varsity athletes. This is consistent with previous literature reporting that females experience lower positive body image and a higher prevalence of eating disorders (Cooper & Fairburn, 1983). Comparable research indicates that males are normally satisfied and happy with their body weight and shape (Leon et al., 1985). However, other studies have concluded that lower positive body image and eating disorders are more frequent in male-athletes compared to non-athletes (Sundgot-Borgen & Torstveit, 2004).

Thus, while not all males display a negative body image, this does not mean that male athletes necessarily have a healthy positive body image. The majority of the male athletes in our study indicated a higher positive body image in relation to female athletes, however, findings did not indicate that they all had a high positive body image. From a practical stance, it is critical to understand that while females are more vulnerable to experiencing lower positive body image, some male athletes also face these challenges and need practical support.

Despite the differences between genders regarding positive body image, identified through an independent samples t-test, the present findings indicate that PGI partially mediates the relation between self-compassion and positive body image regardless of gender differences. Thus, these findings suggest that efforts to investigate positive body image in future research and interventions constructed to promote it, should focus on increasing self-compassion and PGI for men and women varsity athletes.
Given the contradictory findings regarding the impact of the type of sport that athletes participate in, on body image attitudes, this study sought to further investigate this area. Contrary to Hypothesis 6, the present results support previous research (see Hausenblas & Symons Downs, 2001) indicating no differences in body image per classification in ‘non-lean’ or ‘lean’ sport categories. These findings suggest that athletes can experience positive body image regardless of the type of sport that they participate in. Thus, self-compassion and PGI can be enhanced in athletes participating in all sports to promote a positive body image.

**Practical Implications**

The present study also addresses the gap in the literature examining promoting factors of positive body image (Hausenblas & Symmons Downs, 2001; Tylka & Kroon Van Diest, 2015). The data from this investigation suggest that self-compassion and PGI are potential promoting factors of positive body image. In this manner, the results inform future research and interventions aiming at examining or applying promoting factors of positive body image. Particularly, the findings illuminate how self-compassion is helpful in promoting a positive body image through PGI. For example, this study supports other similar findings indicating that mindful awareness and self-compassion are more powerful when the individual also engages in intentional action toward well-being (Cook-Cotton, 2015).

Furthermore, when planning interventions targeting self-compassion to promote a positive body image through PGI, focusing on increasing planfulness may yield more impactful results than efforts to encourage resources, readiness for change, or intentional behavior. Planfulness may be the strongest mediator in this model as the practice of self-compassion emphasizes ‘cognitive reframing’ (Neff, 2003), and planfulness is one of the two cognitive factors of PGI. On the other hand, intentional behaviour and using resources represent the behavioural dimensions of PGI, which may be less relevant to the more cognitive construct of
self-compassion. Readiness for change, the other factor of PGI making up its cognitive dimension is explained in the section below along with future directions.

**Limitations and Future Directions**

Though the findings of the present study illuminate future directions for researchers and interventions, there are important limitations to consider. While the study controlled for gender in all models analyzed, one limitation is that it did not address a concern raised in the literature. This concern speaks to whether studies investigating body image are measuring this construct in a way that captures potential differences in the ways that males and females construe their perceptions of body ideals and pressures associated with these. For example, the “ideal” male body type may be represented by a masculine physique that is lean and muscular (Bottamini & Ste-Marie, 2006; Ridgeway & Tylka, 2005), whereas the “ideal” body type for women may be represented by a lean physique. Indeed, research has found that both men and women tend to hold themselves against societal ideals of what their bodies should look like depending on gender standards (Byrne & McLean, 2001; Furnham, Badmin, & Sneade, 2002). Future directions include understanding how different societal standards impact the reliability and validity of measures assessing positive body image for all genders included. Thus, ensuring that researchers are capturing the relevant experiences of all participants in a more holistic manner. It is also recommended that the study of positive body image become more comprehensive and inclusive in terms of understanding genders outside of the binary norm.

In addition to not capturing potential differences as to how genders perceive body image ideal pressures, a second limitation of the present study was that it did not take into consideration contextual factors. Given the two-fold pressure that athletes experience, de Bruin et al., (2011) suggest that it is imperative to consider Tiggemann’s (2001) definition of body image, one that is multifaceted, dynamic and reactive, instead of one that is consistent and stable. This definition
highlights contextual factors of body image and encompasses how a person may feel and think about their body image depending on the context and social situation (Krane et al., 2001; Russell, 2004). This contextual definition may be particularly applicable to the population of interest as varsity athletes have reported different levels of positive body image depending on which context they are evaluating their body image in, an athletic and a social one (de Bruin et al., 2011; Greenleaf, 2002; Krane et al., 2001; Loland, 1998; Russell, 2004).

Thus, future directions would involve considering contextual factors when measuring positive body image in athletes. Recommendations include measuring body image using the same Body Appreciation Scale-2 (Tylka & Wood-Barcalow, 2015), but asking the questions twice to incorporate an ‘athletic body image’ (i.e., defined as an internal image one has of his or her body and the evaluation of that image within an athletic context), and a ‘social body image’ (i.e., defined as an internal image one has of his or her body and the evaluation of that image within an everyday context) (see de Bruin et al., 2011). Of course, gaining permission to modify the scale would be required to ensure its validity and reliability in such case.

A fourth limitation alludes to the majority of the sample in the study being Caucasian. Since 94 percent of the population was Caucasian, we cannot conclude that these results generalize to other populations. Previous studies suggest that individuals may perceive and define beauty differently depending on culture. As such, some cultures tend to report higher levels of positive body image than others. For example, Schooler et al., (2004) found that among Caucasian women, viewing mainstream television predicted lower positive body image, while viewing Black-oriented media was unrelated to body image. On the other hand, for Black women, viewing Black-oriented television predicted a more positive body image, while viewing mainstream television was unrelated to body image. Future research would benefit from
collecting data from more diverse samples to further investigate factors that may be yielding a more positive body image within certain cultures and ethnicities.

Furthermore, a fifth limitation was the relatively small sample of 88 participants. Future directions involve recruiting a larger sample size to gain statistical power (see Button et al., 2013). However, instead of conducting the same study, an intervention could be created, using methods to increase self-compassion and to encourage the active engagement of the intentional planning of actions focused on promoting a positive body image. This hypothetical intervention could take part in a longitudinal study to measure its impact on increasing positive body image in varsity athletes. It would include the same measures presented in this study, but following the contextual recommendations mentioned earlier in this section of the discussion.

In addition to quantitative measures, a mixed methods approach would be applied. The gathering of qualitative data would enable us to better understand the challenges that athletes face regarding body ideal pressures and how these may differ depending on the gender and sport of the participant. Finally, because PGI only partially mediated the relationship between self-compassion and positive body image, the intervention would more greatly focus on increasing self-compassion. To address the limitation of only a partial mediation, it is recommended to also add measures that can yield a more in-depth understanding of the underlying mechanism of the relation between self-compassion and positive body image.

Lastly, these future directions also involve seeing the impact of the other factors of PGI. While planfulness had the strongest effect in mediating the relation between self-compassion and positive body image, readiness for change may have a more important mediating role in a longitudinal study assessing an intervention seeking to increase positive body image in varsity athletes originally experiencing a low positive body image. It is also important to consider that
since the factors of PGI are highly correlated with one another, the findings of the multiple mediation model are being affected. Thus, further research could investigate this in more depth by looking at the factors of PGI in separate multiple simple mediation models.
References


doi:10.1016/j.bodyim.2015.07.005


doi:10.1037/tra0000010


Systematic review about personal growth initiative. *Anales De Psicologia, 32*(3), 770-782. doi:10.6018/analesps.32.3.219101


doi:10.1080/13576500444000317


Tylka, T. L. (2013). Evidence for the Body Appreciation Scale's measurement


Appendices

Appendix A

Participant Consent Form

Study Title: Competing Without Compromising One’s Positive Body Image in the Sport Arena

Invitation: You are invited to be part of a study investigating how certain positive psychological variables (i.e., athletes’ strengths and resources) are related to positive body image in varsity athletes. This anonymous survey will ask you questions about your athletic background, body image, self-compassion, and intentional action toward one’s personal growth and well-being.

Principal Investigator: Dr. Richard Young
Professor, Department of Educational and Counselling Psychology and Special Education

Co-Investigator: Alejandra Botia
Master of Arts Student, Department of Educational and Counselling Psychology and Special Education

Note: Please read this consent form carefully before you decide to participate in this study. If any questions or concerns should arise regarding the completion of this survey, please contact the primary investigator.

Purpose of the research study:
We are asking for your participation in this anonymous survey to contribute to efforts focused on gaining a clearer understanding of the strengths and resources in athletes’ that can enhance positive body image. We are interested in investigating what helps build a positive body image in a population which is not only exposed to external societal pressures regarding body image, but also to specific athletic body ideal expectations.

What will happen in this study?
If you agree to participate in this study, you will be asked to answer questions related to your demographic and athletic background as well as questions about self-compassion, positive body image, and personal growth initiative (i.e., intentional action towards personal growth).

Time required: The completion of the survey will take approximately 15-30 minutes.

Inclusion Criteria: To participate, you must:
- be 17 to 35 years of age
- be a varsity athlete at your university
- have the English proficiency required to respond to English language survey questions

Risks and Benefits: There are no known risks associated with participating in the study beyond what you would normally experience in your day to day. While there are no direct benefits to your participation, your contribution is paramount as it may influence future strategies aimed at
supporting athletes in making use of their resources and strengths to enhance a positive body image and reduce the likelihood of body image dissatisfaction and eating disorders.

**Participant Appreciation:** Whether participants choose to withdraw from the study, within the survey, you will see that in the last page you are asked if you wish to enter a draw for 5 $40.00 US gift cards to Amazon as a token of our appreciation for your time and contribution to the study.

**Confidentiality:** All records of this study will be kept private and confidential. In any paper published, conference given, or dissemination of information related to the study, the data you provide will be assigned a code number and no personal information will be connected to the given data, so that you cannot be identified individually. Research records will be stored securely and only Dr. Richard Young and graduate student, Alejandra Botia will have access to these records. Furthermore, data will be stored digitally for 5 years at UBC on a secure computer and will be password-protected and encrypted. Any back-ups of the data will also be password-protected and encrypted. While, there is always a minimal risk that security of any online data will be breached, your data will be removed from the online server soon after your participation in the study. The information that you provided in the study that discloses your identity will not be released without your consent unless required by law.

**Voluntary Participation:** Participation in this study is voluntary. If you decide to participate, you are free to not answer any question or withdraw at any time. There is no penalty for not participating.

**Right to withdraw from the study:** You have the right to withdraw from the study prior to completing the online survey.

**Whom to contact if you want clarification about the study:**
If you have any questions about the study, please contact Dr. Richard Young, Ph.D., Department of Educational and Counselling Psychology, and Special Education, University of British Columbia; or graduate student researcher, Alejandra Botia, by e-mail or telephone. Please also contact us if you wish to receive a summary of the results.

**Whom to contact about your rights or treatment as a research participant in the study:**
If you have any concerns about your rights or treatment as a research participant, please contact the Research Participant Complaint Line at the UBC Office of Research Ethics at 6048228598 or if long distance e-mail RSIL@ors.ubc.ca or call the toll-free line at 1-877-822-8598.

**Consent:** By completing this survey, you are consenting to participate in this research study and be informed of the research study.
Appendix B
Electronic Letter to Head Coaches

Dear [Name of Coach],

I am a master’s student in Counselling Psychology at The University of British Columbia (UBC). For my thesis project, I am interested in identifying protective factors for body-image dissatisfaction and eating disorders.

I would like to recruit varsity athletes from the University of ______ [TEAM] and I am wondering if you would be open to supporting this research initiative by sharing the attached flyer with the varsity athletes on your _______ Team. I would be happy to send you copies of the flyer via mail as well.

About the Study
The study would involve the voluntary completion of six questionnaires and would take approximately 20-30 minutes. The participants would be answering questions regarding body-image satisfaction, personal growth, and measures of well-being. This study has gained ethics approval by the ethics board at UBC. This study is supervised by Dr. Richard Young, a professor in Counselling Psychology at UBC.

Participant Appreciation
All participants will be invited to enter a draw to win one of five $40 USA Amazon gift-cards as a token of our appreciation for their time and contribution to the study. Please note that all participants who consent to participate in the study will be invited to enter this draw, even if they do not complete the study or do not answer all the questions included in this study.

Research Investigators
Co-Investigator: Alejandra Botia
Master of Arts Student, Department of Educational and Counselling Psychology and Special Education
Principal Investigator: Dr. Richard Young
Professor, Department of Educational and Counselling Psychology and Special Education

Thank you for your time and consideration,

Alejandra Botia
Counselling Psychology MA Student
The University of British Columbia
Appendix C
Recruitment Handout for Varsity Athletes

Are you a varsity athlete?

Seeking participants for a research study investigating how certain positive psychological variables (i.e., athletes’ strengths and resources) are related to positive body image in varsity athletes.

What will happen in this study?

• This is a confidential and anonymous online survey that will take approximately 20-30 minutes to complete
• It will involve answering questions related to your demographic and athletic background as well as questions about self-compassion, positive body image, and intentional action towards personal growth and well-being.

As a token of our appreciation for your time and contribution, all consenting participants will be invited to enter a draw to win one of five $40 USD Amazon gift-cards.

If you wish to participate in the study, you can click on this link directly:
https://ubc.ca1.qualtrics.com/SE/?SID=SV_9G0MVCspDx9sSVL&Q_JFE=0

Or, you can contact:

Co-Investigator: Alejandra Botia
Master of Arts Student, Department of Educational and Counselling Psychology and Special Education
Principal Investigator: Dr. Richard Young Professor, Department of Educational and Counselling Psychology and Special Education

Please note that this research study has been approved by the Behavioral Research Ethics Board at UBC. We take your confidentiality extremely seriously and since the survey is anonymous, there will be no records linking any identifiable information to your answers.

Thank you for your consideration.

Sincerely,

Dr. Richard Young & Alejandra Botia
Appendix D
Demographic Questionnaire
(please do not include your name)

*Please note* that for this study we are defining varsity athletes as athletes who are recognized as such by their university and who represent their university sport in competition with other universities in the varsity sport division?

What is your gender?

What is your sex?

What is your age?

What is your Ethnicity?
- Canadian
- American
- European
- African
- Indigenous
- Asian
- South East Asian
- Middle Eastern
- Hispanic
- Other, please specify _________

What Canadian University are you currently enrolled in?

What is your current academic year standing?

Are you a varsity athlete?

For how many years have you been a varsity athlete?

What varsity sport are you part of at your university?

What is the name of your varsity team?
Appendix E
Self-Compassion Scale (SCS; Neff, 2003)

The following survey is intended to assess how you act towards yourself in difficult times. Please read each statement carefully before answering. To the right of each item, indicate how often you behave in the stated manner, using the following scale:

<table>
<thead>
<tr>
<th>Almost never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Almost always</th>
</tr>
</thead>
</table>

1. I’m disapproving and judgmental about my own flaws and inadequacies.
2. When I’m feeling down I tend to obsess and fixate on everything that’s wrong.
3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
5. I try to be loving towards myself when I’m feeling emotional pain.
6. When I fail at something important to me I become consumed by feelings of inadequacy.
7. When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am.
8. When times are really difficult, I tend to be tough on myself.
9. When something upsets me, I try to keep my emotions in balance.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I’m intolerant and impatient towards those aspects of my personality I don’t like.
12. When I’m going through a very hard time, I give myself the caring and tenderness I need.
13. When I’m feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens, I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. When I see aspects of myself that I don’t like, I get down on myself.
17. When I fail at something important to me I try to keep things in perspective.
18. When I’m really struggling, I tend to feel like other people must be having an easier time of it.
19. I’m kind to myself when I’m experiencing suffering.
20. When something upsets me, I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I’m tolerant of my own flaws and inadequacies.
24. When something painful happens, I tend to blow the incident out of proportion.
25. When I fail at something that's important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don't like.
### Appendix F

**Body Appreciation Scale-2 (BAS; Avalos, Tylka, & Wood-Barcalow, 2005)**

The following survey is intended to assess positive body image. Please indicate whether the question is true about you never, seldom, sometimes, often, or always.

1 = Never  2 = Seldom  3 = Sometimes  4 = Often  5 = Always

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I respect my body.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>2. I feel good about my body.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>3. I feel that my body has at least has some good qualities.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>4. I take a positive attitude towards my body.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>5. I am attentive to my body’s needs.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>6. I feel love for my body.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>7. I appreciate different and unique characteristics of my body.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>8. My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>9. I am comfortable in my body.</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>10. I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).</td>
<td>0 1 2 3 4 5</td>
</tr>
</tbody>
</table>
Appendix G
Personal Growth Initiative Scale – II ©
Christine Robitschek, Ph.D., 2008

This survey is intended to assess personal growth initiative. For each statement, please mark how much you agree or disagree with that statement. Use the following scale:

- 0 = Disagree Strongly
- 1 = Disagree Somewhat
- 2 = Disagree a Little
- 3 = Agree a Little
- 4 = Agree Somewhat
- 5 = Agree Strongly

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I set realistic goals for what I want to change about myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I can tell when I am ready to make specific changes in myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I know how to make a realistic plan in order to change myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I take every opportunity to grow as it comes up.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. When I try to change myself, I make a realistic plan for my personal growth.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I ask for help when I try to change myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I actively work to improve myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. I figure out what I need to change about myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I am constantly trying to grow as a person.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. I know how to set realistic goals to make changes in myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. I know when I need to make a specific change in myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I use resources when I try to grow.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. I know steps I can take to make intentional changes in myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I actively seek out help when I try to change myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I look for opportunities to grow as a person.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. I know when it’s time to change specific things about myself.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>