

POSITIVE BODY IMAGE AMONG FEMALE EMERGING ADULTS:

A MIXED-METHODS DESIGN

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Abstract

Recent research has highlighted the importance of considering positive body image (e.g., Swami, Hadji-Michael, & Furnham, 2008) that is not simply the absence of negative body image, but also the extent to which one appreciates and accepts one's body as a whole (Avalos et al., 2005). Using a mixed-methods design, I sought to better understand positive body image (PBI) by examining the individual strengths associated with PBI and how PBI may protect against depressive symptoms over time. *Study 1* was a quantitative investigation examining groups of strengths and barriers among female emerging adults (EAs) to examine characteristics that are associated with PBI and how PBI may protect against depressive symptoms. Participants ($N = 1,464$) completed a battery of measures at Time 1 ($M_{\text{age}} = 20.23$, $SD_{\text{age}} = 2.32$) and a subset of participants completed the same measures three months later at Time 2 ($n = 215$, $M_{\text{age}} = 20.01$, $SD_{\text{age}} = 2.26$). Results of the latent profile analysis revealed distinct groups of female EAs who differed on their levels of strengths and barriers. As hypothesized, women who reported higher strengths and lower barriers had higher levels of PBI and, in turn, lower levels of depressive symptoms. Further, women who reported lower levels of strengths and greater barriers reported lower levels of PBI. These findings suggest that it is not just the absence of barriers, but also the presence of strengths that are associated with emotional well-being. *Study 2* was a qualitative analysis of female EAs with PBI ($n = 16$, $M_{\text{age}} = 20.94$, $SD_{\text{age}} = 2.14$) that was conducted to understand how female EAs with self-reported PBI describe their feelings towards their body and what strengths they identify as most important with respect to their overall self and their body. Women reported an overall appreciation and

acceptance for their body. With respect to one's overall self, women most frequently identified specific traits as their greatest strengths, and with respect to their body, women most frequently spoke of internal attributes. Findings are discussed in terms of implications for future mental health promotion and intervention programs.

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Introduction

Body image is a multidimensional construct that involves self-perceptions and attitudes about one's body or outward appearance (Cash, 2004; Grogan, 2008). A well-studied aspect of body image is body dissatisfaction. Body dissatisfaction is associated with adverse psychological consequences, such as depression (e.g., Noles, Cash, & Winstead, 1985; Stice, Hayward, Cameron, Killen, & Taylor, 2000; Stice & Bearman, 2001) and disordered eating behaviours (e.g., American Psychiatric Association, 2000; Attie & Brooks-Gunn, 1989; Cattarin & Thompson, 1994; Norwood et al., 2011; Stice & Shaw, 2002), highlighting the importance of investigating psychological factors associated with body image. Although body image research has typically been a pathology-focused area of study (Cash, 2002), recent research has highlighted the importance of considering positive body image (e.g., Swami, Hadji-Michael, & Furnham, 2008) that is not simply the absence of negative body image, but also the extent to which one appreciates and accepts one's body as a whole (Avalos, Tylka, & Wood-Barcalow, 2005).

In the current study, I sought to better understand positive body image (PBI) by conducting a mixed-method investigation of the individual strengths associated with PBI. Strengths are defined as an individual's positive attributes and encompass those competencies and characteristics within the individual that are valued both by the individual and society (Rawana & Brownlee, 2009), such as one's ability to accomplish a task or adaptively regulate one's emotions when faced with a stressful event. Strengths are important to examine in relation to positive outcomes, such as PBI, and it is also

relevant to investigate how strengths may protect against more adverse outcomes, such as depressive symptoms. To increase our understanding of the strengths associated with PBI, I utilized a strength-based approach to the study of body image among female emerging adults (EAs). In doing so, I investigated individual strengths associated with PBI and I also examined PBI as a protective factor against depressive symptoms. During emerging adulthood individuals are at a high risk for both body dissatisfaction (Rozin, Trachtenberg, & Cohen, 2001) and depression (e.g., Wang et al., 2010). Women, in particular, are more likely to experience depression than men (e.g., Hankin et al., 1998), and there is also a higher prevalence rate of body dissatisfaction among women compared to men (Cash, 2002; Cook-Cottone & Phelps, 2003). In fact, dissatisfaction with one's body is such a common occurrence among women that this phenomenon has been coined 'normative discontent' (Rodin, Silberstein & Striegel-Moore, 1984). As body image is a salient issue among women and this is an emerging area of research, it was considered important for preliminary investigations to focus exclusively on women to gain a solid understanding of PBI. Once research in this area has advanced it will be important to expand investigations to involve men. In summary, it is essential to focus primarily on women within this developmental period to understand the strengths associated with PBI and how PBI may protect against depressive symptoms among female EAs, as these findings have implications for both mental health promotion and intervention programs.

In addition to examining strengths associated with PBI among female EAs, Resnick (2000) suggested that healthy development among youth entails the reduction of risk factors and the promotion of protective factors. Moreover, researchers have proposed

that emotional well-being is not simply the absence of risk, but the accumulation of protective factors (e.g., Keyes, 2002; Keyes & Lopez, 2002). Thus, in addition to examining individual strengths, I also investigated barriers to PBI. Barriers are similar to risk factors, but the term barrier is more appropriate than risk factors when focusing on positive outcomes, such as PBI. A barrier impedes against a positive outcome, like PBI; a risk factor confers against a negative outcome, like depression. Specifically, barriers are defined as individual characteristics and beliefs that are less adaptive than strengths and likely to be negatively associated with positive outcomes (Iannantuono & Tylka, 2012), such as maladaptive emotion regulation strategies. It was important to include both strengths and barriers, as I expected that there would be a distinct profile (i.e., group) of individuals who would report greater levels of strengths and lower levels of barriers and that these individuals would feel more positively about their bodies. Figure 1 shows a depiction of the anticipated profiles that are of interest in the current study; I expected that women who reported higher strengths and lower barriers (i.e., *High Strengths/Low Barriers* group) would have higher levels of PBI and lower levels of depressive symptoms, whereas women who reported lower levels of strengths and greater barriers (i.e., *Low Strengths/High Barriers* group) would have lower PBI.

In summary, in the current study I used a strength-based approach to further our understanding of psychological functioning among female EAs. Specifically, in this study I focused on PBI among female EAs; I investigated individual strengths and barriers associated with PBI and how PBI may serve to protect against depressive symptoms. In conducting this project I utilized both quantitative and qualitative methods to examine the

impact of specific psychological factors postulated to be associated with PBI and then to speak with women with PBI to understand what they perceive to be their self-identified strengths. In Study 1, I utilized a person-centered method to classify female EAs into discrete groups based on their self-reported strengths and barriers, and investigated the association between group membership and PBI, as well as depressive symptoms. In Study 2, I used a qualitative design to explore how female EAs with PBI feel about their bodies and what these women identified as their most salient strengths overall, as well as strengths related to their bodies.

Emerging Adulthood

Emerging adulthood is a unique developmental stage between adolescence and adulthood (18-29 years). This developmental period is distinctive and characterized by identity exploration, change, and development (Arnett, 2000; Schwartz, Côté, & Arnett, 2005). During emerging adulthood, individuals strive towards self-sufficiency, which is characterized by the ability to accept responsibility for one's self, to make independent decisions, and to be financially independent (Arnett, 1997, 1998; Greene, Wheatley, & Aldava, 1992; Scheer, Unger, & Brown, 1996). The novel developmental milestones that characterize emerging adulthood, such as moving away from home and transitioning into postsecondary education (Gross & Muñoz, 1995), are focused on building one's unique identity and process of individuation (Roisman, Masten, Coatsworth, & Tellegen, 2004; Schwartz et al., 2005). Research has shown that during this developmental period well-being increases as does the incidence of psychopathology (Schulenberg & Zarrett, 2006), such as depressive disorders (American Psychiatric Association, 2000). Although the

increase in both well-being and psychopathology is not intuitive, it suggests that there are individual differences in negotiating this stage of development. Given these differences, emerging adulthood is a vital time to investigate individual strengths to identify those that are most salient for positive growth and emotional well-being. In doing so, it is important to consider aspects of one's identity, as identity development is a critical task during emerging adulthood (Arnett, 2000; Schwartz et al., 2005). Identity is defined as the way one views oneself (Vignoles, Regalia, Manzi, Golledge, & Scabibi, 2006) and an essential component of identity is body image (Dittmar, 2009), making it important to study during this developmental period. I also used a developmental psychopathology perspective as a foundation to understanding the factors that influence mental health within this stage of development.

Developmental Psychopathology Perspective

The developmental psychopathology perspective emphasizes the role of person-environment interactions (Glantz & Leshner, 2000) and focuses on individual and contextual factors that may contribute to development (Sameroff, 2000). Additionally, the developmental psychopathology perspective places emphasis on the typical developmental transitions that individuals undergo to more completely understand atypical development and those factors that contribute to, and may result in, the emergence of psychopathologies (Schulenberg, Sameroff, & Cicchetti, 2004). Research has shown that with an increase in the number of risk factors, there is an increased likelihood of an individual developing a problem; conversely, increasing protective factors will increase the likelihood of an individual successfully adapting to

developmental transitions (Fergusson & Lynskey, 1996; Schwartz, Pantin, Coatsworth, & Szapocznik, 2007). It is proposed that when one is able to successfully adapt, they will have a stronger sense of self and in turn feel better about their bodies, as body image is a salient aspect of one's identity and is an important component of mental health (Dittmar, 2009). The developmental psychopathology perspective suggests that the presence of more protective than risk factors is associated with emotional well-being (Keyes, 2002); however, this perspective does not clearly articulate the role of strengths in development. Thus, when considering strengths there is a need to look at additional theories, such as the strength-based approach.

Strength-Based Approach

A strength-based approach was utilized in this study to investigate strengths that foster PBI and are associated with lower levels of depressive symptoms among female EAs. A strength-based approach does not negate mental health issues, such as depression, but reflects a paradigm shift from a focus on pathology to a focus on the strengths of the individual that are important for promoting emotional well-being, as well as preventing against mental health issues. In the current study I focused on a positive outcome, PBI. Therefore, in place of protective factors that may protect against the development of more adverse outcomes, I examined strengths that were expected to be positively associated with PBI. Furthermore, instead of risk factors, I focused on identifying barriers that were expected to be negatively associated with PBI. The strength-based model was developed based on the idea that individuals are more than just the sum of their problems and that it is effective to focus on individuals' strengths, in addition to their problems (Cheon,

2008). This approach seeks to promote an individual's strengths (Duckworth, Steen, & Seligman, 2005) and acknowledges that every person has strengths that can be cultivated to promote overall well-being (Norrish & Vella-Brodrick, 2009). Although research in this area is relatively new, cross-sectional studies have demonstrated support for strengths that are associated with PBI, such as greater levels of self-esteem (e.g., Avalos et al., 2005; Williams, Cash, & Santos, 2004), and there is experimental research that suggests that focusing on strengths helps to reduce depressive symptoms among individuals (Duckworth et al., 2005). Thus, in this project I sought to build on these findings and conducted a person-centered investigation of the strengths associated with PBI and, in turn, examined how PBI is associated with depressive symptoms among female EAs. Barriers of PBI were also included to demonstrate that it is the combination of greater strengths and lower levels of barriers that are associated with PBI and lower levels of depressive symptoms (see Figure 1). The following sections provide a more in-depth discussion of PBI, the strengths and barriers, as well as the association between body image and depressive symptoms.

Positive Body Image

In one of the first empirical investigations of PBI, Williams and colleagues (2004) examined correlates of PBI among EA undergraduate women (age range 18-29 years). They administered multiple measures of body image and used cluster analysis that revealed three distinct groups of women: those with positive body image (PBI; 54%), negative body image (NBI; 24%), and normative body image discontent (23%). The women in the normative group reported similar levels of body dissatisfaction as the NBI

group, but lower levels of distress and negative feelings surrounding their bodies. The women in the PBI group reported higher levels of self-esteem, social support, optimism, appearance satisfaction, and positive emotion regulation (ER) to manage stressful situations related to body image. Additionally, the women in the PBI group reported lower levels of fixing one's appearance, internalization of media influences, eating disturbances, and less maladaptive ER (i.e., avoidant coping) than the other two groups (Williams et al., 2004). As the first to highlight the distinction between negative and positive body image, these researchers contributed greatly to the field; however, their work is limited by the use of cluster analysis that groups individuals in an arbitrary way (Vermunt & Magidson, 2002) and does not accurately account for individual differences. Instead, a more advanced person-centered approach, such as Latent Profile Analysis, can be used to classify individuals into discrete profiles based on tests of significance and fit statistics, while allowing for individual variability (Nylund, Asparouhov, & Muthén, 2007).

Recognizing the importance of studying PBI, Avalos and colleagues (2005) subsequently developed a measure of body appreciation. Body appreciation is an aspect of PBI and is characterized by positive regard and acceptance of one's body regardless of actual size and appearance, attending to the body's needs and living a healthy lifestyle, and rejecting media pressures (Avalos et al., 2005). In their validation studies of the Body Appreciation Scale (BAS) among college women 17 to 55 years, the researchers demonstrated that the BAS was negatively associated with measures of body dissatisfaction ($p < .001$). Additionally, results of three hierarchical regression analyses

revealed that levels of body appreciation were positively associated with self-esteem ($\beta = .45, t = 6.17, p < .001, \Delta R^2 = .05$), adaptive ER (i.e., proactive coping) ($\beta = .25, t = 2.63, p < .01, \Delta R^2 = .02$), and optimism ($\beta = .44, t = 5.09, p < .001, \Delta R^2 = .05$) above and beyond various measures of body dissatisfaction, supporting the validity of the BAS (Avalos et al., 2005). To date, the BAS is the only known measure that assesses multiple characteristics of PBI.

The BAS has since been used in cross-sectional studies demonstrating that PBI is negatively associated with neuroticism among women (Swami et al., 2008), as well as internalization of media pressures among British female undergraduates (Swami, 2009; Swami, Airs, Chouhan, Padilla Leon, & Towell, 2009). Further, PBI is positively correlated with well-being, trait emotional intelligence (Swami, Begum, & Petrides, 2010), and self-esteem (Swami et al., 2009) among British undergraduates. PBI is also positively correlated with intuitive eating, which is eating in response to one's internal hunger cues (Augustus-Hovarth & Tylka, 2011; Avalos & Tylka, 2006; Iannantuono & Tylka, 2012). Iannantuono and Tylka (2012) investigated body appreciation as a mediator connecting strengths and barriers to depression and intuitive eating. Results revealed that body appreciation fully mediated the association between maladaptive perfectionism and intuitive eating and partially mediated the relation between attachment anxiety and intuitive eating, as well as critical messages from one's caregiver and intuitive eating (Iannantuono & Tylka, 2012). Although the findings of this study provide further information on the correlates of body appreciation, it mainly focused on barriers of body

appreciation and only included two strengths of body appreciation, high standards and order perfectionism, which are different types of adaptive perfectionism.

In fact, since the development of the BAS, research has mainly investigated barriers and focused less on identifying the strengths, or positive predictors, associated with PBI (some notable exceptions include Swami et al., 2008; Swami et al., 2009; Swami et al., 2010). Additionally, it is of note that the majority of the previous research described above has involved individuals from London, England (e.g., Swami et al., 2008; Swami, 2009; Swami & Toveé, 2009; Swami et al. 2009; Swami & Abbasnejad, 2010; Swami et al., 2010) or from a Midwestern college in the United States (e.g., Avalos & Tylka, 2006; Iannantuono & Tylka, 2012; Tylka, 2006; Tylka & Wilcox, 2006). Further, this research has typically involved women ranging from late adolescence to middle adulthood and has not specifically focused on EAs. This is a limitation of previous research and in the current study I focused solely on EAs to identify factors associated with PBI during this stage of development. One important exception to this limitation is the work of Augustus-Hovarth and Tylka (2011) who compared the fit of a model of PBI and intuitive eating within emerging (18 - 25 years), early (26-39 years), and middle (40-65 years) adults. Although the model fit each age group, the strengths of the pathways were stronger among early and middle adults (Augustus-Hovarth & Tylka, 2011) suggesting that there are other, possibly more important, variables associated with PBI that are unique to EAs.

Results from qualitative research studies involving both adolescents (Frisén & Holmqvist, 2010) and adults (Wood-Barcalow, Tylka, & Augustus-Hovarth, 2010)

further our understanding of the strengths of individuals with PBI. Swedish adolescent boys and girls were interviewed to understand what characterizes adolescents with PBI (Frisén & Holmqvist, 2010). The findings indicated that these adolescents generally felt satisfied with their appearance, considered exercise an important part of their life that was associated with happiness and health, generally felt as though their family appreciated their appearance, and did not internalize negative remarks from their family and friends regarding their looks (Frisén & Holmqvist, 2010). In a qualitative investigation of female undergraduates (age range = 18 - 21 years) from a Midwestern university who reported PBI, as well as five experts in the field of body image, results revealed that PBI reflects an overall respect and appreciation of one's body (Wood-Barcalow et al., 2010). In terms of factors that contributed to their PBI the women indicated that they took time to care for themselves (e.g., through exercise and/or good sleep habits), maintained healthy eating habits, felt acceptance from important people in their lives, and filtered negative thoughts (Wood-Barcalow et al., 2010). The results from these qualitative studies provide further support for the association between rejection of media pressures and PBI. Additionally, these findings suggest that individuals with PBI care for their bodies through physical activity, thus highlighting the importance of empirically investigating the association between physical activity and PBI. Furthermore, findings from these qualitative studies highlight the importance of conducting qualitative interviews with participants, as they allow for the opportunity to garner a more in-depth understanding of strengths and PBI that is not available through the use of traditional self-report questionnaires.

In summary, previous researchers who have focused on PBI have attempted to identify correlates of PBI. The goal of the current study is to extend this research to investigate characteristics of individuals who appreciate their bodies through a strength-based approach. As emerging adulthood is a time of self-focus and identity exploration (Arnett, 2006), in this study I examined strengths that are associated with emotional well-being and are hypothesized to make one feel more positive about oneself and one's body, investigating how levels of self-esteem, emotional self-efficacy, adaptive emotion regulation (ER) strategies, and physical activity are associated with PBI. Further, in keeping with the suggestion of Resnick (2000), I included barriers of PBI, specifically maladaptive ER strategies and internalization of the thin ideal, as I expected that it is not simply the absence of barriers, but also the presence of strengths that is associated with PBI and lower levels of depressive symptoms. The following section provides an overview of the proposed strengths and barriers.

Strengths and Barriers Associated with Positive Body Image

Self-Esteem

Global self-esteem is defined as the way an individual thinks and feels about herself (Rosenberg, Schooler, & Schoenbach, 1989). Greater levels of self-esteem has been shown to be positively associated with the ability to adjust to new situations as they arise (Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999; Friedlander, Reid, Shupak, & Cribbie, 2007), such as moving away from home and starting post secondary education. Previous research has shown that low self-esteem is associated with depressive

symptoms (Beck, Steer, Epstein, & Brown, 1990; Heatherton & Wyland, 2003; Patton, 1991; Rice, Ashby, & Slaney, 1998). High levels of self-esteem are typically associated with positive youth development (Impett, Sorsoli, Schooler, Henson, & Tolman, 2008), emotional well-being (Garber, 1984), and protect against the development of mental illness (Rutter, 1987). Past investigations have demonstrated that self-esteem is positively and significantly associated with PBI among women (Avalos et al., 2005; Swami et al., 2009; Williams et al., 2004). The goal of the current study is to replicate these findings within a diverse sample of female EAs attending university in a large urban centre. Self-esteem was included as an individual strength and was expected to be positively associated with PBI among female EAs.

Emotional Self-Efficacy

Self-efficacy is the belief that an individual can succeed at what she sets her mind to (Bandura, 1977; Maddux, 2002). Self-efficacy is associated with feelings of personal competence, as it refers to the belief that one will be able to successfully achieve a goal or task that one sets out to accomplish (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003). In a recent review of emotion regulation, Rawana and colleagues noted that during emerging adulthood individuals become conscious of how successful, or effective, they are at regulating their emotions, which is referred to as regulative emotional self-efficacy (Rawana, Flett, Nguyen, Norwood, & McPhie, 2011). Greater levels of regulative emotional self-efficacy indicate that an individual perceives that she will be able to successfully regulate her emotions when needed (Rawana et al., 2011). Previous researchers demonstrated a negative association between emotional self-efficacy and

depression, whereby individuals who believed that they are capable of regulating their negative emotions reported fewer depressive symptoms (Caprara, Gerbino, Paciello, Di Giunta, & Pastorelli, 2010). Findings from prospective longitudinal research have also supported this, indicating that individuals with greater levels of emotional self-efficacy were less likely to report depressive symptoms over time (Catanzaro, Wasch, Kirsch, & Mearns, 2000). Similar to regulative emotional self-efficacy is trait emotional intelligence (EI), which refers to one's perceptions of one's emotional abilities (Petrides & Furnham, 2001). In a meta-analysis examining the association between EI and health, trait EI was associated with overall well-being and physical health (Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). Recently, Swami and colleagues (2010) investigated the association between trait EI and PBI among British female undergraduates (age range 19-42 years). Results indicated that trait EI was positively and significantly associated with PBI. Therefore, applying a developmental approach to trait EI, emotional self-efficacy was investigated as a strength in the current study and examined for its association with PBI among female EAs.

Emotion Regulation

Emotion regulation (ER) is the ability to effectively monitor and regulate one's emotions (Gross & Muñoz, 1995). Adaptive ER strategies include the ability to put an event into perspective and/or think about what can be learned from a stressful situation, whereas maladaptive ER strategies include ruminating over a stressful situation and/or inappropriately blaming oneself or others (Garnefski & Kraaij, 2007). Aldao and Nolen-Hoeksema (2010) investigated the association between ER strategies and various

measures of psychopathology, including depression, anxiety, and eating disorders among undergraduate women and men ($M_{\text{age}} = 18.44$, $SD_{\text{age}} = 0.66$) from a private university in the United States. Results indicated that there was a significant positive correlation among maladaptive ER strategies and symptoms of depression, anxiety, and eating disorders (Aldao & Nolen-Hoeksema, 2010). Among the adaptive ER strategies examined, cognitive reappraisal, which involves re-interpreting an emotional event so that it changes the emotions associated with the event (Lazarus & Alfert, 1964), was significantly and negatively associated with all measures of psychopathology. Furthermore, there were significant negative correlations among problem solving and depression, as well as problem solving and anxiety, but not eating disorder symptoms (Aldao et al., 2010). These findings are in line with previous research that has shown that suppressing one's emotions and turning them inward is associated with body dissatisfaction (Norwood et al., 2011), as well as findings that engaging in adaptive ER strategies is critical for psychological well-being (Gross & Muñoz, 1995).

ER strategies are related to coping strategies, which refer to a set of strategies one uses to deal with a stressful event (Carver, Scheier, & Weintraub, 1989). Proactive coping is an adaptive coping strategy that involves goal setting and attainment for positive individual growth (Greenglass, 2002). Thus, proactive coping shares similarities to positive reappraisal, an adaptive ER strategy that involves focusing on how to learn and grow from the event (Garnefski & Kraaij, 2007). Previous research has demonstrated a significant positive association between PBI and proactive coping (e.g., Avalos et al., 2005; Williams et al., 2004). Therefore, in the current study, adaptive ER strategies,

including acceptance, positive refocusing, refocus on planning, positive reappraisal and putting into perspective were included as strengths potentially associated with PBI and maladaptive ER strategies, including self blame, rumination, catastrophizing, and other blame were investigated as barriers of PBI.

Physical Exercise

Previous research has shown that physical exercise is associated with overall well-being (Fox, 1999). Specifically, engaging in physical exercise has been shown to be an effective component of treatment for clinical depression and can be helpful in alleviating anxiety (Fox, 1999). In a meta-analysis investigating the association between exercise and body image, findings revealed a small effect size indicating that individuals who exercised reported greater levels of body image compared to those who did not (Hausenblas, & Fallon, 2006). Engaging in physical activity (e.g., as part of an intervention) is typically associated with improved body image (Hausenblas & Fallon, 2006); however, the majority of the reviewed studies focused on decreases in body dissatisfaction and did not utilize measures that were designed to assess PBI. Findings from qualitative research suggest that individuals who report PBI engage in physical activity (Frisén & Holmqvist, 2010; Wood-Barcalow et al., 2010), yet the relation between physical activity and PBI has not yet been tested empirically. Therefore, in the current study physical activity was included as a strength, and I expected it to be positively associated with PBI.

Internalization of the Thin Ideal

Women are constantly receiving messages from society that to be beautiful and successful they must attain an unrealistic thin ideal (e.g., Agliata & Tantleff-Dunn, 2004; Thompson & Heinberg, 1999). These messages can have negative consequences when they are internalized (Stice & Shaw, 1994) and researchers have shown that adolescent girls report greater levels of pressure than boys with regards to their appearance (Ata, Ludden, & Lally, 2007), suggesting that sociocultural pressures are more salient for women. Experimental research indicates that exposure to images of women who represented the thin ideal led to immediate increases in levels of depressive symptoms (Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999; Tiggeman & McGill, 2004) and body dissatisfaction (Tiggeman & McGill, 2004) among female university students. In a qualitative investigation, researchers sought to understand the type of physical appearance related messages that EAs perceive from their peers, family, school, and media. Gillen and Lefkowitz (2009) found that from school and the media, EAs perceived that they must be attractive to be successful. Further, when comparing men and women they found that women were more aware of the negative messages from their peers and the media about their appearance than men (e.g., you have to be thin to be successful) (Gillen & Lefkowitz, 2009). Women with PBI reported similar experiences, but indicated that they were able to filter out these negative messages from the media (Wood-Barcalow et al., 2010). These women did not give the media power; they reported that they did not allow media messages play an important role in their lives and impact how they felt about their bodies (Wood-Barcalow et al., 2010). Empirical investigations

revealed a negative association between sociocultural pressures to be thin and PBI (e.g., Swami & Toveé, 2009; Williams et al., 2004), suggesting that internalization of the thin ideal acts as a barrier to PBI. Therefore, this construct was included as a barrier in the current study. I expected that greater internalization of the thin ideal would be negatively associated with PBI.

Positive Body Image as a Protective Factor For Depressive Symptoms

Depressive Symptoms

Researchers report that psychopathology, such as depressive disorders, increases during emerging adulthood (Schulenberg & Zarrett, 2006). This is consistent with reports within Canada, where the cumulative incidence of Major Depressive Episodes (MDE) has been increasing (Wang et al., 2010). In fact, Wang and colleagues (2010) indicated that men and women aged 18 to 25 have the highest incidence of MDE throughout the lifespan, which corresponds to findings that suggest that depression is very prevalent among EAs (Kessler & Walters, 1998; Klerman, 1988; Kuwabara, Van Voorhees, Gollan, & Alexander, 2007; Tanner et al., 2007; Wang et al., 2010). Depression among EAs is associated with significant mental and social consequences (Riggs & Han, 2009). Individuals who experience depression are more likely to engage in disordered eating behaviours (Stice et al., 2000), experience suicidal ideation (Stice & Bearman 2001), and have low levels of educational success (Kuwabara et al., 2007) compared to those without depression. Moreover, in a prospective study of adolescent girls, body dissatisfaction was shown to be associated with depressive symptoms across time (Stice

& Bearman, 2001), a finding that has consistently been found for women, but not men (Bearman & Stice, 2008). Given the severity of the consequences associated with depressed mood, another objective of the current study was to investigate the association between PBI and depressive symptoms, as I expected that PBI might be protective against the development of depressive symptoms. Contributing to the understanding of factors that protect against depressive symptoms among female EAs will have important implications for prevention and treatment programs that will be especially relevant to clinicians working in university counseling centers.

To date, there is only one known study that has examined the relation between PBI and depression (Iannantuono & Tylka, 2012). Findings from this study revealed that PBI was significantly and negatively associated with depression; however, this association was no longer significant after controlling for other variables in the model, protective factors that were mainly associated with perfectionism and attachment (Iannantuono & Tylka, 2012). In the current study, individual strengths and barriers were chosen that are postulated to be significantly associated with PBI. Further, previous researchers have demonstrated an association between each of these factors and depression. Therefore, in the current study I investigated whether PBI significantly predicted lower levels of depressive symptoms among female EAs, as I expected that PBI would protect against depressive symptoms.

In summary, in the present research I sought to contribute to our understanding of PBI among women using a mixed-method design. In doing so, I used a strength-based approach to investigate PBI among female EAs. In conducting this project I utilized both

quantitative and qualitative methods to examine the impact of specific psychological factors postulated to be associated with PBI and then to speak with women with PBI to understand their self-identified strengths. In Study 1, I utilized a person-centered method to classify female EAs into discrete profiles based on their self-reported strengths and barriers, and investigated the association among profile membership and PBI. Additionally, I explored whether PBI was negatively associated with depressive symptoms. Study 2 involved a qualitative component designed to explore how female EAs with PBI feel about their bodies and what these women identified as their most salient strengths overall, as well as strengths related to their bodies. Incorporating both quantitative and qualitative methods provided the opportunity to empirically test the association between specific strengths and PBI and also explore what strengths women with PBI identify as most salient to themselves.

The Current Research Project

The overarching goal of this research project was to understand (1) what characterizes female EAs with PBI and (2) how PBI may serve to protect against depressive symptoms. To accomplish this goal the current research project comprised two separate studies that take a strength-based approach to the investigation of PBI. Study 1: *Predictors of Positive Body Image and Depressive Symptoms*, was a person-centered, quantitative investigation of profiles of both strengths and barriers among female EAs to examine characteristics that are associated with PBI and, how PBI is protective against depressive symptoms. Study 2: *Positive Body Image: A Qualitative Study* was a qualitative analysis of female EAs with PBI to better understand how female EAs with

PBI feel about their body and the extent to which they are able to recognize their own individual strengths. Figure 2 presents a flow chart outlining the goals of each study.

Study 1: Predictors of Positive Body Image and Depressive Symptoms

There were four overarching objectives for Study 1. The first objective was to identify distinct groups of female EAs based on their self-reported strengths and barriers. Through investigating both strengths and barriers, I tested the hypothesis that it is not simply the absence of barriers, but also the presence of strengths that are associated with greater levels of PBI (see Figure 1). To accomplish this goal, a person-centered, latent variable approach was used to classify EAs into groups on the basis of their self-reported strengths and barriers. In determining the profiles, it is of note that each of the profiles will include each of the variables, described above. That is, each profile will include *both* strengths and barriers, allowing for an investigation of the interplay between strengths and barriers.

With respect to objective one, I expected that:

1. Female EAs would be divisible into at least two distinct groups based on their self-reported strengths and barriers. Specifically, I hypothesized that there would be *at least* two distinct groups of female EAs in the current study (see Figure 1):
 - a. Women with high levels of strengths and low levels of barriers (High Strengths/Low Barriers group);
 - b. Women with low levels of strengths and high levels of barriers (Low Strengths/High Barriers group).

Second, the association between these groups and PBI was investigated using a cross-sectional design.

With respect to objective two I expected that:

2. The probability of belonging to the High Strengths/Low Barriers group would be positively associated with PBI;
3. The probability of belonging to the Low Strengths/High Barriers group would be negatively associated with PBI.

The third objective was to examine the association among the High Strengths/Low Barriers group, PBI, and depressive symptoms using a cross-sectional design, to further highlight the importance of PBI and demonstrate that it is a significant protective factor that must be considered in the promotion of mental health.

With respect to objective three I expected that:

4. PBI would be negatively associated with depressive symptoms;
 - a. Additional analyses also controlled for the probability of belonging in the High Strengths/Low Barriers group to investigate the strength of the association between PBI and depressive symptoms. I expected that PBI would be significantly associated with lower levels of depressive symptoms above and beyond the probability of belonging in the High Strengths/Low Barriers group.

Fourth, I investigated the association between PBI and depressive symptoms over time. A subsample of participants who completed the same measures at two time points

(i.e., in the fall and winter of the same academic year) was selected to explore the temporal relationship between PBI and lower levels of depressive symptoms.

With respect to objective four I expected that:

5. PBI would be negatively associated with depressive symptoms over time.

Specifically, I hypothesized that high levels of PBI at Time 1 (fall) would be negatively and significantly associated with depressive symptoms at Time 2 (winter) while controlling for depressive symptoms at Time 1;

- a. Additional analyses also controlled for the probability of belonging to the High Strengths/Low Barriers group at Time 1 to investigate the strength of the association between PBI and depressive symptoms. More specifically, this analysis explored whether PBI would be negatively associated with depressive symptoms above and beyond membership in the High Strengths/Low Barriers group. Given the exploratory nature of this analysis, no specific hypothesis was proposed.

Method

Participants

Participants included 1,464 female EAs enrolled in an Introduction to Psychology course in the fall semester at an urban university in Ontario, Canada ($M_{\text{age}} = 20.23$, $SD_{\text{age}} = 2.32$, age range = 18.0 – 29.92). Seven hundred and seventy-nine participants were in first year (53.2%), 375 in second year (25.6%), 173 in third year (11.8%), 77 in fourth year (4.1%), and 60 reported “other” (4.1%). Five hundred and twenty-eight participants

identified as Caucasian (36.1%), 231 identified as Asian (15.8%), 127 identified as African/Caribbean (8.7%), 46 identified as Hispanic or Latino (3.1%), 2 identified as First Nation, Inuit, or Metis (0.1%), 154 identified as Middle Eastern (10.5%), 245 identified as South Asian (16.7%), and 131 did not specify ethnicity (9.0%). Nine hundred and sixty-nine participants spoke English as their first language (66.2%), 6 participants spoke French (0.4%), and 489 spoke a different language (33.4%). Sixty-four percent of the participants were born in Canada ($n = 934$), while 36% of the participants were not born in Canada ($n = 530$).

Of the larger sample, a subset of participants also completed measures in the winter of the same academic year (an average of 4.13 months apart). Of the 570¹ eligible participants, 215 (37.7%) participants completed measures at both time points ($M_{\text{age}} = 20.01$, $SD_{\text{age}} = 2.26$, age range = 18.0 – 29.92)².

Measures

Demographic information. Demographic information, including age, ethnicity, height and weight was collected from each participant. Body Mass Index (BMI) was calculated based on individuals' self-reported height and weight ($\text{BMI} = \text{weight} [\text{kg}] / \text{height}^2 [\text{m}^2]$).

¹ The larger sample included participants from two different online studies. The first study included the same battery of measures at two time points (Fall and Winter) and the second study only included the measures at one time point (Fall). Therefore, only the participants who took part in Study 1 completed measures at both time points ($n = 570$).

² One-way ANOVAs were also conducted to investigate potential differences between individuals who did and did not complete measures at both time points. Results revealed no significant differences between women who completed measures at both time points and those who did not on levels of positive body image and depressive symptoms at Time 1.

Body appreciation. The Body Appreciation Scale (BAS; Avalos et al., 2005) was used as a measure of PBI. The BAS is a 13-item, unidimensional measure of multiple aspects of PBI, including positive body evaluation, body acceptance, rejection of media pressures, and respect for one's body that is demonstrated by attending to the body's needs and engaging in healthy behaviours (e.g., "I am attentive to my body's needs"). The responses are on a 5-point scale ranging from 1 (*never*) to 5 (*always*) with greater scores indicating higher levels of body appreciation. Potential and actual ranges for this measure are presented in Table 1. The BAS has been shown to be a reliable and valid measure (Avalos et al., 2005; Swami, Stieger, Haubner, & Voracek, 2008). Further, the BAS has been shown to be reliable among ethnically diverse samples (Swami et al., 2009). In the current study, the BAS had strong internal consistency (Cronbach's $\alpha = .93$).

Self-esteem. The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989) is a global measure of feelings of self worth comprising 10 statements for which participants report how much they agree or disagree with statements expressing general self-related feelings (e.g., "On the whole, I am satisfied with myself"). Responses are coded on a 4-point scale ranging from 0 (*strongly disagree*) to 3 (*strongly agree*), and higher scores indicate higher trait self-esteem (Rosenberg, 1989). The RSES is one of the most widely used measures of self-esteem and has demonstrated satisfactory reliability and validity (Blascovich & Tomaka, 1991; Rosenberg, 1989). Self-esteem was included as strength in the current study and demonstrated good reliability (Cronbach's $\alpha = .89$).

Physical activity. The Physical Activity items from Project EAT (Nelson,

Neumark-Sztainer, Hannan, Sirard, & Story, 2006) were administered to assess participants' levels of physical activity. Physical activity was included as an individual strength in the current study. These items were adapted from the Godin Leisure-Time Exercise Questionnaire ("Godin Leisure Time Questionnaire", 1997) and the Planet Health surveys (Gortmaker et al., 1999) that are commonly used measures of physical activity. Three items were asked to investigate how often participants spent in a strenuous (running, biking fast, skating), moderate (dancing, skateboarding, skiing), and mild (yoga, walking slowly, golf) activities. Participants indicated how many hours per week that they spend doing each activity by selecting a time range from 0 to 6 hours per week (0, < .5, .5–2, 2.5–4, 4.5–6, and > 6 hours/week). Following scoring guidelines from Nelson and colleagues (2005), these responses were recoded (0, .3, 1.3, 3.3, 5.3, and 8 hours/week) and the three items were summed for analyses (Cronbach's $\alpha = 0.65$).

Emotional self-efficacy. Emotional Self-Efficacy was assessed using a single item measure of emotion regulation success (Gross & John, 2003) and was investigated as an individual strength in the current study. Participants were asked, "Overall, how successful would you say you are at altering your emotions" and responded on a 10-point scale ranging from 1 (*not at all successful*) to 10 (*very successful*).

Emotion regulation. Adaptive and maladaptive emotion regulation strategies were assessed using the Cognitive Emotion Regulation Questionnaire (CERQ, Garnefski, Legerstee, Kraaij, van den Kommer, & Teerds, 2002; Garnefski & Kraaij, 2007). In the current study, adaptive ER strategies were included as individual strengths and maladaptive strategies were included as barriers of PBI. The CERQ comprises 36

questions, including nine, 4-question subscales (e.g., “I think that I have to accept that this has happened”). These subscales can be administered together or independently of each other to evaluate the maladaptive or adaptive problem- and emotion-focused cognitive coping strategies one may use after experiencing a negative event or situation (Garnefski et al., 2002). The maladaptive ER strategies measured include: self-blame (blaming oneself for what has happened), other-blame (blaming another person for the negative event), rumination (focusing excessively on the negative event), and catastrophizing (focusing on the negative aspects of the event). The CERQ also assesses adaptive ER strategies, including: acceptance (acknowledging what you have been through and resigning yourself to it), positive refocusing (thinking about joyful thoughts as opposed to the event), refocus on planning (focusing on how to cope with the event), positive reappraisal (focusing on how to learn and grow from the event), and putting into perspective (reducing the severity of the event by comparing it to relative events). The responses options vary from 1 (*almost never*) to 5 (*all the time*). The CERQ has high internal consistency (Garnefski et al., 2002; Garnefski & Kraaij, 2007) and test-retest reliability (Garnefski, Kraaij, & Spinhoven, 2001; Garnefski et al., 2002). Acceptable internal consistency was found across subscales in the current sample for both the adaptive (Cronbach’s alphas = .69 - .82) and maladaptive (Cronbach’s alphas = .72 - .78).

Internalization of the thin ideal. The Sociocultural Attitudes Toward Appearance Questionnaire-3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004) is a 30-item scale that measures the level of influence that sociocultural pressures have on one’s body image (e.g., “I would like my body to look like the people

who are in movies”). Internalization of the thin ideal was included as a barrier in the current study. The scale consists of four subscales that assess the importance that one places on the media as a source of information (Information), pressures one feels from the media (Pressure), internalization of media pressures (Internalization-General), and internalization of pressures derived from sports and professional athletes (Internalization-Athlete). Items are on a 5-point scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*) with higher scores reflect greater internalization of sociocultural influences. The SATAQ-3 has been shown to have good psychometric properties (Thompson et al., 2004). Studies have demonstrated that the SATAQ-3 has strong internal consistency (Forbes, Jobe, & Revak, 2006; Swami, 2009; Swami & Toveé, 2009; Thompson et al., 2004). For the purposes of the current study only the Internalization-General subscale was used as a measure of internalization of the thin ideal (Cronbach’s $\alpha = .91$).

Depressive symptoms. The Centre for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was used to assess depressive symptoms. In the current study, depressive symptoms were examined as an outcome of PBI, to investigate how PBI protects against depressive symptoms. The CES-D consists of 20 items (e.g., “I felt like I could not shake off the blues even with help from my family or friends”). Participants were asked to rate the duration of their mood on a 4-point Likert scale from 0 (*rarely or none of the time, less than 1 day*) to 3 (*Most of or All of the Time, 5-7 days*) to determine how they felt in the past week. Higher scores indicate the presence of greater depressive symptomatology. The CES-D has been demonstrated to have good psychometric properties among ethnically diverse populations (Constantine, Okazaki, & Utsey, 2004;

Stahl et al., 2008). Previous researchers have reported that the CES-D has good internal consistency with Cronbach's alpha ranging from .70 to .93 (Constantine et al., 2004; Hann, Winter, & Jacobsen, 1999; Radloff, 1977; Stahl et al., 2008). In the current study, the CES-D demonstrated strong internal consistency across both time one ($\alpha = .89$) and time two ($\alpha = .92$).

Social desirability. The Marlowe-Crowne Social Desirability Scale (MCSDS; Rudmin, 1999) was used in preliminary analyses to identify answers that may be biased based on social desirability or acquiescence. Social desirability is when one wants to present oneself in a positive manner and acquiescence bias is when one unconsciously tends to agree or disagree regardless of the content of the items. The short-form of this scale was used. This scale contains 10 items that are rated as true or false (e.g., "No matter who I'm talking to, I'm always a good listener"), five of which are reversed. The scale provides two indices that were utilized to identify biased answers, the acquiescence bias index and the social desirability index. The acquiescence bias index was computed by calculating the mean of all 10 items before reverse coding any of the items and the social desirability index was computed by reverse coding half of the items before computing the mean (Friborg et al., 2003).

Procedure

Ethics approval was obtained from York University Research Ethics Board. Students from the Introduction to Psychology course at York University were eligible to participate in one of two online studies. The first study included the same battery of measures at two time points (Fall and Winter) and the second study included the same

battery of measures at one time point as well as an invitation for eligible participants to participate in an interview component (see Study 2 for a description of the interview component). Participants were not permitted to participate in both Study 1 and Study 2 (i.e., each study had unique participants). Participants chose to participate in one of the two available studies by selecting one from the list of available studies on the Undergraduate Research Participant Pool (URPP) website. Participants filled out the appropriate electronic consent forms at the beginning of the study (see Appendix A for the longitudinal study consent form and Appendix B for the consent form for study involving survey and interview component). In order to ensure that each of the participants gave adequate time and consideration when responding to the questions, the duration of time participants spent completing the battery of measures was investigated ($M = 43.68$, $SD = 16.67$) and an outlier analysis was performed. Using z-scores that were greater than -3.29 as indicative of outliers (Gravetter & Wallnau, 2004), no outliers were identified. In the event that some participants felt uncomfortable when answering questions, all participants were provided with information about counselling and support services at York University and throughout the Greater Toronto Area after completing the survey (see Appendix C for the longitudinal debriefing form and Appendix D for the survey and interview debriefing form). Participants received course credit for partaking in the study. Participants had the option of declining to answer any question, as well as the ability to opt out of the survey at any point. Although the majority of the participants completed the measures at one time point over the course of the year, a subset of participants completed the measures in the fall and again in the winter of the same

academic year; these participants were sent a maximum of two reminders through the URPP system, notifying them that they were eligible to participate in Part 2 (see Appendix E). These participants received credit each time they participated in the study (0.5 credit for both time 1 and time 2). Data from participants at two time points were used to investigate PBI as a protective factor of depressive symptoms.

Analytic Plan

With respect to data analysis there were four overarching objectives to Study 1: 1) to identify the distinct groups of female EAs based on their self-reported strengths and barriers, 2) to investigate how group membership was associated with PBI, 3) to investigate how PBI may protect against depressive symptoms and to investigate whether PBI was significantly and negatively associated with depressive symptoms while also controlling for the probability of belonging in the High Strengths/Low Barriers group, and 4) to investigate how PBI may protect against depressive symptoms over time and to explore whether PBI is significantly associated with low depressive symptoms over time when also controlling for belonging in the High Strengths/Low Barriers group.

Objective 1. To achieve the first objective and assess hypothesis one, Latent Profile Analysis (LPA) was utilized to identify distinct groups of female EAs based on their self-reported strengths and barriers. LPA is a person-centered, latent variable approach that was used to determine the optimal number of groups and the characteristics associated with each of the groups (Pastor et al., 2007). Unlike a variable-centered approach (e.g., factor analysis), which groups similar items and variables together, person-centered approaches, such as a LPA or cluster analysis, are advantageous as they

group individuals together based on their shared characteristics that distinguish them from individuals within the other groups (Walrath et al., 2004). Thus, this type of approach seeks to minimize differences within groups and maximize differences between groups. Further, in contrast to factor analysis, LPA is not a data reduction technique and in LPA the entire model is significant, as opposed to certain components. Although similar to cluster analysis, LPA is model based and, therefore, the model can be replicated within an independent sample (Nylund, Muthen, & Asparouhov, 2007). Additionally, previous research has indicated that there are difficulties in determining the appropriate number of groups to best represent the individuals within cluster analysis (Morgan & Ray, 1995); thus, LPA is advantageous as it determines the number of groups by comparing fit statistics. Specifically, the fit statistics of LPA models are evaluated against one another to determine the best fit of the model (e.g., a two-profile model versus a three-profile model). LPA is also advantageous as there are comparatively fewer assumptions to this analysis (e.g., LPA can handle abnormal distributions, missing data, and modest correlations among indicators). Further, once the optimal number of groups has been determined through various fit indices, LPA assigns individuals to groups based on posterior probability estimates that are estimates of how likely it would be for an individual to belong in a given group and enables one to evaluate how well individuals were classified (McLachlan & Peel, 2000). Posterior probability estimates allow each participant to be assigned to a group based on her highest posterior probability that can then be used to conduct a variety of statistical analyses, including regression analyses. Each group (i.e., profile) includes each of the variables of interest (i.e., both strengths and

barriers). Thus, LPA is also advantageous, as the profiles incorporate multiple dimensions simultaneously, allowing for an investigation of the interplay between strengths and barriers for each profile.

As LPA is model-based, there is no formal cut-off to determine the optimal number of groups and multiple fit indices were used to determine the appropriate number (Nylund et al., 2007). The Akaike Information Criterion (AIC; Akaike, 1987), Bayesian Information Criterion (BIC; Schwarz, 1978), and Sample-size Adjusted Bayesian Information Criterion (SABIC; Sclove, 1987) were used, where lower values indicate a better fit. Additionally, the Vuong-Lo-Mendell-Rubin Test (VLMRT) adjusted likelihood ratio test was considered, as it compares the estimated model with k profiles to a model with $k-1$ groups. For the VLMRT, significant p values ($p < .05$) indicate the model with $k-1$ groups can be rejected (Muthén & Muthén, 2012). Entropy values were also considered when determining the appropriate number of groups, with entropy values closer to 1 indicating greater accuracy of the model. Mean posterior probabilities for each group were also used to determine classification accuracy, with probabilities closer to 1 representing more accurate classification. Last, the extent to which the groups were qualitatively meaningful was also considered in selecting the most appropriate model. In sum, model fit was determined based on lower AIC, BIC, SABIC fit indices, significant LMRT, entropy and mean posterior probabilities values closer to 1, and the qualitative meaningfulness of groups.

Once the final model was determined, posterior probability estimates and group assignments were extracted from Mplus and added to the original dataset in SPSS. A

series of one-way ANOVAs were conducted for each of the strengths and barriers, except when variances were unequal. Significant omnibus tests were followed up using Tukey's HSD post-hoc tests to investigate the mean differences between profiles. When Levene's test for homogeneity of variances indicated that the variances were unequal, the Welch test (F²) was utilized to test mean for differences across profiles. Significant omnibus Welch tests were followed up with Dunnett T3 post-hoc tests.

Objective 2. Objective two was achieved by performing a linear regression analysis to examine how group membership predicted PBI among female EAs. To do so, posterior probability estimates were used to indicate group membership. Using posterior probability estimates was advantageous as it incorporates the accuracy statistic involved with classifying individuals into groups (Pastor et al., 2007). Thus, hypothesis two was tested using the posterior probability estimates of the High Strengths/Low Barriers group as the independent variable in a regression analysis to examine the association between the probability of belonging in the High Strengths/Low Barriers group and PBI.

Similarly, hypothesis three was tested by using the posterior probability estimates of the Low Strengths/High Barriers group as the independent variable and PBI as the dependent variable in a regression analysis, which allowed for an examination of the association between the probability of belonging in the Low Strengths/High Barriers group and PBI.

Objective 3. The third objective was to investigate the association between the High Strengths/Low Barriers group, PBI, and depressive symptoms using a cross-sectional design. This was accomplished through a series of regression analyses. First, to test hypothesis four, multiple regression was used to investigate the association between

PBI and depressive symptoms. Hierarchical regression analysis was then utilized to examine the association between PBI and depressive symptoms while controlling for the probability of belonging in the High Strengths/Low Barriers group.

Objective 4. The fourth objective was accomplished using hierarchical regression analyses with a subsample of participants who completed measures in the fall and winter of the same academic year to explore the temporal relationship between PBI and depressive symptoms. Thus, in testing hypothesis five, the dependent variable was depression at Time 2 and the independent variables were depression at Time 1 that was entered in step 1 and PBI at Time 1 that was entered at step 2. Additionally, an exploratory hierarchical regression analysis was conducted to examine whether PBI predicted depression above and beyond the proposed strengths and barriers. To do so, the independent variables were depression at Time 1 that was entered in step 1; in step 2 the posterior probability estimates of belonging in the High Strengths/Low Barriers were entered; last, PBI at Time 1 was entered in step 3.

Results

The goal of the current study was to investigate different groups of female EAs and examine how these groups were associated with PBI and depressive symptoms. Statistical analyses were conducted using the Statistical Program for the Statistical Sciences (SPSS 20) and Mplus version 7 (Muthén & Muthén, 2012). First, the data set was cleaned and verified and a missing value analysis (MVA) was performed, revealing less than 5% of missing cases in the dataset. Therefore, data were identified as missing at random (MAR) and maximum likelihood estimation was utilized when conducting the

LPA in Mplus (Muthén & Muthén, 2012), as this is an accepted way of handling missing data (Schafer & Graham, 2002).

Preliminary Analysis

Descriptive statistics and Pearson Product Moment correlations were conducted among the variables of interest for the entire cross-sectional sample (see Tables 1 and 2). The social desirability index and acquiescence bias indices of the MCSDS were utilized to detect biased answers. Following previous research partial correlations were conducted that accounted for the effect of these indices (Cash & Szymanski, 1995; Ekehammer & Akrami, 2007). Examination of Table 2 reveals that after taking the social desirability and acquiescence bias indices into account, the direction of the relation between variables was similar, indicating that the results were not affected by social desirable responding (see Table 2)³. Since the trends remained the same, individuals with higher levels of social desirability and acquiescence were included in the final analyses.

Objective 1

Latent profile analysis. The first objective of the current study was to identify different groups of female EAs based on their self-reported strengths and barriers. I expected that there would be at least two distinct groups of women that were of particular

³ Additional analyses were also conducted to investigate the potential influence of social desirable responding. First, the internal consistency of the measures for individuals who reported higher on social desirability (i.e., z score of greater than 2 on the either the social desirability index or the acquiescence bias index; $n = 54$, 3.7% of the total sample, $M_{\text{age}} = 20.31$, $SD_{\text{age}} = 2.32$) was computed, revealing similar results to those who did not report higher social desirability. Second, one-way ANOVAs were used to investigate potential differences between participants who reported high social desirability and all others on all variables of interest that yielded no significant differences. Finally, all Latent Profile Analyses were conducted without participants who reported higher on social desirability that yielded similar results to the Latent Profile Analyses conducted with the entire sample.

interest in the current study, women with high levels of strengths and low levels of barriers (High Strengths/Low Barriers group) and women with high levels of barriers and low levels of strengths (Low Strengths/High Barriers group). Therefore, Latent Profile Analysis (LPA) was conducted estimating a 2, 3, and 4-profile model. The results indicated that a 4-profile model was the best fit, as this model had lower AIC, BIC, and SABIC values than the 2 or 3-profile models (see Table 3). Additionally, the VLMRT was significant ($p = .007$), indicating that a 3-profile model could be rejected. Entropy for the 4-profile model was 0.82, suggesting well separated profiles and high classification accuracy (Celeux & Soromenho, 1996). The mean posterior probabilities ranged from 0.86 to 0.92, signifying that class assignment was 86 - 92% accurate. Moreover, the 4-profile model was selected, as the inclusion of the fourth profile was theoretically meaningful.

The four profiles are shown in Figure 3. The means of the strengths and barriers within each of the profiles are presented in Table 4. Profile 1 was the largest profile, consisting of 42% of the sample ($n = 615$). Lower mean levels of both strengths and barriers generally characterized participants in this profile. This profile was labeled *Low Strengths/Low Barriers* group. Individuals in profile 2 ($n = 337$, 23% of the sample) reported similar levels of both strengths and barriers; this profile was named *Moderate Strengths/ Moderate Barriers* group. Participants in the third profile ($n = 105$, 7.2% of the sample) reported lower levels of strengths and higher levels of barriers. This profile was named *Low Strengths/High Barriers* group. Finally, profile 4 ($n = 407$, 27.8% of the sample) included participants who reported higher levels of strengths and lower levels of

barriers. Subsequently, this profile was named the *High Strengths/Low Barriers* group.

Table 4 presents the descriptives for each of the strengths and barriers in the four different groups. Individuals in the High Strengths/Low Barriers group reported significantly greater levels of self-esteem, emotional self-efficacy, refocus on planning, reappraisal of the situation, and putting into perspective than each of the other groups. Additionally, women in this group reported higher levels of positive refocusing than the Low Strengths/High Barriers and Low Strengths/Low Barriers groups. Furthermore, the High Strengths/Low Barriers group reported lower levels on each of the barriers, than the Low Strengths/High Barriers and Moderate Strengths/Moderate Barriers groups (see Table 4). In the current study it was of particular interest to examine the differences between the Low Strengths/High Barriers group and the High Strengths/Low Barriers group. In comparing these two groups, results indicated that the Low Strengths/High Barriers group reported significantly lower levels on the majority of the strengths, including emotional self-efficacy, self-esteem, positive refocusing, refocus on planning, reappraisal of the situation, and putting into perspective (see Table 4). However, there was no significant difference between groups on levels of physical activity and acceptance (see Table 4). Consistent with what was expected, the Low Strengths/High Barriers group reported significantly higher levels on each of the barriers, including internalization of the thin ideal, self-blame, rumination, catastrophizing, and other-blame (see Table 4).

Objective 2

Group membership and positive body image. To test the hypothesis that the

probability of belonging in the High Strengths/Low Barriers group would be positively associated with PBI, a linear regression was conducted. Results supported the hypothesis, indicating that the High Strengths/Low Barriers group accounted for 12.1% of the variance in PBI, $\beta = .35$, $t(1455) = 14.14$, $p < .001$. A second linear regression was used to test the hypothesis that the probability of belonging in the Low Strengths/High Barriers group would be negatively associated with PBI. Consistent with what was expected, the results indicated that the Low Strengths/High Barriers group was negatively associated with PBI. The Low Strengths/High Barriers group accounted for 11.1% of the variance in PBI, $\beta = -.33$, $t(1455) = -13.50$, $p < .001$.

Additional exploratory analysis. Linear regression analyses were also conducted to investigate the strength of the association between profiles 1 (Low Strengths/Low Barriers group) and 2 (Moderate Strengths/Moderate Barriers group) and PBI. Results indicated that the Low Strengths/Low Barriers group accounted for 6.0% of the variance in PBI, $\beta = -.079$, $t(1455) = -3.04$, $p = .002$, indicating that the probability of belonging in the Low Strengths/Low Barriers group was negatively associated with levels of PBI. Similarly, results revealed that the probability of belonging in the Moderate Strengths/Moderate Barriers group was also negatively associated with levels of PBI, $R^2 = 0.04$, $\beta = -.066$, $t(1455) = -2.51$, $p = .012$.

Objective 3

The association between group membership, positive body image, and depressive symptoms. I expected that PBI would be negatively associated with depressive symptoms. To test this hypothesis, a linear regression was conducted. As

expected, PBI was significantly and negatively associated with depressive symptoms, $R^2 = 0.17$, $\beta = -.41$, $t(1443) = -17.22$, $p < .001$, suggesting that individuals with higher PBI reported lower depressive symptoms. To investigate the association between PBI and depressive symptoms while controlling for the probability of belonging in the High Strengths/Low Barriers group, a hierarchical regression was conducted. The probability of belonging in the High Strengths/Low Barriers group was entered in the first step and PBI was entered into the second step (see Table 5). As each variable was added to the model, the R^2 change was examined to determine whether the variable added significantly to the regression. Results for Step 1 showed that the probability of belonging in the High Strengths/Low Barriers group accounted for 14.0% of the variance in the sample's depressive symptoms as measured by the CES-D, $\Delta R^2 = 0.14$, $\Delta F(1, 1443) = 227.50$, $p < .001$, revealing that a higher probability of belonging in the High Strengths/Low Barriers group was significantly associated with lower levels of depressive symptoms, $\beta = -.25$, $t(1443) = -10.41$, $p < .001$. Step 2 found that PBI accounted for 9.2% of the variance in the sample's depressive symptoms, $\Delta R^2 = 0.092$, $\Delta F(1, 1442) = 172.50$, $p < .001$. Importantly, PBI was a unique predictor of depressive symptoms above and beyond the probability of belonging in the High Strengths/Low Barriers group, $\beta = -.32$, $t(1442) = -13.13$, $p < .001$.

Objective 4

Longitudinal association between group membership, positive body image, and depressive symptoms. I expected that PBI would be negatively and significantly associated with depressive symptoms over time. To test this hypothesis, a hierarchical

regression analysis was conducted. Depression at Time 1 was entered into the first step to control for depressive symptoms at Time 1 and PBI (Time 1) was entered into step 2. The results indicated that PBI had a small, but still significant effect on depressive symptoms over time, $\Delta R^2 = 0.019$, $\Delta F(1, 211) = 6.65$, $p = .011$.

An exploratory analysis was also conducted to investigate the strength of the association between PBI and depressive symptoms at Time 2 while controlling for depression at Time 1 and the probability of belonging to the High Strengths/Low Barriers group. Specifically, depression at Time 1 was entered into Step 1, the probability of belonging to the High Strengths/Low Barriers group was entered into Step 2, and PBI was entered into Step 3. The results indicated that PBI did not significantly predict depressive symptoms at Time 2 above and beyond depressive symptoms at Time 1 and the probability of belonging in the High Strengths/Low Barriers group, $\Delta R^2 = 0.009$, $\Delta F(1, 210) = 3.33$, $p = .069$ (see Table 6).

Discussion

The goal of Study 1 was to identify unique groups of female EAs based on their self-reported strengths and barriers and to examine how group membership was associated with PBI and, in turn, how PBI was associated with depressive symptoms. This is the first known study to conduct a person-centered investigation of strengths and barriers associated with PBI and, therefore, these findings provide a unique contribution to the literature. Findings from this study are discussed below.

Consistent with the first hypothesis, it was possible to identify distinct groups of female EAs based on the majority of their self-reported strengths and barriers.

Specifically, as expected, one group that emerged reported lower levels of strengths and higher levels of barriers (i.e., Low Strengths/High Barriers group) and another reported higher levels of strengths and lower levels of barriers (i.e., High Strengths/Low Barriers group). A total of four groups were revealed through latent profile analysis: 1) Low Strengths/Low Barriers, 2) Moderate Strengths/Moderate Barriers, 3) Low Strengths/High Barriers, and 4) High Strengths/Low Barriers.

Among the four groups identified, women in the High Strengths/Low Barriers group reported significantly higher levels of self-esteem, indicating that women in this group felt better about themselves overall compared to all other groups. Additionally, individuals in this group reported the highest levels of emotional self-efficacy relative to all other groups, suggesting that individuals in this group felt more capable of regulating their emotions in stressful situations. Related to this, women in this group reported higher levels on the majority of the adaptive ER strategies, including refocus on planning, reappraisal of the situation, and putting into perspective compared to those individuals in each of the other groups. Women in the High Strengths/Low Barriers group also reported higher levels on positive refocusing, compared to the Low Strengths/High Barriers group and the Low Strengths/Low Barriers group. Moreover, women in the High Strengths/Low Barriers group reported significantly lower levels on each of the barriers, including internalization of the thin ideal, blaming oneself, ruminating, blaming others, and catastrophizing than the Low Strengths/High Barriers group and the Moderate Strengths/Moderate Barriers group. These findings lend support to the idea that it is not simply the presence of strengths that leads to emotional well-being, but the combination

of higher levels of strengths and lower levels of barriers. This finding is novel and has implications for strength-based research, highlighting the need for theories that are inclusive of both protective (strengths) and vulnerability (barriers) factors.

In the current study, the focus was placed on understanding the characteristics of the High Strengths/Low Barriers group and the Low Strengths/High Barriers group. While each of the barriers and the majority of strengths differentiated between these two groups in the expected fashion, results revealed some discrepancies. Physical activity did not significantly differentiate between groups; however, the trend was as expected with the Low Strengths/High Barriers group reporting lower levels of physical activity than the High Strengths/Low Barriers group. Although previous researchers have found that engagement in physical activity is positively associated with body image (Hausenblas & Fallon, 2006), there is also research indicating that engagement in specific types of sport and activities that emphasize the thin ideal (e.g., ballet, track, gymnastics) is negatively associated with body image (Ringham et al., 2006; Swami, Steadman, & Tovée, 2009). These findings suggest that certain types of physical activity may act as a strength, whereas others may act as a barrier. Thus, it may be that the women in the Low Strengths/High Barriers group engaged in activities that emphasized their appearance and subsequently encourage women to lose weight and maintain the thin ideal, whereas women in the High Strengths/Low Barriers group engaged in physical activities that reinforced body acceptance and appreciation. Alternatively, researchers have also found that women often begin an exercise regime for the purpose of changing their outward appearance, but with time, women's perceptions of exercise change and their routine is

maintained for the overall physical and mental health benefits (Martin & Lichtenberger, 2002). Thus, it may be that women in the High Strengths/Low Barriers group were more likely to have engaged in physical activity for longer, and as such physical activity was a strength for them.

In contrast to what was expected, the adaptive ER strategy, acceptance of the situation, did not significantly differentiate between the High Strengths/Low Barriers and Low Strengths/High Barriers groups. In fact, individuals in the Low Strengths/High Barriers group reported slightly higher levels of acceptance; however, this difference was not significant. Adaptive ER strategies are described as the ability to put an event into perspective and/or think about what can be learned from a stressful situation. Developers of the CERQ define acceptance as a strategy that involves acknowledging what you have been through and resigning yourself to it (Garnefski et al., 2002; Garnefski & Kraaij, 2007). Therefore, it may be that the act of ‘resigning’ oneself to the occurrence of the event is not a true form of adaptive emotion regulation. Alternatively, it may be that when participants responded to the questionnaires they imagined a recent stressful event in which acceptance did not play as salient a role. Although contrary to what was expected, these findings are in line with previous researchers who investigated the differences in emotion regulation between individuals who had been previously depressed and healthy controls (Ehring, Fischer, Schnulle, Bosterling, & Tuschen-Caffier, 2008). In contrast to what was expected, results of this study revealed that there were no differences on levels of acceptance, as measured by the CERQ, between those previously depressed and controls. Interestingly, there were differences on levels of

acceptance as measured by the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), with healthy controls reporting higher levels of acceptance. However, as Ehring and colleagues (2008) note, the CERQ acceptance subscale assesses acceptance of the situation (e.g., “I think that I have to accept the situation”), as opposed to acceptance of the emotion, and Hayes and colleagues (2006) argued that it is the acceptance the emotion that is salient (Hayes, Luoma, Bond, Masuda, Lillis, 2006). These findings provide further support that acceptance, as defined by the developers of the CERQ, may not be assessing a true ‘strength.’ In support of this, results indicated that the acceptance subscale of the CERQ had the lowest internal consistency of all subscales of the CERQ (Cronbach’s $\alpha = .69$), suggesting that it is possible that this subscale is not accurately assessing acceptance as a *true* adaptive ER strategy.

The second objective was to investigate the association between PBI and the High Strengths/Low Barriers group and the Low Strengths/High Barriers group. I expected that the probability of belonging in the High Strengths/Low Barriers group would be positively associated with PBI. The results were in line with the hypothesis and indicated that women who reported higher levels of emotional self-efficacy, self-esteem, physical activity, and adaptive ER strategies (e.g., positive refocusing, refocus on planning, reappraisal of the situation, and putting into perspective) and lower levels of internalization and maladaptive ER strategies were more likely to feel positively about their bodies. These results are consistent with past research that has demonstrated that self-esteem, positive reappraisal, and physical exercise is positively associated with PBI (Avalos et al., 2005; Frisén & Holmqvist, 2010; Wood-Barcalow et al., 2010), whereas

internalization of the thin ideal is negatively associated with PBI (Swami & Toveé, 2009; Williams et al., 2004). Further, these results contribute to the existing literature, as this is the first known study that has investigated the relative association of emotional self-efficacy, positive refocusing, refocus on planning and putting into perspective and PBI, demonstrating that individuals who endorse greater levels of these strengths are more likely to feel better about their bodies.

Furthermore, consistent with what was expected, the probability of belonging in the Low Strengths/High Barriers group was negatively associated with PBI, indicating that the greater a woman's probability of belonging in this group the lower her level of PBI. Exploratory analyses were also conducted investigating the association of the Low Strengths/Low Barriers and the Moderate Strengths/Moderate Barriers groups and PBI. Results revealed that the probability of belonging in these groups was negatively associated with PBI. In sum, these findings are in support of previous researchers (Keyes, 2002; Keyes & Lopez, 2002), who postulated that emotional well-being is made up of a combination of greater strengths and lower levels of barriers. Further, findings from this study contribute to the literature by demonstrating that there are distinct profiles of strengths and barriers. Moreover, as results indicated that it is the unique combination of greater levels of strengths and lower levels of barriers that is associated with PBI, this suggests that determining profile membership may be useful in identifying those who would benefit from mental health prevention programs.

Within objective three it was hypothesized that PBI would be significantly and negatively associated with depressive symptoms. These results were as expected and in

support of previous research (Iannantuono & Tylka, 2012), revealing that individuals who reported feeling better about their bodies reported lower levels of depressive symptoms. Moreover, the association between PBI and depressive symptoms was significant above and beyond the probability of belonging in the High Strengths/Low Barriers group, demonstrating the strength of the association between PBI and depressive symptoms. These results serve to highlight the importance of PBI and suggest that PBI may have a central role in the protection of depressive symptoms over time.

The fourth, and final, objective was to investigate whether PBI predicted lower levels of depressive symptoms over time. Consistent with what was expected, PBI significantly predicted depressive symptoms at Time 2 while controlling for depressive symptoms at Time 1. Exploratory analyses revealed that PBI did not significantly predict depressive symptoms at Time 2 above and beyond the probability of belonging in the High Strengths/Low Barriers group, indicating that the strength of the association between PBI and depressive symptoms at Time 2 was no longer significant after adding the probability of belonging to the High Strength/Low Barriers group to the model. This suggests that, while important, PBI is not the sole factor that protects against depressive symptoms and provides empirical evidence for multiple strengths that should be cultivated within mental health prevention and intervention programs. In summary, this is the first known study to investigate the association between PBI and the change in depressive symptoms over time. These results provide a unique contribution to the literature and provide support the idea that PBI is an important construct to be considered in protecting against the development of depression.

Study Strengths

There are many strengths of the current study. First, this study involved a large, ethnically diverse sample of female EAs (age range 18 – 29). As emerging adulthood is a distinct developmental stage characterized by identity development (Arnett, 2000; Schwartz et al., 2005), this study focused on PBI, as body image is an important component of identity (Dittmar, 2009). Further, by focusing exclusively on women within this developmental stage these findings advance our understanding of PBI among women during this stage of development by providing information on specific strengths and barriers of PBI and demonstrating that PBI is negatively associated with depressive symptoms. Additionally, this is the first known investigation that identified unique groups of female EAs based on their self-reported strengths and barriers using LPA, a person-centered, latent variable approach. This approach is advantageous to more commonly used variable-centered approaches, as LPA groups individuals together based on their shared characteristics that distinguish them from individuals within the other groups, while allowing for individual variability (Walrath et al., 2004). Last, an additional strength of this study is the use of both cross-sectional and longitudinal analyses to investigate the association between PBI and depressive symptoms over time. In sum, this is the first known study to employ a person-centered approach to the study of strengths and barriers associated with PBI among female EAs. Findings from the current study provide directions for future research and have important implications for both researchers and clinicians.

Limitations and Future Directions

In the current study, all participants were female and from one large urban university in southern Ontario. Therefore, it is unknown whether these findings are generalizable to women attending other universities as well as to women not enrolled in university. As Biswas-Diener and colleagues found that an individual's strengths may be different based on one's environment (Biswas-Diener, Kashdan, & Minhas, 2011) it will be important for future researchers to investigate the association among these psychological constructs and PBI in different settings to determine whether similar profiles emerge among women attending alternative post-secondary school settings and/or those in the workforce. Given the exploratory nature of the study and that women have higher rates of body dissatisfaction (Cash, 2002; Cook-Cottone & Phelps, 2003) and depression (e.g., Hankin et al., 1998) than men it was deemed important to focus exclusively on women in the current study. Furthermore, by focusing on women the findings from the current study provide a basis for which to build on these findings to involve men. Specifically, it will be of interest for researchers to investigate whether men and women can be grouped together in the same profiles, or whether there are gender differences between groups.

In the current study, the emphasis was placed on understanding the High Strengths/Low Barriers group and the Low Strengths/High Barriers group. In doing so, I focused less on the Low Strengths/Low Barriers group and the Moderate Strengths/Moderate Barriers group. Therefore, future researchers should more closely examine the correlates associated with these groups. In examining the differences

between the High Strengths/Low Barriers and the Low Strengths/High Barriers groups, not all of the strengths differentiated between groups as predicted. First, physical activity did not significantly differentiate between the High Strengths/Low Barriers group and the Low Strengths/High Barriers group. It is possible that different types of physical activity, specifically sports that are more aesthetically focused, may act as a barrier to PBI (Ringham et al., 2006; Swami et al., 2009). Alternatively, it may be that individuals who have just begun engaging in physical activity are doing so for weight management and appearance related concerns (Martin & Lichtenberger, 2002). Therefore, future research should investigate specific types and duration of physical activity and PBI to better understand the association between physical activity and PBI. Second, results revealed that women in the Low Strengths/High Barriers group reported higher levels of acceptance than women in the High Strengths/Low Barriers group. As previous researchers have found that acceptance is an integral component of programs designed to improve body image (e.g., Cash, 1997), this suggests that there may be different ways of assessing acceptance that may be more relevant to the study of PBI. Therefore, researchers should attempt to replicate this study and use different measures of acceptance to further investigate the association between acceptance and PBI. Lastly, while LPA is an innovative modeling analysis, researchers should build on this research by incorporating a longitudinal design. Longitudinal research from adolescence to emerging adulthood would allow researchers to investigate how the trajectories of strengths and barriers may change as adolescents' transition into emerging adults. These findings would contribute to our understanding of the role of strengths across

development. Further, these findings would highlight how different strengths may be more important for positive growth and emotional well-being at different stages of development, which would have implications for mental health promotion and intervention programs targeting different age groups.

Clinical Implications

The results of the current study underscore the importance of focusing on an individual's strengths as well as her problems, as greater levels of strengths and lower levels of barriers were associated with PBI and lower levels of depressive symptoms. These findings are in line with previous strength-based research (e.g., Cheon, 2008, Keyes, 2002; Keyes & Lopez, 2002) and have important clinical implications for clinicians working with emerging adults. Specifically, findings provide support for the inclusion of strengths in mental health assessment practices and prevention programs.

With respect to assessment, results of the current study provide additional support for assessing both strengths and barriers (Lopez, Snyder, & Rasmussen, 2003; Tedeschi & Kilmer, 2005) to identify women who may be at risk for body dissatisfaction and depressive symptoms and who would benefit from secondary prevention mental health programs. Findings indicated that membership in the Low Strengths/Low Barriers, Moderate Strengths/Moderate Barriers, and Low Strengths/High Barriers groups was associated with lower levels of positive body image, which in turn was associated with greater levels of depressive symptoms. Therefore, it is postulated that women who report similar profiles (i.e., similar to the Low Strengths/High Barriers, Moderate Strengths/Moderate Barriers, Low Strengths/Low Barriers groups) during an assessment

should be encouraged to participate in prevention programs.

With respect to prevention programs, these findings provide support for body image promotion programs that are focused on building individual strengths and decreasing barriers, or risk factors, which is in line with recent mental health promotion programs (e.g., McVey et al., 2010; Norwood, Murray, Nolan, & Bowker, 2011; O’Dea & Abraham, 2000; Rawana, Norwood, & Whitley, 2011). Results of the current study provide empirical support for specific strengths that future programs should emphasize in mental health programs to improve PBI. Specifically, findings suggest that it would be beneficial for programs to focus on promoting strengths that include enhancing one’s self-esteem and building upon one’s adaptive ER strategies and emotional self-efficacy to help women feel more confident about themselves, and in turn about their bodies. Further, results provide additional evidence for the continued inclusion of media literacy in these programs, as internalization of the thin ideal was identified as a barrier to PBI and media literacy teaches women to be more critical of the ‘thin ideal’ reinforced by society so that they feel less pressure to conform (Cooley & Toray, 2001). Results of the current study showed that PBI was negatively associated with depressive symptoms and researchers have identified poor body image as a well-known risk factor for disordered eating (e.g., Cooley & Toray, 2001; Polivy & Herman, 2002; Striegel-Moore & Bulik, 2007). Therefore, programs that work to focus on strengths that build PBI have broad implications for overall mental health and emotional well-being.

In summary, this is the first known study to conduct a person-centered investigation of specific strengths and barriers hypothesized to be associated with PBI

among female EAs. These findings highlight the importance of assessing both strengths and barriers in relation to positive outcomes, such as PBI, as well as negative outcomes, such as depressive symptoms. Results revealed that there are distinct groups of women who differ on their self-reported strengths and barriers. Further, these findings indicate that it is not simply the absence of barriers, but also the presence of strengths that is associated with higher levels of PBI and lower levels of depressive symptoms.

Study 2

Positive Body Image: A Qualitative Study

The main objective of this study was to use a strength-based approach to investigate how female EAs with PBI understand their body and their strengths. This study moves beyond the self-report questionnaires utilized in Study 1 to obtain a more in-depth understanding of how female EAs with self-reported PBI talk about their bodies and their individual strengths. To accomplish this, individual interviews with female participants who reported PBI were conducted. This exploratory qualitative study sought to answer the following questions:

1. How do female EAs with self-reported positive body image describe their feelings towards their body?
2. What strengths do female EAs identify as most important with respect to their overall self, as well as strengths related to their body?

Method

Participants

Selection of participants. Purposeful sampling was considered when selecting participants in the current study. Purposeful sampling involves selecting information-rich cases that are able to draw on their own knowledge and experiences to respond to the researcher's questions (Patton, 2002). Criterion sampling is a type of purposeful sampling that identifies participants based on a predetermined standard that is important to the researcher (Patton, 2002). Thus, the proposed study utilized criterion sampling to identify

participants with self-reported PBI. Subsequently, participants were eligible to partake in the interview component if they reported above the mean on the BAS (Avalos et al., 2005) and below the mean on the Body Shape Questionnaire (Cooper et al., 1987) and also endorsed greater or equal to 4 (i.e., *always* or *often*) on item 6 of the BAS: “I take a positive attitude towards my body.”

Using the SONA system, the online software that runs the Undergraduate Research Participant Pool (URPP) at York University, I invited forty-eight participants to participate in the interview. Contacting participants via the SONA system was advantageous, as it ensured that participants remained anonymous. Of the 48 eligible participants, 16 (33.3%) agreed to participate ($M_{\text{age}} = 20.94$, $SD_{\text{age}} = 2.14$, age range = 18.67 – 26.58, $M_{\text{BMI}} = 20.95$, $SD_{\text{age}} = 3.29$, range = 16.56 – 28.07). Four participants were in their first year of undergraduate studies (25.0%), four were in second year (25.0%), seven were in third year (43.8%), and one participant reported that she was in fourth year (6.3%). Eight participants were in the High Strengths/Low Barriers group (50.0%), 5 participants were in the Moderate Strengths/Moderate Barriers group (31.3%), and 3 participants were in the Low Strengths/Low Barriers group (18.8%). Pseudonyms were given to the participants to maintain confidentiality when identifying direct quotes, below. Six students identified as South Asian (Karmina, Carla, Kellie, Heather, Megan, and Katie), three identified as Asian (Amy, Rachel, and Anne), one identified as Caucasian (Ashley), three identified as African/Caribbean (Jennifer, Nicole, and Shannon), two identified as Middle Eastern (Julia and Aren), and one identified as both South American and Caucasian (Krista).

Measures

As part of a larger battery of measures that were administered to participants, the two measures described below were utilized to identify women with PBI.

Body appreciation. The Body Appreciation Scale (BAS; Avalos et al., 2005) was utilized as a measure of PBI (see Study 1 for a more detailed description).

Body dissatisfaction. The Body Shape Questionnaire (BSQ; Cooper et al., 1987) is a 16-item self-report measure of poor body image (e.g., “Have you thought that your thighs, hips, or bottom are too large for the rest of you”). Participants are asked to rank their thoughts and behaviours on a seven-point scale ranging from 1 (*never*) to 6 (*always*). Higher scores reflect greater levels of body dissatisfaction. The BSQ has demonstrated good psychometric properties (Rosen, Jones, Ramirez, & Waxman, 1996). This measure demonstrated good internal consistency in the current study (Cronbach’s $\alpha = .86$).

Interview protocol. A semi-structured interview was administered to the participants. For the purposes of the current study, responses to the following questions were analyzed:

1. How do you describe your attitude towards your body?
2. What are your greatest overall strengths (e.g., top 5 attributes)?
3. What are your body’s greatest strengths (e.g., top 5 strengths related to your body, body image, etc.)?

Procedure

Ethics approval was obtained from York University Research Ethics Board. Students from the Introduction to Psychology course at York University were recruited to participate in the online study and filled out an electronic consent form at the beginning of the study (see Appendix B). Eligible participants were then invited via the confidential URPP SONA system to come into the lab to participate in a qualitative interview (see Appendix F). Participants received a maximum of three notifications reminding them that they were eligible to partake in the interview (see Appendix G). I conducted all of the interviews with participants. Participants were informed that the interview was about body image, however they were not informed that they had been selected based on their self-reported levels of body image, nor were they informed of the ultimate goal of the study.

Participants received 1.0 course credit for partaking in the study. Participants provided verbal consent to have the interview audiotaped and were informed that all information would be kept confidential and anonymous. Participants were also told that they had the option of declining to answer any question, as well as the ability to opt out of the interview at any point. All participants were given a debriefing form (see Appendix D) at the end of the interview that asked them not to share the details of the interview with other students and also listed information about counselling and support services at York University and throughout the Greater Toronto Area.

Analytic Plan

The overarching goal of the current study was to investigate how female EAs with PBI describe their attitudes towards their body and individual strengths. This study took a thematic approach to qualitative analysis (Braun & Clarke, 2006). Thematic analysis was deemed appropriate for this study, as it is a flexible approach that enables the researcher to identify important themes consistent across the data (Braun & Clark, 2006). In describing the uses of thematic analysis in psychology, Braun and Clark (2006) outlined processes of thematic analysis that were followed in this study to ensure credibility of findings. In the first phase, a volunteer within my research lab transcribed the interviews verbatim from audio to written format. I conducted accuracy checks on all of the transcriptions, which enabled me to become more familiar with the data. Once accuracy checks were complete all of the interviews were printed to hard copy to facilitate reading through the data. Data was read through multiple times and initial thoughts were noted. The second phase involved identifying and labeling initial codes. To facilitate this, data was imported into NVivo qualitative data analysis software. Codes were identified that represented interesting aspects of the data. While coding, constant comparisons were made between interviews to ensure consistency. These codes were then used to note repeated patterns that were labeled as the themes.

Results

Overall Attitudes Towards Body

Two themes emerged when participants were asked to describe their overall attitudes towards their body: *Overall Appreciation* and *Body Acceptance* (see Table 7)

Overall appreciation (16 participants). When asked to describe their overall attitudes towards their body, each of the participants reported an overall appreciation for her body and the majority of the women directly commented on their positive feelings towards their body. For example, Katie reported, “I’m happy about it,” and Julia stated, “Yah, I’m pretty positive about it.” Overall appreciation of one’s body was also expressed through participants’ comments that reflected the importance of taking care of their body, “I don’t do anything that like deliberately harms my body. Any time that I am aware that I am doing something that harms my body I try to stay away,” reported Shannon. Further, Shannon reported, “I exercise. I don’t take, you know, my body for granted.”

Body acceptance (12 participants). When describing their attitudes towards their bodies, participants reported that they viewed their bodies as positive overall; however, they acknowledged that there were things that they may change, indicating that these women with PBI are aware of the pressures from society that women should have an “ideal” body type. For example, Carla reported, “I’m completely happy with my body. I do think that I could use a little work in terms of toning it in the way that I want and what I think is an ideal body” she added, “other than that I’m happy with how I am.” Heather reported appreciation of her body and the features that make it unique, “Like, I

like the quirks and whatever.” Overall, the women reported that they liked their bodies as a whole and accepted their bodies.

Greatest Overall Strengths

Participants identified strengths consistent with two main themes. First, the women spoke of innate characteristics of themselves as individuals (a theme of *Traits*). In addition, participants spoke of their abilities in various areas that were grouped within the theme of *Competencies* (see Table 7). Interestingly, it was observed that participants initially appeared to have difficulty identifying their overall strengths. This was observed through participants taking longer pauses, engaging in nervous laughter, and vocalizing their uncertainty as to whether their responses were acceptable. For example, Aren asked, “Um, I dunno, um with schooling and I guess like my interest in school would be...like would that count as one?” With time, each of the participants was able to successfully identify individual strengths.

Traits (16 participants). When asked to identify their greatest overall strengths, participants often identified unique characteristics of themselves, such as being “persistent,” “optimistic,” and having a “positive impact in terms of um other people” (Carla), “quite confident,” “relatively intelligent,” and “funny.” (Ashley). Aren reported that she is “very problem focused” specifically, she stated that “I’m the kind of person that’s like ‘Okay, we have an emergency, what’s going on? Okay this is what happened, this is how we’re going to solve it. This is how we’re going to work around it and I guess I would be the leader in any emergency. Most of the time I actually am.” Two participants also identified traits associated with their physical appearance. For example,

Megan reported, “I like my height.” Whereas others also identified that some of their greatest strengths involved interacting with others. For example, Anne reported, “I like helping people,” Shannon indicated that one of her strengths is her “willingness to understand things before I jump to conclusions,” and Rachel reported that one of her strengths is “making new friends in a strange, totally strange uh environment.”

Competencies (6 participants). When identifying their overall strengths, participants also made reference to things that they felt they were successful at. Aren reported, “I love learning. I absolutely love learning.” Participants also spoke of the various activities that they engaged in, Katie reported, “I’m a good Kathak dancer” and referred to the medals that she has won in competitions. Rachel identified writing as a strength, “writing novels online and I have a lot of friends which they like my novels” as well as her ability to speak multiple languages, including “Japanese, Korean, Chinese, and English.”

Body’s Greatest Strengths

Two major themes emerged when participants were asked to identify overall strengths related to their body, including, *Internal Attributes* and *External Attributes* (see Table 7). Similar to the experiences observed when asking participants about their overall strengths, participants also appeared to have difficulty identifying strengths related to their body. For example, Carla stated, “Um...um...what else? If...this is hard (laughing).”

Internal attributes (14 participants). Internal attributes were most commonly identified by participants as being part of their overall strengths associated with their

body. This theme captured individuals' attributes that are more inherent to the individual, such as the way in which one's body functions. Carla reported, "Um, the way my body generally does react to a certain environment. Example, if I haven't been sleeping for a couple of days I can still pretty much function prop...properly and not look like my body's tiring out." Similarly, Heather commented on her body's ability to function, reporting, "everything works properly." Amy reported, "I know I'm at a healthy weight." Carla and Anne both referred to their metabolism, as Carla reported "I appreciate the fact that I'm gifted with a good metabolism so I can eat pretty much anything" and Anne reported, "I have a high metabolic rate. So that's why I can eat and not gain weight. And if I, say, like I wanna lose weight, like healthily lose weight, I can do so." Amy and Aren each made reference to God. Specifically, Aren reported, "...now I'm working at a nursing home. But, so I guess, I have...I have enough experience and I've seen so many different people that now it's like, you know what, thank you Lord for giving me this body you know."

External attributes (13 participants). This theme represented the women's self-identified strengths that included aspects that are more visible to others. Nicole identified that, "being able to dance diversely" was one of her body's strengths and Aren reported, "I can walk forever." Amy reported, "I like being physically active. So I like to go on runs or hikes or walk around all day to be active." Additionally, many participants identified specific features of their bodies, such as "I think my eyebrows are great" (Aren), "I like my teeth" (Megan), "I like my eyes" (Heather). Kellie reported, "I think I

like my structure a lot. I'm not too tall; I'm not too short. I like the way that my body's built."

Discussion

The goal of this study was to explore how women with self-reported PBI described their attitudes towards their body and which strengths they identified as most salient with respect to their overall selves and their bodies. This study went beyond the use of self-report questionnaires from Study 1 and involved open-ended questions to capture individuals' thoughts and feelings towards their bodies and their individual strengths.

The first research question sought to better understand how female EAs with self-reported PBI described their feelings towards their body. The findings indicated that each of the participants felt positively about her body. The overall appreciation of one's body that was reported by each of the women confirms the accuracy of the criteria that were used to select participants to partake in the interview and also provides additional support for the validity of the BAS (Avalos et al., 2005). Interestingly, the majority of the participants made reference to the pressures from society for women to have an 'ideal' body type. Many participants identified that their body did not fit with the 'ideal' that society reinforces for women, but they reported that they liked, and accepted, their bodies and their self-perceived "quirks." This finding suggests that, while these women may be aware of the sociocultural pressures, they have not internalized these pressures and do not feel compelled to obtain the 'thin ideal.' This is in line with results of a qualitative study

conducted by Wood-Barcalow and colleagues (2010), which revealed that women with PBI were more likely to filter negative thoughts and reject media pressures.

The second goal of this study was to better understand the strengths that female EAs with PBI identified as most important with respect to their overall self, as well as strengths related to their body. When speaking of their general strengths, two themes were identified, including *Traits* and *Competencies*. In this context, traits included innate characteristics, whereas the theme of competencies incorporated things that participants felt that they were skilled at. These themes are similar to the strengths identified by Epstein and colleagues (2000), who described characteristics that are similar to the current study's theme of 'traits' as personality attributes inherent in the individual, such as extraversion. Further, they described competencies as certain skills that have been developed, such as dancing (Epstein, Rudolph, & Epstein, 2000, p. 250). All participants identified specific traits of themselves that they felt were their greatest strengths, whereas only six participants identified specific competencies. Thus, based on the frequency of participants' responses, the most important individual strengths that women identified were individual traits, such as confidence, organization, and kindness. This finding highlights the importance of assessing one's traits to utilize these positive attributes to develop new competencies, which is in line with the suggestion of Rawana and Brownlee (2009).

With respect to strengths associated with one's body, two themes were identified that were labeled *Internal* and *External Attributes*. These themes captured the strengths that lay within the individual, such as the way in which one's body functioned (Internal

Attributes), as well as those more visible to others, including strengths related to physical activity (External Attributes). Across both themes, participants referred to strengths that were either indirectly or directly associated with their body's weight and shape. Within the theme of Internal Attributes, participants commented on strengths associated with their metabolism and their body's ability to maintain a certain weight. Within External Attributes, participants identified specific physical features, such as their body's structure. These findings underscore participants' awareness of their weight and shape, highlighting the importance of women accepting their bodies to help them feel more confident. Overall, participants most frequently identified internal attributes as their greatest overall strengths related to their body, suggesting that women with PBI are in tune and appreciative of their body's internal strengths and well-being. This suggests that it may be more adaptive to view one's body as a functional organism as opposed to a physical object. This is in line with previous research that found that women who place a lot of importance on their appearance are more likely to report higher levels of negative body image, depressive symptoms, and disordered eating (Cash & Labarge, 1996).

Study Strengths

There are many strengths of the current study. This is the first known study to directly investigate how female EAs with PBI identify their overall strengths and strengths related to their body. Previous researchers have demonstrated that many EAs experience body dissatisfaction (Gillen & Lefkowitz, 2006), thus focusing solely on EAs was advantageous, as these findings help to broaden our understanding of PBI during this unique stage of development. Further, open-ended questions enabled the researcher to

capture information that is not available through the use of traditional self-report questionnaires; therefore, the findings from this study help to shed light on how women with PBI describe their attitudes towards as their bodies as well as their individual strengths.

Limitations and Future Directions

As the first known study to qualitatively investigate strengths among female EAs with PBI this study also has limitations that may be addressed in future research. Findings from this study reflect the views of 16 female EAs with PBI. While these women represented an ethnically diverse group of undergraduates, all participants attended the same urban university, and, thus, it is unclear whether these findings are generalizable to other women. Therefore, researchers should attempt to build on these findings, as researchers have found that an individual's strengths may be different depending on one's context (Biswas-Diener et al., 2011). Thus, it is expected that women living in different environments (e.g., rural vs. urban), or in different stages of life (emerging adulthood vs. adulthood) may identify different strengths that are more significant to their lifestyle. These findings would have implications for strength-based mental health promotion programs, as findings would allow facilitators to tailor the program based on their audience. Additionally, by focusing exclusively on women, these findings provide a basis for which to conduct mixed gender research, investigating how men with PBI describe their attitudes towards their body and what strengths they identify with respect to their overall strengths, as well as strengths associated with their body. Last, a potential limitation of this study is that participants were only interviewed at one

time and were not given the opportunity to return for follow-up to verify themes and provide participants with the opportunity to review their responses. While a single interview is still utilized in many research studies, researchers have argued that having participants return after the initial interview may add to the quality and richness of the data (Polkinghorne, 2005). Therefore, future researchers may want to build on these findings through multiple interviews.

Clinical Implications

When asked to identify their overall strengths, women more frequently identified specific traits (e.g., kindness, confidence) compared to competencies. These findings suggest that mental health promotion programs should focus on building awareness of one's strengths so that women feel more confident in trying new things and subsequently developing new competencies. Additionally, based on the frequency that participants identified aspects of their outward appearance, the results suggest that strengths that are most important with respect to participants' bodies may be associated with their outward appearance. This finding provides additional evidence for mental health promotion and intervention programs to include a media literacy lesson (e.g., Cook-Cottone & Phelps, 2003) that educates women on the unrealistic ideal that society reinforces and teaches women how to think critically about the media. Additionally, results reinforce the importance of programs incorporating lessons on mindfulness and acceptance (e.g., Cash, 1997) so that all women accept and appreciate their bodies.

Furthermore, when asked to identify their strengths, participants were observed to have difficulty doing so. Specifically, women took longer than usual to respond to the

question, engaged in nervous laughter, or directly reported that identifying their strengths was a difficult, unfamiliar task. As findings from Study 1 indicate that it is not simply the absence of barriers, but the presence of strengths that is associated with greater levels of PBI and lower levels of depressive symptoms, it will be important for programs to teach women the language of strengths to help make them more comfortable and confident in themselves.

In summary, findings from this study contribute to the literature on PBI and strengths. Results suggest that participants who reported PBI were able to appreciate and accept their bodies as they are. Furthermore, when asked to identify their greatest overall strengths, women most frequently commented on specific traits, and when identifying their greatest overall strengths associated with their bodies, many women identified various internal attributes. Thus, these findings indicate that the most salient strengths that participants highlighted were associated with their inner selves, further reinforcing that women who first feel confident about their inner selves will be more accepting and confident of their bodies.

General Discussion

The overarching goal of this research project was to increase our understanding of PBI among female EAs through a mixed-method, strength-based approach. This goal was based on contemporary theories of development that emphasize an individual's strengths, as opposed to focusing solely on one's risks. These two studies provide evidence for specific strengths that are associated with PBI among female EAs. Results of Study 1 demonstrated that higher levels of strengths and lower levels of barriers were associated

with greater levels of PBI and lower levels of depressive symptoms, highlighting the importance of increasing one's strengths in conjunction with targeting barriers for optimal mental health. Results of Study 2 indicated that women with PBI appreciate and accept their bodies as they are. Furthermore, when talking about their overall strengths and strengths related to their body, participants spoke of strengths associated with their inner and outer selves. Thus, these findings serve to highlight the importance of women being confident in both their bodies, inside and out. In summary, findings from this research project contribute to the literature on positive body image and strengths and have important implications for researchers as well as clinicians.

The current research project has many strengths. First, by incorporating a mixed-method approach, the current project involved a quantitative study that included advanced person-centered modeling analysis and a longitudinal component, as well as an exploratory qualitative component to gain a more in-depth understanding of women with PBI. Second, by focusing exclusively on female EAs, this project increases our awareness of specific strengths that are salient to women in this stage of development and contributes to our understanding of PBI. In particular, results across both studies highlight a breadth of strengths that are associated with PBI, including individual traits, the ability to adaptively regulate one's emotions, to feel positive and confident about oneself, and competent in one's ability to regulate one's emotions. Thus, these findings provide different strengths for clinicians to focus on to tailor prevention and intervention programs to meet the needs of the individual(s). Additionally, these findings serve to reinforce the value of understanding both barriers and strengths associated with PBI to

optimize mental health, as program facilitators can work to diminish barriers while promoting individual strengths. Overall, these two studies combined help to advance our understanding of the strengths associated with PBI in EAs by highlighting specific strengths that are associated with PBI and demonstrating that PBI is negatively associated with depressive symptoms. Further, results highlight the importance of considering both strengths and barriers, which has implications for researchers and clinicians.

As this is the first known research project of its kind, it will be important for researchers to involve male participants to investigate potential gender differences in strengths and PBI. Longitudinal research would also be beneficial in order to investigate the trajectories of strengths over time. Further, it would be interesting for researchers to utilize the results from both Study 1 and 2 to inform one another. For example, as the qualitative study was exploratory, broad-based, open-ended questions were employed; however, it would be interesting for researchers to question participants directly on the importance of the identified strengths from Study 1 (i.e., self-esteem, emotional self-efficacy, and adaptive ER strategies). Additionally, the findings from Study 2 suggest that researchers should conduct a quantitative investigation of specific traits and internal attributes to investigate how these strengths are associated with PBI. Last, it would be interesting for researchers to investigate the association between PBI and other outcomes, including positive outcomes, such as interpersonal relationships and academic and vocational success. As women with PBI feel confident about their bodies, it is expected that this confidence may be carried forward and associated with success in their and professional and personal lives.

For clinicians, findings from these studies provide support for strength-based mental health promotion programs designed to enhance strengths and promote overall well-being. Results from Study 1 revealed that it is the combination of greater levels of strengths and lower levels of barriers that is associated with PBI and lower levels of depressive symptoms, and Study 2 indicated that individuals with self-reported PBI, in time, endorsed positive feelings towards their bodies. Consequently, clinicians may have to encourage clients to identify strengths, such as providing examples or using self-report measures of strengths, such as the Strength Assessment Inventory (SAI; Rawana & Brownlee, 2010) or the Values In Action Inventory of Strengths (VIA-IS; Peterson & Seligman, 2004). Clinicians may also find it helpful to revisit the discussion of strengths continually throughout the assessment and intervention process, as clients gain a greater appreciation of the value and usefulness of optimizing and leveraging their strengths and minimizing their barriers on a daily basis. Furthermore, across both studies, societal influences that reinforce the thin ideal were apparent, underscoring the importance for clinicians to incorporate a media literacy component in treatment to educate their clients on the ways in which society's depiction of the thin ideal is unrealistic. Overall, findings across the two studies highlight the importance of implementing mental health promotion programs that promote positive change through building upon individuals' strengths and working to decrease barriers.

In summary, emerging adulthood is a time of identity exploration and development (Arnett, 2000; Schwartz et al., 2005). Body image is a salient component of one's identity (Dittmar, 2009), making it important to investigate during this stage of

development. This is the first known mixed-method research project that sought to broaden our understanding of strengths associated with PBI among female EAs. Study 1 utilized a person-centered investigation to understand the profiles of strengths and barriers and how group membership is associated with PBI and, in turn, depressive symptoms. Study 2 involved a qualitative analysis of open-ended responses from female EAs with PBI in order to gain a better understanding of how they felt about their bodies and what they identified as their individual strengths. Across both studies, results indicated that it was the presence of strengths and the absence of barriers that was associated with PBI and emotional well-being. Findings from this project support the importance of considering strengths as well as barriers in the prevention and treatment of mental health concerns, which has implications for clinicians and researchers. Researchers should build on the knowledge gained from the current research project to inform the development, and evaluation of, a strength-based mental health promotion program that seeks to cultivate strengths and lessen barriers to promote a strong sense of self and positive body image.

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Table 1

Summary of Means, and Standard Deviations, for All Dependent Measures

Measure	M	SD	Range	
			Potential	Actual
STRENGTHS				
Emotional Self-Efficacy	6.39	1.91	1 - 10	1 - 10
Physical Activity	7.15	5.50	0 - 24	0 - 24
Self-Esteem	19.63	5.34	0 - 30	0 - 30
Acceptance	11.73	3.10	4 - 20	4 - 20
Positive Refocusing	10.22	3.30	4 - 20	4 - 20
Refocus on Planning	12.10	3.30	4 - 20	4 - 20
Reappraisal of Situation	12.65	3.80	4 - 20	4 - 20
Putting into Perspective	12.40	3.60	4 - 20	4 - 20
BARRIERS				
Internalization - General	2.96	0.90	1 - 5	1 - 5
Self-Blame	9.96	3.04	4 - 20	4 - 20
Rumination	11.40	3.21	4 - 20	4 - 20
Catastrophizing	8.92	3.22	4 - 20	4 - 20
Other Blame	8.24	2.70	4 - 20	4 - 20
OUTCOMES				
Positive Body Image	3.47	0.80	1 - 5	1 - 5
Depressive Symptoms (T1)	17.41	10.20	0 - 59	0 - 59
Depressive Symptoms (T2)	17.78	11.44	0 - 59	0 - 55

Table 2

Summary of Intercorrelations and Partial Correlations (Controlling for Social Desirability and Acquiescence) for All Dependent Measures of Latent Profile Analysis

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13
1. Emotional Self-Efficacy	Zero-order <i>r</i>	1	.072 ^b	.36 ^c	.073 ^b	.22 ^c	.27 ^c	.31 ^c	.24 ^b	-.20 ^c	-.18 ^c	-.16 ^c	-.18 ^c	-.071 ^b
	Partial <i>r</i>	1	.070 ^a	.36 ^c	.080 ^b	.20 ^c	.26 ^c	.31 ^c	.23 ^c	-.20 ^c	-.20 ^c	-.17 ^c	-.19 ^c	-.070 ^a
2. Physical Activity	Zero-order <i>r</i>	-	1	.097 ^c	.042	.070 ^a	.12 ^c	.13 ^c	.074 ^c	-.010	.010	.030	-.020	-.010
	Partial <i>r</i>	-	1	.10 ^c	.040	.070 ^a	.13 ^c	.12 ^c	.072 ^a	-.010	.010	.030	-.022	-.020
3. Self-Esteem	Zero-order <i>r</i>	-	-	1	-.042	.17 ^b	.30 ^c	.40 ^c	.24 ^c	-.36 ^c	-.40 ^c	-.30 ^c	-.33 ^c	-.082 ^b
	Partial <i>r</i>	-	-	1	-.040	.15 ^c	.29 ^c	.40 ^c	.23 ^c	-.35 ^c	-.38 ^c	-.30 ^c	-.33 ^c	-.074 ^b
4. Acceptance	Zero-order <i>r</i>	-	-	-	1	.29 ^c	.41 ^c	.44 ^c	.39 ^c	-.010	.39 ^c	.46 ^c	.23 ^c	.11 ^c
	Partial <i>r</i>	-	-	-	1	.29 ^c	.42 ^c	.45 ^c	.40 ^c	-.033	.41 ^c	.46 ^c	.23 ^c	.11 ^c

Note. 1 Emotional Self-Efficacy; 2 level of Physical Activity; 3 Self-Esteem; 4,5,6,7,8 adaptive emotion regulation subscales of the Cognitive Emotion Regulation Questionnaire; 9 subscale of the Sociocultural Attitudes Towards Appearance Questionnaire-3; 10, 11, 12, 13 maladaptive emotion regulation subscales of the Cognitive Emotion Regulation Questionnaire.

^a $p < .05$. ^b $p < .01$. ^c $p < .001$.

(continued)

Table 2 (continued)

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13
5. Positive Refocusing	Zero-order r	-	-	-	-	1	.52 ^c	.53 ^c	.45 ^c	-.07 ^b	.10 ^c	.11 ^c	.098 ^c	.17 ^c
	Partial r	-	-	-	-	1	.52 ^c	.53 ^c	.45 ^c	-.06 ^a	.092 ^b	.11 ^c	.098 ^b	.18 ^c
6. Refocus on Planning	Zero-order r	-	-	-	-	-	1	.75 ^c	.55 ^c	-.13 ^c	.16 ^c	.24 ^c	.018	.087 ^b
	Partial r	-	-	-	-	-	1	.75 ^c	.54 ^c	-.13 ^c	.16 ^c	.24 ^c	.011	.10 ^c
7. Reappraisal of Situation	Zero-order r	-	-	-	-	-	-	1	.68 ^c	-.20 ^c	.082 ^b	.12 ^c	-.10 ^c	.020
	Partial r	-	-	-	-	-	-	1	.67 ^c	-.20 ^c	.074 ^b	.13 ^c	-.11 ^c	.030
8. Putting into Perspective	Zero-order r	-	-	-	-	-	-	-	1	-.10 ^c	.11 ^c	.13 ^c	-.10 ^b	.053 ^a
	Partial r	-	-	-	-	-	-	-	1	-.10 ^c	.10 ^c	.12 ^c	-.10 ^b	.070 ^a
9. Internalization - General	Zero-order r	-	-	-	-	-	-	-	-	1	.20 ^c	.16 ^c	.20 ^c	.14 ^c
	Partial r	-	-	-	-	-	-	-	-	1	.18 ^c	.15 ^c	.20 ^c	.13 ^c

Note. 1 Emotional Self-Efficacy; 2 level of Physical Activity; 3 Self-Esteem; 4,5,6,7,8 adaptive emotion regulation subscales of the Cognitive Emotion Regulation Questionnaire; 9 subscale of the Sociocultural Attitudes Towards Appearance Questionnaire-3; 10, 11, 12, 13 maladaptive emotion regulation subscales of the Cognitive Emotion Regulation Questionnaire.

^a $p < .05$. ^b $p < .01$. ^c $p < .001$.

(continued)

Table 2 (continued)

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13
10. Self-Blame	Zero-order <i>r</i>	-	-	-	-	-	-	-	-	-	1	.60 ^c	.42 ^c	.14 ^c
	Partial <i>r</i>	-	-	-	-	-	-	-	-	-	1	.60 ^c	.40 ^c	.12 ^c
11. Rumination	Zero-order <i>r</i>	-	-	-	-	-	-	-	-	-	-	1	.45 ^c	.24 ^c
	Partial <i>r</i>	-	-	-	-	-	-	-	-	-	-	1	.50 ^c	.23 ^c
12. Catastrophizing	Zero-order <i>r</i>	-	-	-	-	-	-	-	-	-	-	-	1	.47 ^c
	Partial <i>r</i>	-	-	-	-	-	-	-	-	-	-	-	1	.47 ^c
13. Other Blame	Zero-order <i>r</i>	-	-	-	-	-	-	-	-	-	-	-	-	1
	Partial <i>r</i>	-	-	-	-	-	-	-	-	-	-	-	-	1

Note. 1 Emotional Self-Efficacy; 2 level of Physical Activity; 3 Self-Esteem; 4,5,6,7,8 adaptive emotion regulation subscales of the Cognitive Emotion Regulation Questionnaire; 9 subscale of the Sociocultural Attitudes Towards Appearance Questionnaire-3; 10, 11, 12, 13 maladaptive emotion regulation subscales of the Cognitive Emotion Regulation Questionnaire.

^a $p < .05$. ^b $p < .01$. ^c $p < .001$.

Table 3

Fit Statistics for 2, 3, and 4-Profile Models

	AIC	BIC	SABIC	VLMRT p	Entropy
2-profile solution	90888.011	91099.568	90972.501	$p < .001$	0.795
3-profile solution	89811.051	90096.653	89925.112	$p = 0.0065$	0.809
4-profile solution	89181.391	89541.038	89325.023	$p = 0.0073$	0.821

Note. AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; SABIC = Sample-size Adjusted Bayesian Information Criterion; VLMRT = Vuong-Lo-Mendell-Rubin Test.

Table 4

Summary of Means and Standard Deviations for All Dependent Measures within Profiles

Measure	Profile 1 (n = 615)		Profile 2 (n = 337)		Profile 3 (n = 105)		Profile 4 (n = 407)		F (<i>p</i> -value)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
	STRENGTHS								
Emotional Self-Efficacy	6.20 _a	0.11	6.32 _a	0.15	4.31 _b	0.27	7.31 _c	0.090	87.93 (.000) ¹
Self-Esteem	19.60 _a	0.31	18.10 _{a,b}	0.46	11.87 _c	0.73	23.12 _d	0.31	223.30 (.000)
Physical Activity	6.60 _a	0.24	7.34 _{a,b}	0.40	6.53 _{a,b}	0.62	7.98 _b	0.32	4.78 (.003)
Acceptance	9.80 _a	0.20	13.50 _b	0.30	12.92 _{b,c}	0.44	12.80 _c	0.25	204.73 (.000) ¹
Positive Refocusing	8.60 _a	0.13	11.90 _{b,c}	0.37	7.80 _d	0.53	11.90 _c	0.25	178.82 (.000) ¹
Refocus on Planning	9.83 _a	0.15	13.52 _b	0.34	9.60 _a	0.56	14.82 _c	0.26	419.22 (.000) ¹
Reappraisal of Situation	10.01 _a	0.19	14.10 _b	0.49	8.73 _c	0.51	16.40 _d	0.25	734.93 (.000)
Putting into Perspective	10.23 _a	0.18	13.80 _b	0.33	9.40 _c	0.50	15.20 _d	0.24	316.60 (.000) ¹

Note. Means sharing a common subscript (e.g., _a) are not statistically different at $p < .05$ according to the Tukey HSD procedure.

Profile 1 = Low Strengths/Low Barriers, Profile 2 = Moderate Strengths/Moderate Barriers, Profile 3 = Low Strengths/High Barriers, Profile 4 = High Strengths/Low Barriers.

¹ variances were unequal and the Welch test (F^{**}) is reported as well as results of Dunnett T3 post-hoc tests.

(continued)

Table 4 (continued)

Measure	Profile 1 (n = 615)		Profile 2 (n = 337)		Profile 3 (n = 105)		Profile 4 (n = 407)		F (<i>p</i> -value)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
BARRIERS									
Internalization - General	2.70 _a	0.040	3.20 _b	0.070	3.70 _c	0.12	2.60 _d	0.060	53.90 (.000) ¹
Self-Blame	8.50 _a	0.15	12.10 _b	0.30	14.30 _c	0.75	9.15 _d	0.24	235.14 (.000) ¹
Rumination	9.70 _a	0.18	13.71 _b	0.27	15.34 _c	0.60	10.84 _d	0.30	283.64 (.000) ¹
Catastrophizing	7.97 _a	0.14	11.50 _b	0.44	12.71 _c	0.78	7.20 _d	0.20	228.82 (.000) ¹
Other Blame	7.80 _a	0.12	10.23 _b	0.36	8.20 _a	0.46	7.30 _c	0.13	83.38 (.000) ¹

Note. Means sharing a common subscript (e.g., _a) are not statistically different at $p < .05$ according to the Tukey HSD procedure.

Profile 1 = Low Strengths/Low Barriers, Profile 2 = Moderate Strengths/Moderate Barriers, Profile 3 = Low Strengths/High Barriers, Profile 4 = High Strengths/Low Barriers.

¹ variances were unequal and the Welch test (F^*) is reported as well as results of Dunnett T3 post-hoc tests.

Table 5

Cross-Sectional Hierarchical Multiple Regression Analyses Demonstrating the Relation Between Depressive Symptoms and High Strengths/Low Barriers group membership and Positive Body Image

Predictor	Depressive Symptoms	
	ΔR^2	β
Step 1	-.14***	
High Strengths/Low Barriers		-.37***
Step 2	.09***	
Positive Body Image		-.32***
Total R^2	0.23***	

*** $p < .001$.

Table 6

Longitudinal Hierarchical Multiple Regression Analyses Predicting Depressive Symptoms at Time 2 From Depressive Symptoms at Time 1, the High Strengths/Low Barriers group membership and Positive Body Image

Predictor	Depressive Symptoms (T2)	
	ΔR^2	β
Step 1	-.37***	
Depressive Symptoms (T1)		.60***
Step 2	.031**	
High Strengths/Low Barriers		-.20**
Step 3	.009	
Positive Body Image		-.11
Total R^2	0.41	

Note. T1 = Time 1, T2 = Time 2

** $p < .01$, *** $p < .001$

Table 7

Questions, Themes, Sub-Themes, and Exemplifying Quotes of Study 2

QUESTION	THEME	SUB-THEMES	EXEMPLIFYING QUOTES
Attitudes Towards Body	Overall Appreciation	Positive View of the Body	<p>“Um, perfectly fine, I have no issues with it.”</p> <p>“I’m completely happy with my body.”</p>
		Healthy Lifestyle	<p>“I exercise. I don’t take, you know, my body for granted. I don’t use it for just anything.”</p> <p>“like I take care of it and I’m pretty health conscious”</p> <p>“I exercise regularly”</p> <p>“I like to do things that are physical”</p>
	Body Acceptance	Acceptance of Flaws	<p>“like, sometimes I do feel kind of on the downside, maybe I could, you know, lose some belly fat, or maybe I can, you know, have like longer legs or something like that. But I just think like my body type, I like it. More than ever, I actually like my body type.”</p> <p>“I’m very happy with my body. Obviously there’s little things that I would change here and there. Um, but other than that I think I worked hard enough at it to be happy with it.”</p>

(continued)

Table 7 (continued)

QUESTION	THEME	SUB-THEMES	EXEMPLIFYING QUOTES
Greatest Overall Strengths	Traits	Knowing Oneself	<p>“I’d say I’m quite confident.”</p> <p>“staying organized.”</p> <p>“So um, strong would be my communication skills.”</p> <p>“I think I’m honest.”</p> <p>“I’m a nice person.”</p>
		Being with Others	<p>“I like to get along with people.”</p> <p>“Um, positive impact in terms of other people.”</p> <p>“I’m very approachable.”</p> <p>“I like helping people.”</p>
		Physical Appearance	<p>“Um, I guess I like my hair.”</p> <p>“I’m pretty.”</p>
	Competencies	Physical Abilities	<p>“I’m a good Kathak dancer.”</p> <p>“I can cook.”</p>
		Engaging in Enjoyable Activities	<p>“um, doing things I like. That’s the second most important thing. Please myself, pleasing myself as in going out, travelling, or doing work that I like to do. Volunteering, stuff like that.”</p>

(continued)

Table 7 (continued)

QUESTION	THEME	SUB-THEMES	EXEMPLIFYING QUOTES
		Academic Strengths	<p>“I enjoy doing school work. I’m really focused on school. I like academics a lot.”</p> <p>“I absolutely love learning.”</p> <p>And I never... actually I never feel nervous about exams.”</p>
Body’s Greatest Strengths	Internal Attributes	<p>Body Functions</p> <p>Strengths related to Weight</p>	<p>“I appreciate that like in general, that I’m able to function. Because like you know, everything works properly.”</p> <p>“I think I have a great immune system”</p> <p>“I can walk forever”</p> <p>“I can endure a lot. I have a lot of endurance”</p> <p>“I appreciate the fact that I’m gifted with a good metabolism so I can pretty much eat anything.”</p> <p>“I know I’m at a healthy weight.”</p> <p>“I’m not overweight or anything, And I’m not too skinny. I guess I’m just like average.”</p> <p>“Um, well I have a high metabolic rate.”</p>

(continued)

Table 7 (continued)

QUESTION	THEME	SUB-THEMES	EXEMPLIFYING QUOTES
		Religion	<p>“...thank you Lord for giving me this body you know.”</p> <p>“I like that I’m able to still walk around and carry things pretty easily...something I really appreciate and like happy to like God so.”</p>
	External Attributes	Strengths related to Physical Appearance	<p>“I think I like my structure a lot. I’m not too tall; I’m not too short. I like the way that my body’s built.”</p> <p>“Um, I like my nose a lot.”</p> <p>“I’m not like overweight or anything. And I’m not too skinny. I guess I’m just like average.”</p>
		Strengths related to Physical Activity	<p>“I have strong legs. I’ve played soccer.”</p> <p>I like being physically active.”</p> <p>“I can walk forever.”</p> <p>I think, um, being able to dance diversely.”</p>

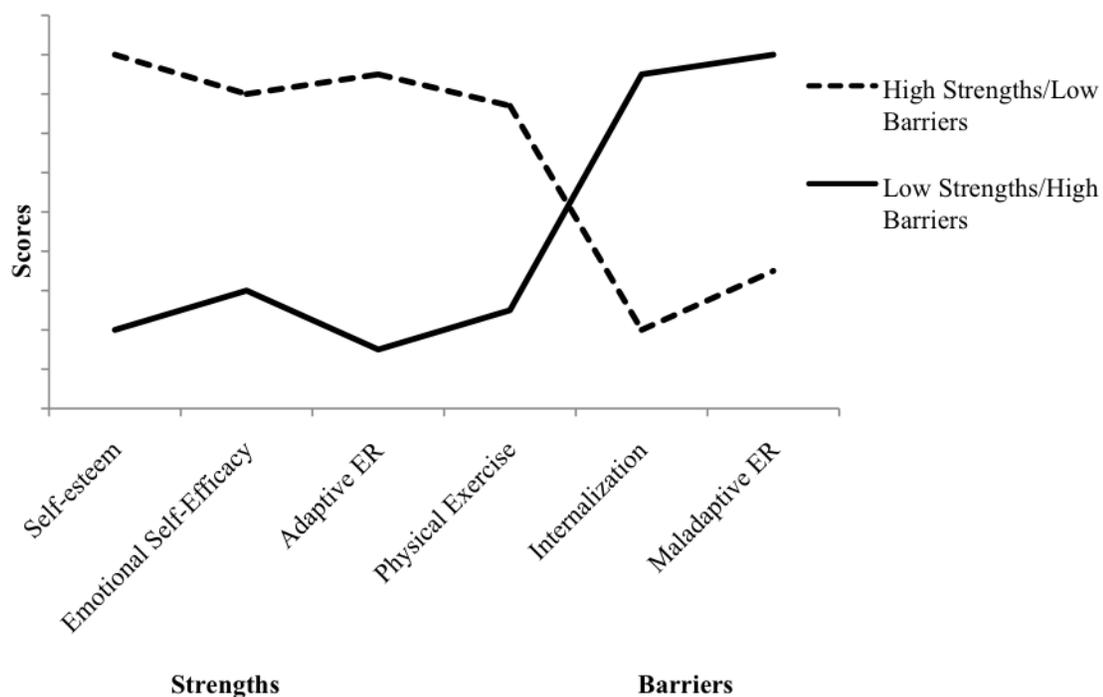


Figure 1. Two hypothesized groups of strengths and barriers associated with PBI that were of interest in Study 1. Strengths investigated included: self-esteem, emotional self-efficacy, adaptive emotion regulation (ER), and physical activity. Barriers investigated included: internalization of the thin ideal and maladaptive emotion regulation (ER).

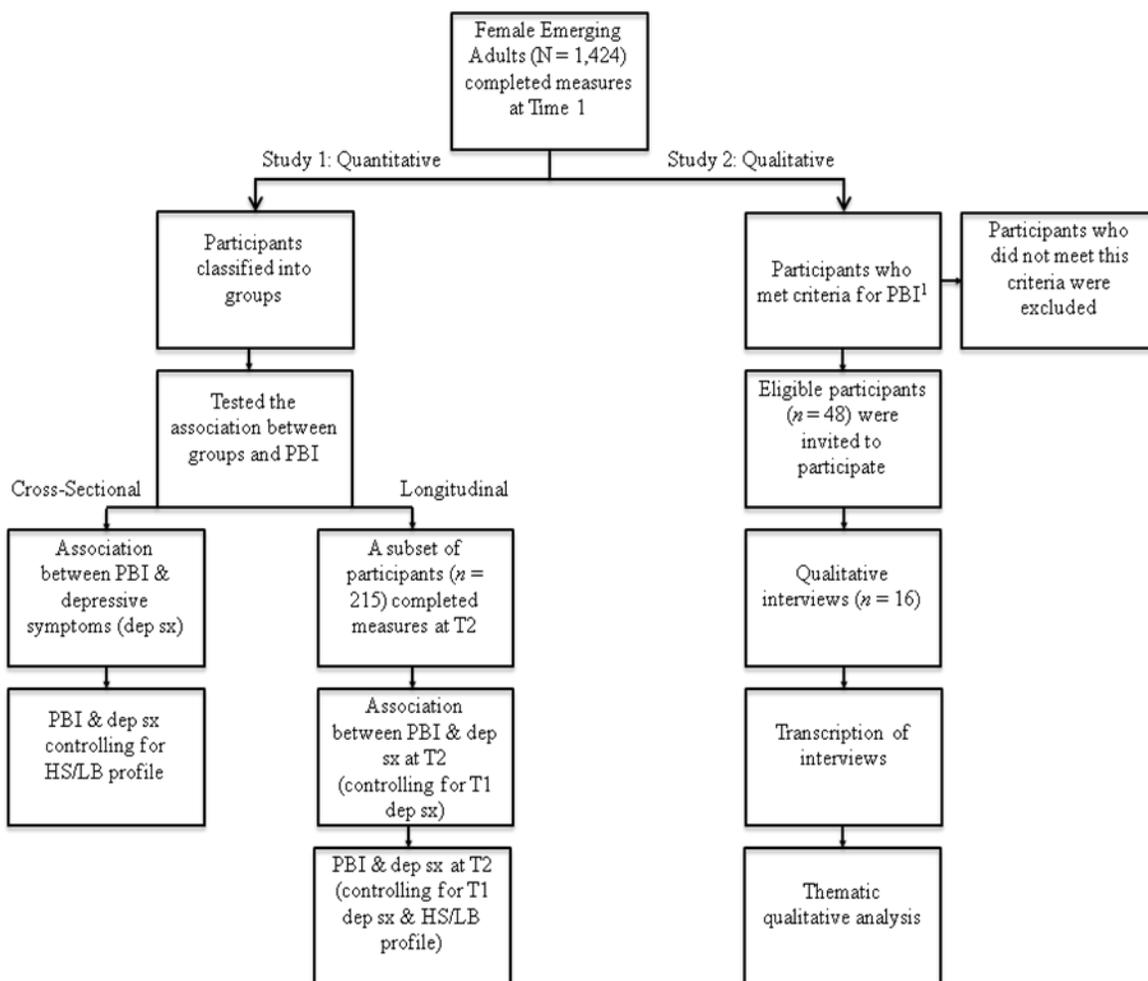


Figure 2. Flow of participants through Study 1 and 2. PBI = positive body image, dep sx = depression symptoms, T1 = Time 1, T2 = Time 2, and HS/LB = High Strengths/Low Barriers profiles.

¹ Participants were invited to participate in the qualitative study if they reported greater than the mean on BAS and less than the mean on BSQ and also endorsed greater or equal to 4 on item 6 of the BAS.

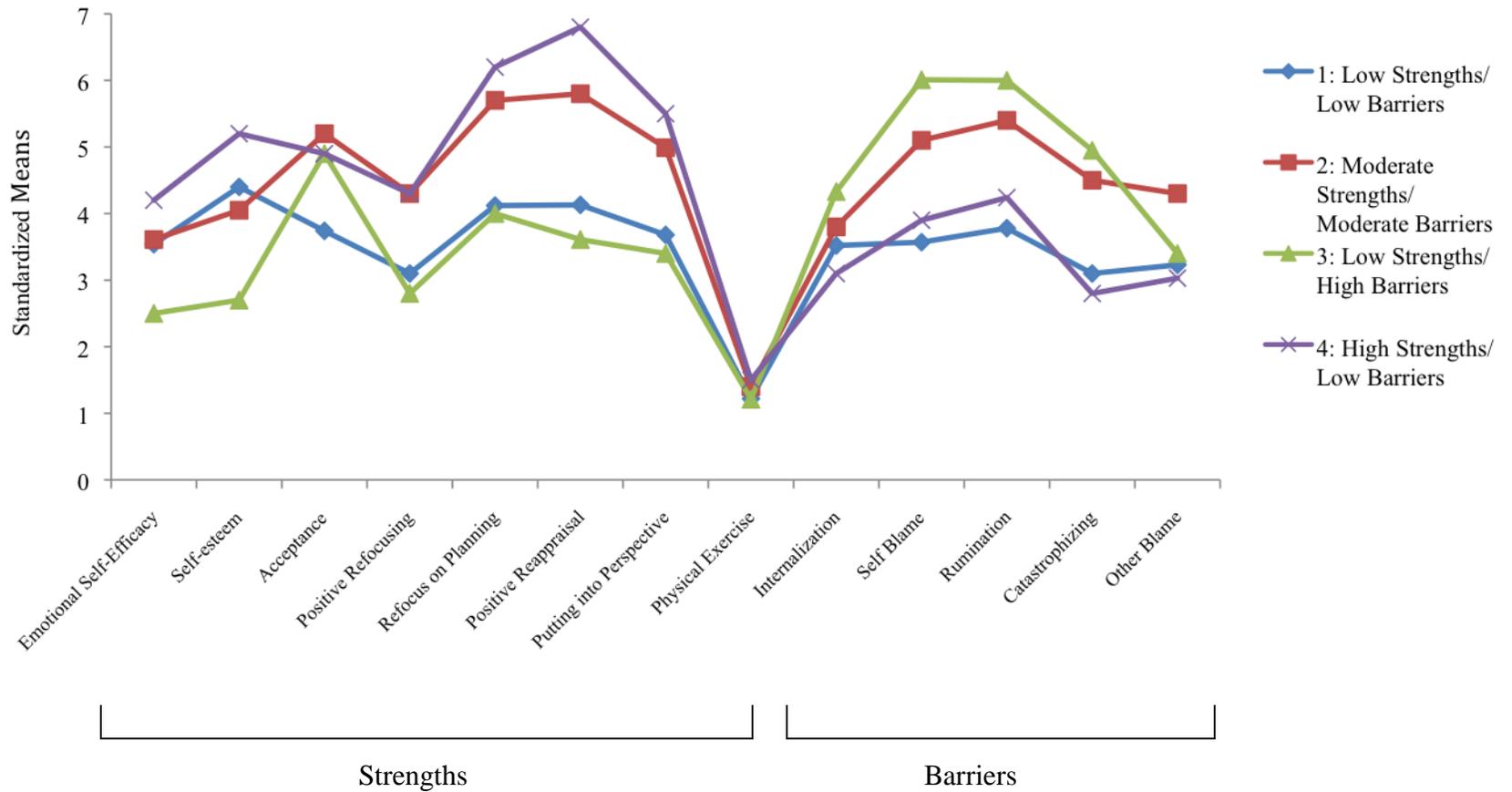


Figure 3. Line graphs depicting the standardized means of each of the strengths (emotional self-efficacy, self-esteem, acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, and physical exercise) and barriers (internalization of the thin ideal, self-blame, rumination, catastrophizing, and other blame) for each of the four profiles that were identified in the Latent Profile Analysis.

Appendix A: Consent Form for Longitudinal Study

- A. This study is comprised of TWO PARTS. For each part in the survey component, you will complete an online survey about a broad range of behaviours and emotions encountered in university and pertaining to eating patterns. For example, the survey will ask questions about your relationships with others, any feelings of low mood, cultural identification, and patterns of eating. Some demographic information is also collected. It will take about 30 minutes to complete the survey. The survey you are completing today is PART 1 of 2. All participants will complete the Survey component consisting of two parts.
- B. This is a voluntary study. You are free to not answer any questions and to stop participating at any time without any academic penalty in Psyc 1010 (i.e., no impact on your marks). All responses to these questions will be kept anonymous and confidential by the researchers. Confidentiality will be provided to the fullest extent possible by law. Your name will not be linked with your answers. The information you provide will help us understand better our research on young adults attending university.
- C. In order to receive full credit, all questions must be completed. If you prefer not to answer a question, please choose the “Not Applicable” option for ALL the questions you prefer not complete. This will ensure you have a response for each question, therefore you will obtain course credit and you will then be eligible for remaining components of the study for full credit. If you decide to withdraw from the study at anytime without responding to the remaining questions you will still receive credit and all of your data collected will be immediately destroyed.
- D. In Winter 2012, you will be contacted to complete another online survey with similar questions (PART 2). You will receive .5 credits (.33%) towards your Psyc 1010 mark for each Survey (up to 2 parts), which is a maximum of 1 credit total (0.66%).
- E. There are no serious anticipated risks involved with completing the survey. Some people may become uncomfortable or distressed while completing some questions related to feelings of sadness or issues in relationships. If you do become distressed, please contact the Counselling & Development Centre at York University (Ph: 416-736-5297; Location: N110 Bennett Centre for Student Services). At the end of the survey, you will also be given a list of other local counselling resources. Benefits of participating in the study are an added maximum of 2% to your Psyc 1010 grade, experience in psychology research and helping your fellow students who are involved in this research study.
- F. If you have any questions about the survey or the study in general, please contact the REACH Lab - URPP Study (rch_urpp@yorku.ca), or Dr. J. Rawana at rawana@yorku.ca or (416)-736-2100 ext 20771.

- G. Should you have any questions regarding your rights or the ethics review process please contact the Manager for the Office of Research ethics at York University, 309 York Lanes (416) 736-5914 (ore@yorku.ca)
- H. Research has been reviewed and approved by the Department of Psychology Ethics Review Committee and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.
- I. Please select below that you “agree” or “disagree” to participate in this study. By selecting “agree” and continuing to complete this survey online, you are providing your consent to participate in this study and indicating you have read this Consent Form. Thank you.

Response Options:

I agree or disagree to participate in this study.

The researchers can contact me in Winter 2012 to complete ONE follow-up online Survey. Yes No

Appendix B: Consent Form for Study Involving Survey and Interview Component

- A. This study has two components: A Survey and Interview Component. For the survey component, you will complete an online survey about a broad range of behaviours and emotions encountered in university and pertaining to eating patterns. For example, the survey will ask questions about your relationships with others, any feelings of low mood, and patterns of eating. Some demographic information is also collected. It will take about 30 minutes to complete the survey. Some participants will be contacted after the Survey component is complete and be asked to participate in an Interview component of the study. The interview component of the study involves participants coming into the lab to answer questions about yourself and how you feel about your body. It will take up to 60 minutes to complete the interview component. All participants will complete the Survey component; only selected participants will complete the Interview component of the study in addition to the Survey component.
- B. This is a voluntary study. You are free to not answer any questions and to stop participating at any time without any academic penalty in Psyc 1010 (i.e., no impact on your marks). All responses to these questions will be kept anonymous and confidential by the researchers. Confidentiality will be provided to the fullest extent possible by law. Your name will not be linked with your answers. The information you provide will help us better understand our research on young adults attending university.
- C. In order to receive full credit, all questions must be completed. If you prefer not to answer a question, please choose the “Not Applicable” option for ALL the questions you prefer not to complete. This will ensure you have a response for each question. Therefore, you will obtain course credit and still be eligible for remaining components of the study for full credit. If you decide to withdraw from the study at anytime without responding to the remaining questions *you will still receive* credit and all of your data collected will be immediately destroyed.
- D. After the Survey component is completed, a random sample of participants will be invited to participate in an Interview component that will take place on campus. You will receive .5 credits (.33%) towards your Psyc 1010 mark for participating in the Survey Component and 1 credit (.66%) towards your Psych 1010 mark for participating in the Interview Component of the study, which is a maximum of 1.5 credits total (.99%).
- E. There are no serious anticipated risks involved with completing the survey. Some people may become uncomfortable or distressed while completing some questions related to feelings of sadness or issues in relationships. If you do become distressed, please contact the Counselling & Development Centre at York University (Ph: 416-736-5297; Location: N110 Bennett Centre for Student Services). At the end of the survey, you will also be given a list of other local counselling resources. Benefits of participating in the study are an added maximum of .99% to your Psyc 1010 grade,

- experience in psychology research (both survey and qualitative), and helping your fellow students who are involved in this research study.
- F. If you have any questions about the survey or the study in general, please contact the REACH Lab - URPP Study (rch_urpp@yorku.ca), or Dr. J. Rawana at rawana@yorku.ca or (416)-736-2100 ext 20771.
 - G. Should you have any questions regarding your rights or the ethics review process please contact the Manager for the Office of Research ethics at York University, 309 York Lanes (416) 736-5914 (ore@yorku.ca)
 - H. This research conforms to the standards of the Canadian Tri-Council Research Ethics guidelines.
 - I. Please select below that you “agree” or “disagree” to participate in this study. By selecting “agree” and continuing to complete this survey online, you are providing your consent to participate in this study and indicating you have read this Consent Form. Thank you.

Response Options:

I agree or disagree to participate in the Survey component of the study.

Yes No

The researchers can contact me to participate in the Interview component.

Yes No

Appendix C: Debriefing Information for Research Participants in Longitudinal Study

We would like to thank you for completing our Survey study on feelings and behaviours experienced while attending university. The questions that you have answered pertaining to relationships, feelings, coping, and stressors will help us identify some common problems and strengths experienced in undergraduates. Some of the questions in this survey may have made you feel uncomfortable or distressed. If you are or anyone you know is feeling depressed or psychologically distressed, there is help available. Below is contact information for some helpful services if you are feeling psychologically depressed or distressed.

Please remember that this study has two parts, and you have just completed Part One of the Survey Component (completing this online survey). You are requested to complete PART TWO of the Survey Component, which is another follow-up survey that will have similar questions during Winter 2012 in order to receive your 0.5 credit for Psyc 1010. As mentioned earlier, you can withdraw from this study at anytime without any academic penalty.

Before we end this study, we would like to please not talk about this study with anyone. There are many other people who have not participated in this study yet. If they hear from you or others about what the study is about, it may influence their responses. Our results may not be accurate. We hope that you will cooperate with us in this regard. Questions related to this study can be sent to rch_urpp@yorku.ca.

Thank you.

Counselling Services at York University:

If you have any questions or concerns, please contact the Counselling & Development Centre (CDC) at York at 416-736-5297 or go to the centre directly at N110 in the Bennett Centre for Student Services.

Other Counselling Services in the GTA:

1. Toronto Psychological Services 416-531-0727 www.toronto-ps.com
2. Distress Centre of Toronto 416-408-4357 (HELP)
3. Help Line for All Youth HEYY 416-423-4399 (HEYY)

4. The Freedom from Fear Foundation in Toronto is an organization established to help people with anxiety disorders. They have a network of support groups set up throughout Ontario 416-761-6006
5. Drug & Alcohol Registry of Treatment (DART)/Treatment info-line 1-800-565-8603
6. The National Eating Disorder Information Centre has a national register of private therapists, medical programs, and information 416-340-4156
7. Mood Disorders Association of Ontario 416-486-8046 OR call TOLL-FREE at 1-888-486-8236
8. A.C.C.E.S. (Accessible Community Counselling and Employment Services)
Toronto: 416-921-1800 Scarborough: 416-431-5326 Mississauga: 905-361-2522
9. Family Services Association of Toronto 416-595-9230
10. For a list of more health, social, community, and/or government community resources/services, you can access it via www.211toronto.ca or you can dial 2-1-1 in Toronto 24 hours a day. This phone number is free, confidential, and the trained staff is multilingual.

Appendix D: Debriefing Information for Research Participants in Survey and Interview Study⁴

We would like to thank you for completing our Study on feelings and behaviours experienced while attending university. The questions that you have answered pertaining to relationships, feelings, coping, and stressors will help us identify some common problems and strengths experienced in undergraduate students. Some of the questions in this survey may have made you feel uncomfortable or distressed. If you are or anyone you know is feeling depressed or psychologically distressed, there is help available. Listed below is contact information for some helpful services if you are feeling psychologically depressed or distressed.

You have just completed the Survey Component (completing this online survey), and you will receive .5 credits (.33%) towards your final Psyc 1010 grade. A subsample of participants will be invited to participate in the Interview component of this study, where individuals will be invited to come into the lab to answer questions about yourself and how you feel about your body. Students who complete this component will also receive an additional 1.0 credit (.66%) for Psyc 1010. As mentioned earlier, you can withdraw from this study at anytime without any academic penalty.

Before we end this study, we would like to kindly ask you to not talk about this study with anyone. There are many other people who have not participated in this study yet. If they hear from you or others about what the study is about, it may influence their responses. Our results may not be accurate. We hope that you will cooperate with us in this regard. Questions related to this study can be sent to rch_urpp@yorku.ca.

Thank you.

Other Counselling Services in the GTA:

1. Toronto Psychological Services 416-531-0727 www.toronto-ps.com
2. Distress Centre of Toronto 416-408-4357 (HELP)
3. Help Line for All Youth HEYY 416-423-4399 (HEYY)

⁴ *Note.* In the Interview Component debriefing form, the following information was added. “You have answered questions about how you feel about yourself and your body to provide information on the development of body image.”

4. The Freedom from Fear Foundation in Toronto is an organization established to help people with anxiety disorders. They have a network of support groups set up throughout Ontario 416-761-6006
5. Drug & Alcohol Registry of Treatment (DART)/Treatment info-line 1-800-565-8603
6. The National Eating Disorder Information Centre has a national register of private therapists, medical programs, and information 416-340-4156
7. Mood Disorders Association of Ontario 416-486-8046 OR call TOLL-FREE at 1-888-486-8236
8. A.C.C.E.S. (Accessible Community Counselling and Employment Services)
Toronto: 416-921-1800 Scarborough: 416-431-5326 Mississauga: 905-361-2522
9. Family Services Association of Toronto 416-595-9230
10. For a list of more health, social, community, and/or government community resources/services, you can access it via www.211toronto.ca or you can dial 2-1-1 in Toronto 24 hours a day. This phone number is free, confidential, and the trained staff is multilingual.

**Appendix E: Reminder Email to Participants Notifying them that they are Eligible
to Participate in Part 2 of the Longitudinal Survey Study**

Hello,

This is just a reminder that you are eligible to participate in **!!**University Lifestyles and Attitudes:Part 2**!!**

Participation is online and will take approximately 30 minutes of your time. Just log on and select the study from the list of available studies.

Thank you for your participation!

The Research on Emerging Adults, Adolescence, and Children (REACH) Lab

**Appendix F: Invitation to Eligible Participants to Participate in the Qualitative
Component (Study 2)**

Hello,

Thank you for participating in the University Lifestyles and Attitudes Study! As a result, you have been selected to participate in a follow-up interview study.

The interview component of the study will take place in the Behavioural Sciences Building on campus. Participants will answer questions about yourself and how you feel about your body. All of your responses will be kept confidential.

This study will take up to 60 minutes of your time and you will receive 1 credit (.66%) towards your Psych 1010 mark for participating.

Log on to the URPP, select University Lifestyles and Attitudes Interview type in the Invitation Code University and sign up for a timeslot now!

Thank you for your participation!

The Research on Emerging Adults, Adolescence, and Children (REACH) Lab

**Appendix G: Reminder Email to Participants Notifying them that they are Eligible
to Participate in the Qualitative Component (Study 2)**

Hello,

This is just a reminder that you have been selected to participate in a follow-up interview study: University Lifestyles and Attitudes Interview! and additional timeslots have been added!

The interview component of the study will take place in the Behavioural Sciences Building on campus. Participants will answer questions about yourself and how you feel about your body. All of your responses will be kept confidential.

This study will take up to 60 minutes of your time and you will receive 1 credit (.66%) towards your Psych 1010 mark for participating.

Log on to the URPP, select University Lifestyles and Attitudes Interview, and type in the Invitation Code “University” and sign up for a timeslot now!

If you are unavailable during the open timeslots, but are interested in participating in the study please email us at rch_urpp@yorku.ca and we can try to set up an alternate time!

Thank you for your participation!
The Research on Emerging Adults, Adolescence, and Children (REACH) Lab