EXAMINING THE INTERPLAY: SOCIAL ANXIETY AND BODY IMAGE IN YOUNG
ADULTS

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ABSTRACT

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Social anxiety involves negative thoughts and self-focused attention during social interactions. This self-evaluation can involve reflections regarding the body or body image, which may have an impact on social experiences. Body image is experienced in a negative (body dissatisfaction) and positive (body appreciation) way. The present study investigated the relation between symptoms of social anxiety and various aspects of body image in older adolescents and young adults. Quantitative results demonstrated considerable overlap between social anxiety and body image, with the qualitative results further supporting the rationale that symptoms consistent with social anxiety occur within those with body image concerns. Seven themes emerged and they were physical attributes, societal influence, appearance-driven coping strategies, impact on social life and relationships, discomfort with appearance, social avoidance, and appearance monitoring.

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Table 1

Mean Scores for Social Anxiety, Body Dissatisfaction, Body Image Disturbance, and Body Appreciation (n = 140)

	M	*SD*	*Range*
Social Anxiety			
Liebowitz Social Anxiety Scale	61.56	26.73	9-116
Social Interaction Anxiety Scale	34.30	15.40	2-70
Fear of Negative Evaluation	*5.53*	*3.33*	*0-12*
Body Dissatisfaction			
Multidimensional Body-Self Relations Questionnaire Appearance Evaluation Subscale	3.39	.76	1.43-5.00
Multidimensional Body-Self Relations Questionnaire Appearance Orientation Subscale	3.52	.64	1.75-4.67
Multidimensional Body-Self Relations Questionnaire Body Areas Satisfaction Subscale	3.33	.69	1.78-5.00
Body Image Disturbance			
Body Image Disturbance Questionnaire	2.10	.77	1-3.71
Body Appreciation			
Body Appreciation Scale-2	3.53	.77	1.60-5.00

Examining the Interplay: Social Anxiety and Body Image in Young Adults

Overview

Social anxiety (SA) is characterized by a persistent and unrealistic fear of social situations (Morrison et al., 2016). Individuals with SA tend to experience negative thoughts and self-focused attention during social interactions (Biggs et al., 2011) and self-evaluation that can have an impact on their ability to socialize (Riggio et al., 1990). Physical appearance, or body image (the perception of and attitude towards one's appearance; Cash, 2012), plays an important role in self-evaluation (Barker & Bonstein, 2010) and therefore may contribute to SA. Adolescence is a developmental period when SA is most prevalent (Dobinson et al., 2019; Mesa et al., 2011) and body image tends to become a focus (Smolak, 2004). Although SA and body dissatisfaction are both linked to poor social functioning (Davison & McCabe, 2010; La Greca & Lopez, 1998) and are related to another, little is known about the broader relation between positive body image concepts, such as body appreciation and SA. The significant developmental and physical changes that occur during adolescence point to a need to better understand how SA and body image are associated in this developmental period. Positive social interactions are critical for adolescent and young adult well-being as they are navigating more serious friendships and beginning romantic relationships (Gomez-Lopez et al., 2019; Orben et al., 2020; Viner et al., 2012). Thus, understanding the relation between SA, body dissatisfaction, body image disturbance, and body appreciation in a sample of adolescents and young adults would further expand this field of research and inform intervention approaches.

Social Anxiety

Social anxiety (SA) is the fear and avoidance of social situations, particularly those with the potential for negative evaluation by others (e.g., performing in front of a crowd; Caouette et

al., 2015). The social situations that are feared and avoided differ from person to person and can vary in intensity (Dell'Osso et al., 2003). In other words, it is possible to experience SA with no impairment in psychosocial functioning, while other levels of SA may hinder or completely impair functioning. For instance, one individual with SA may severely fear public speaking (e.g., refuses to do in-class presentations impacting academia) but feel comfortable speaking one-to-one with a stranger (e.g., helping a customer while working). Conversely, another individual with SA may speak in public as part of their job (e.g., professor) even though it makes them feel uncomfortable, but have debilitating fear when it comes to interacting one-to-one with a stranger (e.g., on a first date). This highlights how SA exists on a continuum rather than as a distinct disorder when symptoms reach a particular threshold.

Symptoms of SA vary, but include physiological (e.g., sweating), cognitive (e.g., irrational worry in the form of negative thoughts), and behavioural (e.g., avoidance of social situations) symptoms (Mesa et al., 2011). Cognitive models of SA propose that maladaptive cognitive processes, or information processing biases, contribute to the maintenance of SA (Clark & McManus, 2002; Wong & Moulds, 2011). These information processing biases consist of attentional biases (e.g., attending to negative social information over other social stimuli) and interpretation biases (e.g., habitually interpreting social information in a negative way). These biases are believed to provoke a cascade of other maladaptive cognitive processes (Yeung & Sharpe, 2019), which includes self-focused attention (e.g., thinking about one's social incompetence), safety behaviours (i.e., using overt or covert actions to mitigate a fearful consequence; e.g., adjusting social performance to make a good impression), anticipatory and post-event processing (e.g., predicting the interaction will go negatively or believing the interaction did go negatively), and anxiety provoked performance deficits (Clark & Wells, 1995;

George & Stopa, 2008; Gray et al., 2019). This hinders social performance and creates difficulty building trust in relationships, which reaffirms the individual's negative beliefs about their social competence and helps to maintain symptoms of SA (Hirsch & Clark, 2004; Hirsch et al., 2006; Yeung & Sharpe, 2019).

Social Anxiety and Negative Attentional Bias

The negative attentional bias associated with SA is the selective attention toward threatening social cues (e.g., being negatively judged) and negative social stimuli (e.g., negative emotions; Duval et al., 2020; Heeren et al., 2015; Trubanova Wieckowski et al., 2019), which contributes to the maintenance of their anxiety (Pergamin-Hight et al., 2016). This negative attentional bias leads to a tendency to recognize and recall negative social cues (e.g., frown showing disapproval) more readily than positive social cues (e.g., smile indicating approval; Clark & McManus, 2002; Schmidt et al., 2009; Veljaca & Rapee, 1998). Since social interactions include cues that range in valence from positive to negative, it is logical to propose that competent social functioning involves attending to both positive and negative social information. However, individuals with SA tend to selectively attend to behaviours, facial expressions, and emotion words with a negative valence (Gilboa-Schechtman et al., 1999; Hope et al., 1990; Veljaca & Rapee, 1998), while avoiding positive social cues (Taylor et al., 2010).

For example, Veljaca and Rapee (1998) found that when speaking to an audience, individuals with a greater number of SA symptoms more frequently detected negative social cues from audience members (e.g., a person checking one's watch) than individuals with fewer SA symptoms. Other research has shown that individuals with clinical levels of SA are quicker to detect negative facial expressions (e.g., anger) compared to positive facial expressions (e.g., happiness) in a crowd of faces with neutral expressions (Gilboa-Schechtman et al., 1999). This

negative attention bias appears to extend to emotion words related to a social performance situation. To illustrate this, Hope et al. (1990) used a modified Stroop task that involved naming the colour of ink that emotion words were printed in. Participants with clinical levels of SA and with panic disorder were presented with neutral words and words characteristic of social threat (e.g., criticism) or physical threat (e.g., disease). Hope et al. found that individuals with SA took longer to name the colours of words that indicated social threat whereas individuals with panic disorder demonstrated this delay with physical threat words. These results indicate that individuals with SA appear to focus on social threat cues rather than physical ones because social threat words are relevant to their anxiety or fear regarding social situations (Hope et al., 1990; Mansell et al., 2002). A focus on social threat cues could pose a difficulty in social interactions as any delay in responding when interacting with others could confuse the interaction partner or end the conversation. This could leave the individual with SA ruminating about the experience (a maladaptive cognitive process), possibly reinforcing the desire to avoid these interactions in the future (a behavioural symptom of SA).

The negative attentional bias demonstrated by individuals with SA also impacts social situations, which contain positive social cues (e.g., friend smiling and saying, "You're funny") without the presence of negative social cues (e.g., disapproval). It is believed that the negative attentional bias demonstrated by individuals with SA directs their attention away from positive social cues (Chen et al., 2002; Mansell et al., 1999; Taylor et al., 2010). Taylor et al. (2010) demonstrated that symptoms of SA in undergraduate students were associated with attending more slowly to positive social words (e.g., likeable) versus neutral words (household items). This indicated that individuals with SA found it easier to turn their attention toward a neutral word compared to the positive social word. This negative attentional bias also mediated the association

between reported symptoms of SA and the level of anxiety experienced after an unexpected social stressor (spontaneous presentation). Thus, those with higher levels of SA were more likely to have trouble attending to positive social words which then predicted anxiety occurring from the spontaneous presentation. Difficulty attending to positive feedback could leave one vulnerable to negative affect or maladaptive cognitive processing because positive social cues can provide reassurance of successful social performance.

Negative attentional bias may impact the ability to successfully navigate social situations, particularly ones that may involve the body being on display or available for judgement (e.g., in a bathing suit at the beach). However, the meaning of some social cues, such as facial expressions (e.g., surprise) and phrases (e.g., neutral statement about the body) can be ambiguous because of the context of the social interaction (e.g., sarcasm over text message). Individuals with SA not only attend to negative social information more readily, but also appear to interpret ambiguous social information (e.g., your date saying, "You're not what I expected") as negative and this has been called a negative interpretation bias (Alden et al., 2008; Constans et al., 1999; Stopa & Clark, 2000).

Social Anxiety and Negative Interpretation Bias

Research shows that when individuals with SA are given descriptions of ambiguous social situations (Amin et al., 1998; Beard & Amir, 2009; Huppert et al., 2003; Stopa & Clark, 2000), shown ambiguous facial expressions (Gilboa-Schectman et al., 2008), or asked to interpret ambiguous behaviour of others (Kanai et al., 2010), they tend to interpret them as negative compared to individuals without SA. Interpretating ambiguous information as positive can set one up to appreciate sarcasm, facilitate laughter, and develop a friendship. In contrast however, interpreting ambiguous information as negative may keep someone from interpreting

that information as it was intended (e.g., as a joke or sarcasm). A negative interpretation bias could hinder the capacity to develop trust in friendships if the individual is repeatedly viewing social intentions as negative. For example, an individual with SA who presents with a negative interpretation bias may read a message saying, "John and I were talking about what happened at the party last night" as negative. Huppert et al. (2003) showed this to be the case when they presented descriptions of social scenarios and asked young adults and adults with symptoms of SA to match them to descriptions that closely resembled the original but varied in negative wording. When compared to those with fewer symptoms of SA, individuals with more symptoms of SA tended to choose a match that was negatively worded (i.e., showed a negative bias), but was otherwise consistent with the original. This suggests that when individuals with more symptoms of SA analyze social scenarios, they interpret them in a negative way.

This negative interpretation bias appears to apply to both verbal and nonverbal social information. In the case of facial expressions, this bias would lead to a negative interpretation (e.g., being upset) of an ambiguous facial expression (e.g., blank stare). To illustrate this, Maoz et al. (2016) presented emotional expressions on a continuum from angry to happy to individuals with and without SA disorder. Those with SA disorder more frequently interpreted ambiguous expressions (equal combination of angry-happy) as negative and took longer to state a positive interpretation compared to individuals without SA disorder. Therefore, not only does this bias lead to more frequent negative interpretations but also appears to delay interpretation of positive expressions. This negative interpretation bias has also been found with facial expressions where the eyes, which displayed disgust, fearfulness, surprise, sadness, or neutrality, were blended with a smile (displaying happiness; Gutierrez-Garcia & Calvo, 2014). Negatively interpreting the intentions of others could lead to rumination regarding the interaction (e.g., repeatedly thinking

that a conversation went horribly), contributing to negative affect (i.e., negative emotions).

This negative interpretation bias could also apply to how one views or evaluates their own social performance. Evaluating one's own social performance is normal (e.g., realizing you should have said hello to an old friend while at the store) and could improve future social interactions. However, for individuals who experience heightened levels of SA, a negative self-evaluation of social performance (e.g., believing they spoke rudely to a friend) can impact their willingness to engage with others (i.e., create avoidance behaviours; Gray et al., 2019). For instance, an individual with SA may evaluate their interaction with a friend at a party negatively and avoid seeing that friend or going to parties in the future. This avoidance behaviour can generalize to other social situations. Self-evaluation often focuses on social behaviours, but it can also involve one's physical appearance. For example, thinking, "I don't like how I look in this bathing suit, so I'm not going to that beach party" and deciding not to go to a particular social event. Thus, self-evaluations regarding one's body and physical appearance (i.e., body image) can also affect social interactions.

Body Image

Body image is a multidimensional concept that includes positive and negative perceptions, attitudes or beliefs, cognition, behaviour, and affect toward one's body and appearance (Cash, 2011). For example, an individual may perceive their body or aspects of it differently (e.g., too large, too small), and believe that they are inadequate or adequate because of this perception (i.e., negative or positive attitude, respectively). In turn, this could contribute to negative or positive thoughts (i.e., cognition) and feelings (i.e., affect) about the size of one's body and encourage behaviours to decrease or maintain body size (e.g., exercise or overeating). Body image is influenced by ongoing interactions between physical (e.g., body size or shape),

psychological (e.g., low self-esteem), and socio-cultural factors (e.g., cultural ideal of beauty, media pressure to achieve an ideal of beauty; Cash, 2002; Wertheim & Paxton, 2011). Body image-related behaviours appear to emerge in childhood, with girls as young as three engaging in appearance related behaviours (e.g., playing with a vanity) in playrooms following a brief exposure to media (e.g., tv shows) that includes appearance-based statements (e.g., "You're the best because you're so beautiful!") and behaviours (e.g., changing clothing to enhance beauty; Hayes & Tantleff-Dunn, 2010). When body image develops negatively, it is often referred to as body dissatisfaction and when these negative views become so severe that it leads to appearance-related preoccupation and distress it is known as body image disturbance (Pinto & Phillips, 2005). In contrast, when body image is experienced positively, it is often referred to as body appreciation. Although the literature examines body dissatisfaction, body image disturbance, and body appreciation, body image is typically explored through a negative lens with a substantial amount of research focusing on body dissatisfaction.

Body Dissatisfaction and Body Image Disturbance

Body dissatisfaction is considered to be a negative attitude toward one's body, resulting in a negative body image (Amaral et al., 2017; Cash, 1990). However, body dissatisfaction is not simply feeling dissatisfied with or distressed by one's appearance. A cognitive-behavioural model of body dissatisfaction suggests that there are two dimensions: appearance evaluation (i.e., satisfaction or dissatisfaction with one's appearance) and appearance orientation (i.e., investment in one's appearance; Cash & Smolak, 2011; Senín-Calderón et al., 2017). This model suggests that negative appearance evaluation (i.e., dissatisfaction) and positive appearance orientation (i.e., greater investment) simultaneously is indicative of body dissatisfaction and impairment (Senín-Calderón et al., 2017). Despite there being a cognitive-behaviour model for body

dissatisfaction, the two dimensions are not often explored simultaneously in research. The separation of appearance evaluation and appearance orientation is important in the study of body image because one is attitudinal and the other is a behavioural response. The first speaks to how one evaluates their appearance whereas the latter refers to the degree of importance one places on their appearance and effort expended on body image. These dimensions can be experienced differently by each person and not all will indicate body dissatisfaction and impairment. For instance, one individual may be satisfied with their appearance (positive appearance evaluation) and invest a lot of time to enhance it because it is important to them (positive appearance orientation). Conversely, another individual may be dissatisfied with their appearance but invest no time to enhancing their appearance because they have not placed high importance on it. This is indicative of some impairment. Finally, another individual may experience dissatisfaction and place a significant amount of effort to enhance their appearance, indicative of impairment.

Beliefs about body image appear to develop early, with young children engaging in behaviours that are indicative of the evaluative dimension of body dissatisfaction. By the age of 5, children may associate positive characteristics (e.g., good, fun) with thinner figures and negative characteristics (e.g., mean, naughty) with larger figures (Damiano et al., 2015). By the age of 6, the evaluative dimension of body dissatisfaction is present for some children (Nichols et al., 2018). Using a longitudinal design, Nichols et al. (2018) investigated body image development in children between the age of 6 and 7. In addition to measuring variables such as self-esteem, the evaluative dimension of body dissatisfaction, and dietary restraint, two questions were asked to assess internalization of appearance ideals: 1) "Would you like your body to look like the bodies of people you see on television?", and 2) Would you like your body to look like the bodies of people you see in the movies?". Findings from this study suggest that the

evaluative dimension of body dissatisfaction remained stable for girls between 6 and 7 years but decreased for boys. However, Nichols et al. also found that internalization of appearance ideals was the only variable measured at age 6 that predicted greater body dissatisfaction at age 7 for boys and girls. Thus, children's appearance internalizations are forming at a young age, and this may be uniquely related to body satisfaction by 6 and 7 years of age.

By adolescence, pubertal development is underway and these biological changes (e.g., weight gain) can ignite further emphasis on body image. For instance, weight gain naturally occurs during the adolescent period in females, and this can contribute to body dissatisfaction. Adolescent girls and boys have reported feeling the most dissatisfied with their bodies when they were considered overweight, next most dissatisfied when they were considered normal weight, and the most satisfied with their bodies when they were underweight (Makinen et al., 2012). However, during the adolescent period, males tend to report more satisfaction with their appearance than females do (Kantanista et al., 2015).

Nonetheless, when the evaluative dimension of body dissatisfaction is present for males and females during adolescence, peer relationships may be negatively impacted (Davison & McCabe, 2010). More specifically, Davison and McCabe (2010) demonstrated that adolescents with body dissatisfaction (evaluative dimension only) experienced poor opposite-sex relations, but same-sex relations were impacted for girls as well (Davison & McCabe, 2010). Peer relationships are a priority for adolescents and these relationships can impact well-being (Choukas-Bradley & Prinstein 2014; Liu, 2023). Therefore, it is possible that body dissatisfaction and the accompanying poor peer relationships in adolescence may be harmful to emotional well-being (e.g., social anxiety) as one develops. In fact, research shows that by the time individuals reach emerging adulthood, the evaluative dimension of body dissatisfaction is

associated with negative outcomes including low self-esteem (Grossbard et al., 2009) and clinical symptoms of social anxiety (Aderka et al., 2014). This is logical, considering dissatisfaction with the body may coincide with avoiding social situations where the body is often on display, and such social avoidance is characteristic of social anxiety.

Although sex differences were found for the evaluative component of body dissatisfaction in adolescence, by emerging adulthood, both dimensions of body dissatisfaction can manifest differently in males versus females. Longitudinal research examining the two dimensions of body dissatisfaction (appearance evaluation and appearance orientation) demonstrated that appearance evaluation was more negative overall for females compared to males between 18 and 21 years of age (Gillen & Lefkowitz, 2012). This finding appears to be related to the stability of appearance orientation (investment dimension of body dissatisfaction) over the course of three semesters, and from adolescence through emerging adulthood. The findings also demonstrated that body dissatisfaction (evaluative dimension) did improve for female students during this time period, and that appearance orientation (investment dimension) was higher for females (particularly African American vs. European American) when compared to males. These findings suggest that female college students are investing effort into their appearance and overtime, they are evaluating their appearance more positively (improved appearance evaluation). It is reasonable to propose that this investment in physical appearance is contributing to more positive evaluations of the body but may also hinder other avenues of development that are typically prioritized during emerging adulthood (e.g., relationships). For instance, someone who invests a considerable amount of time and energy into their appearance may not invest as much time and energy into their friendships and romantic pursuits.

Other longitudinal research suggests that the appearance evaluation dimension of body dissatisfaction continues throughout the lifespan for both men and women (Bucchianeri et al., 2013; Quitkatt et al., 2019; Wang et al., 2019). Bucchianeri et al. (2013) conducted a 10-year longitudinal study on body dissatisfaction appearance evaluation) from middle childhood to young adulthood in two cohorts staggered in age. The younger cohort started the study at an average age of 12.80 years (early adolescence) and the older cohort started the study at an average age of 15.90 years. The younger cohort, which comprised 29.90% of the sample and the older cohort, which comprised 70.10% of the sample, completed surveys at three timepoints. Body dissatisfaction and body mass index (BMI) was measured. Considering the developmental differences between late childhood and adolescence, including weight gain, which was a prominent topic of this study, the staggering in age of these two cohorts was valuable.

Results of a slope analysis revealed that overall body dissatisfaction worsened for males and females in each cohort, at each timepoint. However, females experienced more body dissatisfaction than males at all three timepoints. In the younger cohort, body dissatisfaction worsened significantly and steadily for females across each timepoint. A noticeable, though not significant, worsening of body dissatisfaction was only found in the older cohort from early young adulthood (23.20 years) to young adulthood (26.20 years) for females. When adjusting for increases in BMI (which is more rapid in the younger cohort compared to the older cohort due to greater pubertal development), the slope analyses no longer revealed significant linear trends for either group; suggesting that BMI and body dissatisfaction were associated. Thus, as BMI increased at each time point, so did body dissatisfaction and this was more prominent for those starting puberty. This finding suggests that younger individuals evaluate their bodies more negatively as weight gain occurs. For males, significant linear trends were found for the younger

and older cohorts, but no significant difference was found between these groups. Meaning, males experienced greater body dissatisfaction overtime, regardless of their age. However, this linear trend was no longer significant once controlling for BMI, which also suggests, that similar to the females, BMI and body dissatisfaction are associated in males. Male weight gain during this stage of life is more evenly spread-out than in females, which explains why their body dissatisfaction steadily worsens but is not significant across timepoints.

Bucchianeri et al. (2013) findings demonstrate that developmental trajectories for body image differ between males and females; for females, early adolescence (with weight gain due to pubertal development) may be a time when body dissatisfaction is magnified. As females move into young adulthood, their weight gain may start to level out, resembling the typical male weight gain trajectory. It appears that male and female body dissatisfaction trajectories are related to BMI; however, this study failed to include variables, other than BMI, that may be related to changes in body image as well (e.g., anxiety).

Wang et al. (2019) addressed this gap by exploring the trajectories of the appearance evaluation component of body dissatisfaction, alongside potential predictor and moderating variables other than BMI, from adolescence to adulthood. A total of 1455 individuals participated in four waves of the study, in 5-year intervals. Participants were recruited from middle or high schools and the average age of the participants at timepoint 1 was 14.80 years. By the final follow up (timepoint 4), participants were an average age of 31.00 years. At each timepoint, body dissatisfaction, as well as other constructs such as depression, self-esteem, parental communication, and peer dieting were measured. Generalized estimating equations demonstrated findings consistent with Bucchianeri et al. (2013). Body dissatisfaction increased for males and females over the 15-year period, but this finding was no longer significant after

controlling for overweight status. However, growth curve mixed modeling was then used to explore trajectories of body dissatisfaction over time. Results showed four body dissatisfaction patterns across the four timepoints.

The first group was described as having consistently low body dissatisfaction which slightly increased over time. The second trajectory started with the lowest body dissatisfaction score, which increased steeply after 5 years (around 20 years of age), then decreased thereafter. The third pattern started with a moderately high body dissatisfaction, followed by a steep decrease at around 20 years, which remained stable for 5 years before increasing again at around 30 years. Lastly, the fourth group displayed consistently high body dissatisfaction across all four time points, with slight decreases over time. Different variables predicted membership in each of these trajectories. For instance, factors such as elevated depression or poor self-esteem predicted membership in the fourth trajectory versus the first one. In the two trajectories with low body dissatisfaction at the beginning, peer dieting (degree to which their peers partake in dieting to lose or maintain weight) was the only variable that distinguished membership in the second trajectory (lowest body dissatisfaction with a sharp increase then steady decrease) compared to the first one (low body dissatisfaction that remained consistent over 15 years). Wang et al. (2019) suggested that the development of body dissatisfaction may take one of four trajectories from adolescence to adulthood with certain factors (e.g., depression, self-esteem, peer dieting) related to one trajectory over another, beyond that of demographic factors or weight status.

It should be noted that the results from Bucchianeri et al. (2013) and Wang et al. (2019) speak to the appearance evaluation dimension of body dissatisfaction only. Gillen and Lefkowitz (2012), who examined both dimensions of body dissatisfaction (appearance evaluation and orientation) in males and females between 18 and 21 years of age demonstrated that appearance

evaluation (dissatisfaction) was more negative and appearance orientation (appearance investment) was higher for females (particularly African American vs. European American) when compared to males. The stability of appearance orientation (i.e., appearance investment) from adolescence through to adulthood and its relation to body dissatisfaction and other relevant variables is unknown. It is valuable to explore appearance orientation alongside other possible outcomes associated with adulthood (e.g., socialization) as it could shed light on potential problems (e.g., SA) associated with a high investment in appearance. Despite the substantial attention on body dissatisfaction, positive evaluations of one's body is also important to examine since it can be a protective factor against negative outcomes typically associated with body dissatisfaction. For this reason, the study of body appreciation is imperative when exploring ways to support well-being in young adults; however, this focus is relatively new.

In the past, it was argued that body dissatisfaction and body appreciation were conceptually distinct and not on a continuum (Avalos et al., 2005; Tylka & Wood-Barcalow, 2015a). However, recent research does not support this idea and suggests they are on opposite sides of a continuum (More et al., 2022). In fact, research demonstrates that body dissatisfaction and body appreciation are negatively correlated with one another (Tobin et al., 2019) and that individuals typically fall into one of three groups: 1) high body appreciation and low body dissatisfaction, 2) low body appreciation and high body dissatisfaction, and 3) moderate levels of both (More et al., 2022). Thus, this research suggests that it is unlikely that someone who deeply appreciates their body (body appreciation) also struggles with body dissatisfaction at the same time.

Body Appreciation

Body appreciation is comprised of four main components: 1) thinking favourably of

one's body, 2) acceptance of one's body, regardless of any considered imperfections, 3) respect for one's body, which includes attending to bodily needs and prioritizing health, and 4) protecting body image by rejecting beauty-related appearance ideals that are promoted by the media (Avalos et al., 2005; Tylka & Wood-Barcalow, 2015b). For instance, one may acknowledge that their body is different than what is promoted in the media (i.e., thin or curvy), but accept these differences as beautiful and what makes them unique.

In general, the focus on body appreciation is relatively new and is generally conducted with adolescents and young adults. In adolescents and young adults, body appreciation is associated with a number of positive factors such as overall well-being, increased self-esteem, and life satisfaction (Halliwell, 2015; Tylka & Wood-Barcalow, 2015b), as well as others. For instance, Andrew et al. (2016) recruited 298 Australian girls in grade 8, 9, and 10 to participate in a 1-year longitudinal study investigating body appreciation. The girls completed a series of questionnaires at the beginning of the study and one year later that assessed body appreciation, media consumption, physical activities (e.g., yoga), hobbies (e.g., reading), body acceptance by others, self-objectification, social comparison, intuitive eating, dieting behaviour, and other health-related behaviours (e.g., use of sun protection). Correlational analyses revealed that body appreciation at Time 1 was related to wearing more sun protection, less dieting, and decreased alcohol consumption at Time 2. A hierarchical regression model revealed a bi-directional relation between body appreciation and perceived body acceptance by others. Body acceptance by others at Time 1 was a predictor of body appreciation one year later, and greater body appreciation at Time 1 was related to increased body acceptance at Time 2. Thus, body acceptance by others and body appreciation may go hand in hand for adolescents. If body

appreciation can be increased, it is possible that a range of healthy behaviours could increase in frequency later on as well.

The literature also suggests benefits associated with body appreciation during emerging adulthood (Sundgot-Borgen et al., 2021). For example, Sundgot-Borgen et al. (2021) investigated body appreciation, appearance comparison, internalization of body ideals, self-esteem, life satisfaction, and exercise in a sample of male and female Norwegian undergraduate students who were studying exercise science ($n = 517$) or in a non-exercise field of study (teaching, engineering, or business; $n = 476$). This comparison was done to determine if learning about exercise and health was related to body appreciation. The average age of the participants was 24.30 years and comparisons were conducted between the exercise and non-exercise groups. With respect to females, results showed that female exercise science students had greater body appreciation compared to female students studying a topic unrelated to the body. In addition, female exercise science students also exhibited less appearance comparison, greater internalization of the athletic body ideal, less internalization of the thin ideal, higher satisfaction with life, and higher self-esteem than females studying subjects unrelated to the body. In contrast, no significant differences between the exercise and non-exercise groups were found for male body appreciation. These results demonstrate that learning about the body through exercise science is related to body appreciation and other positive psychological factors in females. This suggests that learning about exercise and health promotion has the potential to increase body appreciation, as well as self-esteem and life satisfaction in female students.

Body dissatisfaction and body appreciation reflect self-evaluations that could impact social interactions. Self-evaluations in the context of a social interaction are associated with SA. As such, it is possible that greater symptoms of SA are associated with body dissatisfaction,

given that individuals with SA may already be engaged in evaluating themselves harshly. In addition, fears of others evaluating their body negatively may further prompt more body dissatisfaction and less body appreciation. Conversely, individuals with less SA may evaluate themselves less critically, which may translate to more body appreciation.

SA and Body Image

Currently, there is little research that specifically explores SA and body dissatisfaction and body appreciation simultaneously. Consistent with the research above, studies tend to focus on SA and body dissatisfaction. For instance, Aderka et al. (2014) investigated 68 outpatients with SA disorder, obsessive compulsive disorder, or panic disorder and the appearance orientation and evaluation components of body dissatisfaction and body image disturbance. Although there were no significant differences in body dissatisfaction among the three groups, Aderka et al. found that SA disorder predicted appearance evaluation and body image disturbance. Aderka et al. concluded that symptoms of SA might be specifically associated with body image disturbance. These findings are supported by additional clinical research that has examined SA disorder and body dysmorphic disorder (Fang & Hofmann, 2010) which is characterized by a severe preoccupation with a self-perceived defect in appearance (Pinto & Phillips, 2005). Both disorders are associated with a fear of negative evaluation by others (Pinto & Phillips, 2005). Thus, past research suggests that clinical symptoms of SA are related to dissatisfaction and pre-occupation with appearance, at times to a clinical extreme (i.e., body dysmorphia).

Research with nonclinical samples show similar results. For example, Vannucci and Ohannessian (2018) investigated the association between symptoms of SA, general anxiety, and body dissatisfaction in a community sample of 581 adolescents in the United States. Data was

collected at three distinct timepoints: 1) spring of 2007, 2) spring of 2008, and 3) spring of 2009.

It should be noted that SA was assessed with a general anxiety measure (Screen for Child

Anxiety Related Disorders) and body dissatisfaction was measured indirectly (The Physical

Appearance Self-Competence subscale of the Self-Perception Profile for Adolescents). Results

demonstrated that adolescents who reported greater body dissatisfaction experienced more SA

symptomology at the initial assessment, but these symptoms decreased overtime. Thus, it is

possible that symptoms of SA and body dissatisfaction are heightened during adolescence and

improve as individuals age. Although the literature consistently shows that SA and the evaluative

dimension of body dissatisfaction are associated with one another, research by Pawijit et al.

(2017) suggest that specific aspects of SA may play a more important role in body dissatisfaction

than others. Pawijit et al. examined SA and body dissatisfaction in 80 emerging adults from

Thailand (25 males) between 18 and 25 years of age. The emerging adults completed

questionnaires that assessed general symptoms of SA, fear of negative evaluation (an aspect of

SA), and body dissatisfaction. Results showed that SA and body dissatisfaction were positively

correlated, but that fear of negative evaluation fully mediated this relation. These results suggest

that fear of negative evaluation is driving the associating between SA and body dissatisfaction

and that this aspect of SA plays a critical role in body dissatisfaction. Moreover, it is indicative

that symptoms of SA and body dissatisfaction continue to exist for some throughout emerging

adulthood, beyond what Vannucci and Ohannessian (2018) demonstrated.

Taken collectively, the literature is consistent regarding the relation between SA and

negative body image. Research by Pawijit et al. (2017) suggests some aspects of SA (fear of

negative evaluation) may play a more critical role than other aspects in this relation. A gap in this

literature is the inclusion of body appreciation. This is important because body appreciation,

which is associated with body dissatisfaction, has been shown to be a protective factor that is associated with increased self-esteem, overall well-being, and decreased depression (Linardon et al., 2023). However, the association between symptoms of SA (or lack of) and body appreciation has yet to be explored. Thus, it is unclear how these variables coexist in adolescents and young adults. Gaining a more comprehensive understanding of the relations between SA and body dissatisfaction and body appreciation could inform interventions that aim to increase body appreciation, promoting protective factors that may decrease symptoms of SA. Focusing on increasing body appreciation may be more effective than targeting body dissatisfaction. For this reason, the present study aimed to investigate how symptoms of SA (including fear of negative evaluation) and body dissatisfaction and body appreciation relate to one another in late adolescence and early adulthood.

Hypotheses

- Consistent with past research that has found a negative correlation between body dissatisfaction and body appreciation in adults (Tobin et al., 2019), and in line with the cognitive behaviour model of body dissatisfaction (Cash & Smolak, 2011; Senín-Calderón et al., 2017), it is predicted that increases in both body dissatisfaction (e.g., appearance evaluation and orientation) and body image disturbance will result in decreased body appreciation.

- Similarly, previous research has shown relations between SA and the evaluative dimension of body dissatisfaction (Aderka et al., 2014; Pawijit et al., 2017; Vannucci & Ohannessian, 2018). Thus, it is predicted that SA symptoms, including the isolated symptoms of fear of negative evaluation, will be positively related to the appearance evaluation dimension of body dissatisfaction, body areas dissatisfaction, as well as body

image disturbance. The inclusion of the body image disturbance would extend clinical research which suggests SA disorder and body dysmorphia are related (Aderka et al., 2014).

- Although past research has not explored SA and body appreciation, considering the relation between body dissatisfaction and body appreciation, it is predicted that SA, including fear of negative evaluation, will be negatively associated with body appreciation in the present sample.

- The majority of the literature focuses on quantitative methods, which does not provide a contextual understanding of individual concerns regarding body image. A final goal of the present study is to employ a qualitative approach to understand personal views regarding body image disturbance.

Method

Participants

A total of 142 participants, between 17 and 29 years of age, from Trent University were included in the present study. Students were recruited from the undergraduate participant pool (SONA) to take part in a larger study investigating social cognition in adolescents and young adults. Students who were enrolled in a course that provided bonus credits for research participation had the option of receiving bonus credits for participating. The study was approved by the Trent Research Ethics Board and written informed consent was obtained from each participant before proceeding with the study.

Procedure

During the COVID-19 pandemic, the study was conducted through Zoom videoconferencing and sessions lasted between 2.5-3.5 hours. Students completed a background

questionnaire, followed by questionnaires to assess symptoms of SA and body image, along with other measures that are not relevant to the present study. All questionnaires were completed as an interview, with the participant providing their responses verbally. When pandemic restrictions were lifted, the study transitioned to in-person testing with the procedure remaining the same.

Measures

Socioeconomic Status

Socioeconomic status can affect a wide range of psychological processes such as interpretation of social information and overall cognitive ability (Beck et al., 2018; Chen et al., 2004; Last et al., 2018) therefore, it was included as a control variable. Parental occupation was obtained in the background questionnaire and this information was coded using the *Blishen Scale* (Blishen et al., 1987). The *Blishen Scale* provides a score for socioeconomic status, based on education and salary, that ranges from 17.81 (newspaper carriers and venders) to 101.32 (physicians and surgeons).

Social Anxiety

The *Liebowitz Social Anxiety Scale* (Liebowitz, 1987), a 24-item self-report measure, was used to assess social anxiety. The scale focuses on fear and avoidance of social situations and is answered on a Likert scale ranging from 0 (*none*) to 3 (*frequently*). Scores range from 0–144 with higher scores indicating more severe SA. The scale has high internal consistency (Cronbach's α = .95), strong convergent and discriminant validity, and good test-retest reliability (r = .83; Baker et al., 2002).

The *Social Interaction Anxiety Scale* (Mattick & Clarke, 1998) is a 20-item self-report measure that was used for assessing cognitive symptoms of SA (i.e., anxiety and fears) that are associated with social interactions (e.g., I find it difficult to mix comfortably with the people I

work with). Each item is answered on a 5-point scale from 0 (*not at all*) to 4 (*extremely*), which results in a total score that ranges from 0–80, with higher scores indicating greater SA. This score was used as an overall score for SA. Three questions from the scale were also identified as assessing *fear of negative evaluation*, an aspect of SA linked to body dissatisfaction (Pawijit et al., 2017). The total score from these three questions, used to represent fear of negative evaluation, could range from 0 to 15. The Social Interaction Anxiety Scale demonstrates good internal consistency (Cronbach's α = .94; Auyeung & Alden, 2020).

Body Dissatisfaction

Body dissatisfaction was measured using the appearance evaluation and body areas satisfaction subscales from the *Multidimensional Body-Self Relations Questionnaire* and investment in appearance (an aspect of body dissatisfaction) was measured using the appearance orientation subscale of the *Multidimensional Body-Self Relations Questionnaire*.

The *Multidimensional Body-Self Relations Questionnaire - Appearance Scales* (Cash, 2000) includes 34 questions answered on a 5-point scale, with the first 22 questions answered on a scale ranging from 1 (definitely disagree) to 5 (definitely agree). Question 23 asks about weight loss attempts with responses ranging from 1 (never) to 5 (very often). Question 24 asks about self-perceived weight and 25 asks about other-perceived weight with response options ranging from 1 (very underweight) to 5 (very overweight). Questions 26-34 are answered with response options that range from 1 (very dissatisfied) to 5 (very satisfied). This questionnaire provides scores for the following subscales: Appearance Evaluation, Appearance Orientation, Overweight Preoccupation, Self-Classified Weight, and the Body Areas Satisfaction scale. Of relevance to the current study are the Appearance Evaluation scale, the Appearance Orientation Scale, and the Body Areas Satisfaction scale. The Appearance Evaluation scale assesses perceived level of

attractiveness and satisfaction with appearance. High scores on this subscale demonstrate feeling attractive and satisfied with one's appearance. The Appearance Orientation scale measures investment in appearance with higher scores indicating that appearance is highly important and is closely monitored by the individual. The Body Areas Satisfaction scale, similar to the appearance evaluation scale, also assesses perceived satisfaction but focuses on specific body areas. A higher overall score suggests satisfaction with multiple areas of the body. The *Multidimensional Body-Self Relations Questionnaire - Appearance Scales* has demonstrated adequate validity, and good reliability and internal consistency (Cash, 2020; Senin-Calderona et al., 2017).

Body Image Disturbance

Body image disturbance was measured using the *Body Image Disturbance Questionnaire* (Cash et al., 2004), which is a self-report questionnaire that measures distress and impairment in daily functioning from appearance-related concerns. A total of 7 items are answered on a Likert scale from 1 (not at all/no/never) to 5 (extremely/extreme/very often). The responses were summed to provide a total score with higher scores indicating greater body image disturbance (concern and dissatisfaction with appearance, as well as a preoccupation of these concerns). Questions 5 to 7 included an open-ended question that asked participants to expand on their initial response (e.g., If so, what do you avoid?). These open-ended questions were administered in an interview format which lasted approximately 5 to 10 minutes and were audio recorded. The audio recording was transcribed in Microsoft Word and double checked to ensure accuracy of the transcription. These open-ended questions were qualitatively analyzed using thematic analysis. The Body Image Disturbance Questionnaire demonstrates internal consistency and good convergent and discriminant validity (Cash et al., 2004).

Body Appreciation

Body appreciation was assessed using the *Body Appreciation Scale-2* (Tylka et al., 2022). This scale includes 10 items that are rated on a 5-point scale, ranging from 1 (never) to 5 (always). The following were assessed with this questionnaire: a) positive opinions of the body, b) body acceptance, despite weight, shape, and other deviations from the ideal, c) respect for the body and engagement in healthy behaviours, and d) protection of body image by rejecting social standards. An average item score is calculated, with higher scores suggesting greater body appreciation. This scale has good psychometric properties, including internal consistency, test-retest validity, and construct validity (Tylka & Wood-Barcalow, 2015b).

<div align="center">

Results

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Data Screening

The data was screened for normality using visual and statistical methods to ensure appropriate analyses were selected. First, boxplots were used to visually assess for outliers. A total of 10 cases were identified as outliers on the body image questionnaires: eight cases on the Body Image Disturbance Questionnaire and two cases on the Multidimensional Body-Self Relations Questionnaire (one on the appearance orientation and one on the body areas) were outliers. The ten outliers were modified by winsorizing, which involves replacing the outlier value with the next closest value (Aguinis et al., 2013; Kokic & Bell, 1994). Winsorizing was done to preserve the sample size. After winsorizing, the new boxplots demonstrated that there were no outliers present. Next, an analysis for skewness and kurtosis showed all variables were normally distributed, except for the Body Image Disturbance Questionnaire and the questions describing Fear of Negative Evaluation from the Social Interaction Anxiety Questionnaire. The Body Image Disturbance Questionnaire was positively skewed and the questions describing Fear

of Negative Evaluation from the Social Interaction Anxiety Questionnaire were negatively skewed. This was also supported visually by the histograms and the Kolmogorov-Smirnov test of normality, which is suitable for samples over 50 (Mishra et al., 2019). The results of the Kolmogorov-Smirnov test suggested that the Body Image Disturbance Questionnaire and the questions describing Fear of Negative Evaluation from the Social Interaction Anxiety Questionnaire were non-normal. Considering variables did not meet the assumption of normality, despite winsorizing, a log transformation was computed for the Body Image Disturbance Questionnaire and bootstrapping was applied to subsequent statistical analyses.

To assess if there were group differences based on method of data collection (Zoom [n = 79] or in person [n = 61]) and the gender of the research assistant (male [n = 30] or female [n = 110]) independent t-tests were also conducted. Most of the t-tests showed no significant differences for method of data collection and sex of the research assistant, with the exception of the Social Interaction Anxiety Scale. The independent t-tests for the Social Interaction Anxiety Scale showed participants reported significantly more cognitive symptoms of SA when being administered the task by a male research assistant (M = 39.57, SD = 11.82; $t(123)$ = 2.03, p = .04, than a female research assistant (M = 32.92, SD = 16.12) and when facilitated in person (M = 36.69, SD = 14.84; $t(138)$ = -2.13, p = .04) versus over Zoom (M = 31.18, SD = 15.66). The effect size was very large for both with a Cohen's d of 15.28 and 15.21, respectively. Consequently, the method of data collection and gender of the research assistant was controlled for in subsequent analyses with the Social Interaction Anxiety Scale.

The following assumptions for correlational analysis were also assessed: 1) linearity, 2) bivariate normality, 3) homoscedasticity (i.e., reasonably equal variances in the outcome variable across values of the predictor variable), and 4) normality of the residuals. Scatterplots were used

to explore these assumptions visually. All data appeared to be linear, with the data points spreading from left to right in a straight line. The data also represented bivariate normality because each value for the predictor had a normal distribution with the associated outcome variable. Added, the data appeared to represent the shape of an oval, indicating homoscedasticity. That is, the error variability in the data (i.e., residuals) did not appear to vary dramatically as the predictor changed; the distance between the line of best fit and the residual scores appeared to remain constant as the predictor increased. Normal P-P Plots were used to assess the normality of the residuals and normality was assumed for each of these graphs as most data points were distributed in linear pattern. Overall, it was concluded that the data met all parametric correlation assumptions. Despite this, bootstrapping was utilized in subsequent analyses due to non-normality of the Body Image Disturbance Questionnaire and Fear of Negative Evaluation.

Sample Characteristics

The final sample was comprised of 142 participants with a mean age of 20.75 ($SD = 2.85$ range: 17-29 years-old). The sample primarily identified as female (120 or 84.50%), 21 identified as male (14.80%), and one individual identified as other (.70%). The sample showed an average socioeconomic status score of 52.69 ($SD = 13.92$, $n = 139$), which is considered middle class. Socioeconomic status was not significantly correlated to any of the measures; therefore, it was excluded from the subsequent analyses. Of the 142 participants, 10 indicated no body image disturbance and 132 indicated concerns and proceeded to provide open-ended responses to the Body Image Disturbance Questionnaire.

Quantitative Data

Mean scores for SA, body dissatisfaction and disturbance, and body appreciation can be

found in Table 1. On average, participants reported moderate levels of SA (Liebowitz, 1987).

Participants reported above average disturbance with their body image (measured with the Body

Image Disturbance Questionnaire), but not in the clinical range (Habosky et al., 2009).

Participants also reported moderate satisfaction with their body, moderate investment in their

body (both measured by the Multidimensional Body-Self Relations Questionnaire), and an

average body appreciation score that was consistent with past college samples (Tylka & Wood,

2015).

The Associations between Body Dissatisfaction, Body Image Disturbance, and Body

Appreciation

To test the first hypothesis, bootstrapped correlation coefficients were computed for body

dissatisfaction (e.g., appearance evaluation and orientation), body image disturbance, and body

appreciation. There was a significant positive association between one measure of body

dissatisfaction (appearance evaluation subscale) and body appreciation ($r(140) = .84, p < .001$).

This correlation was re-affirmed by the 95% bootstrapped CI [.79, .88] with a lower limit of .79

and an upper limit of .88. Given the exclusion of 0 within this interval, it is probable that a

positive correlation indeed exists within the broader population. There was also a significant

positive association between the second measure of body dissatisfaction (body areas satisfaction

subscale) and body appreciation $r(140) = .75, p < .001$. This correlation had a lower limit of .68

and an upper limit of .81. Lastly, the behavioural component of body dissatisfaction (appearance

orientation subscale) was not significantly associated with body appreciation. However, there

was a significant negative correlation between body image disturbance and body appreciation

($r(140) = -.59, p < .001$. This correlation was also re-affirmed by the 95% bootstrapped CI [-.69,

-.48] with a lower limit of -.69 and an upper limit of -.48. As this confidence interval does not

span 0, it implies a likely negative association between these variables within the general population. These results support the hypothesis that as body dissatisfaction increase in young adults, body appreciation decreases.

The Association between Social Anxiety and Body Dissatisfaction and Body Image

Disturbance

To test the second hypothesis, bootstrapped partial and bivariate correlation coefficients were computed for symptoms of SA (as measured by the Social Interaction Anxiety Scale and the Liebowitz Social Anxiety Scale) and body dissatisfaction (appearance evaluation). The first partial correlation (controlling for method of data collection and research assistant gender) showed a significant negative association between SA (measured by the Social Interaction Anxiety Scale) and the appearance evaluation component of body dissatisfaction (measured by the Multidimensional Body-Self Relations Questionnaire*; r*(136) = -.49, *p < .001)*. Results of a bivariate correlation showed a significant negative association between SA (as measured by the Liebowitz Social Anxiety Scale) and appearance evaluation component of body dissatisfaction (measured by the Multidimensional Body-Self Relations Questionnaire; *r*(138) = -.41, *p < .001)*. Furthermore, the fear of negative evaluation, included on the Social Interaction Anxiety Scale, also had a significant negative correlation with appearance evaluation (*r*(136) = -.55, *p < .001)*, upon controlling for method of data collection and research assistant gender. The above correlations were all supported by their 95% bootstrapped confidence intervals, suggesting that a probable negative association between these variables in the general population. Thus, as symptoms of SA increase, including fear of negative evaluation, satisfaction with one's body decreases.

Another partial correlation (controlling for method of data collection and research

assistant gender) showed a significant negative association between SA (measured by the Social

Interaction Anxiety Scale) and body areas satisfaction (measured by the Multidimensional Body-

Self Relations Questionnaire; $r(136) = -.50$, $p < .001$). Results of a bivariate correlation showed a

significant negative association between SA (as measured by the Liebowitz Social Anxiety

Scale) and body areas satisfaction ($r(138) = -.44$, $p < .001$). Furthermore, upon controlling for

method of data collection and research assistant gender, a significant negative correlation was

demonstrated between fear of negative evaluation (from the Social Interaction Anxiety Scale)

and body areas satisfaction ($r(136) = -.51$, $p < .001$). These correlations were also supported by

their 95% bootstrapped confidence intervals. Thus, a probable negative association between

these variables in the general population is likely to exist. These results suggest that as symptoms

of SA increase, including fear of negative evaluation, satisfaction with multiple areas of one's

body decreases.

      Similarly, and further examining the second hypothesis, results of the partial correlation

(controlling for method of data collection and research assistant gender) between SA (as

measured by the Social Interaction Anxiety Scale) and body image disturbance (as measured by

the Body Image Disturbance Questionnaire) revealed a significant positive association; $r(136) =$

$.41$, $p < .001$. The bivariate correlation between SA (measured with the Liebowitz Social Anxiety

Scale) and body image disturbance also revealed a significant positive association; $r(138) = .41$,

$p < .001$. Finally, the fear of negative evaluation (measured with the Social Interaction Anxiety

Scale) had a significant positive correlation with body image disturbance, $r(136) = .52$, $p < .001$,

after controlling for method of data collection and research assistant gender. These correlations

with body image disturbance were also supported by the 95% bootstrapped confidence intervals.

As a result, it is probable that a positive correlation indeed exists within the broader population

for both measures of SA and fear of negative evaluation. Meaning, these correlations suggest that increased symptoms of SA are related to body image disturbance.

The Association between Social Anxiety and Body Appreciation

To test the third hypothesis, bivariate and partial correlation coefficients were computed for symptoms of SA and body appreciation. Results of the partial correlation (controlling for method of data collection and research assistant gender) revealed a significant negative association between SA (as measured by the Social Interaction Anxiety Scale and fear of negative evaluation) and body appreciation ($r(136) = -.47$, $p < .001$, $r(136) = -.54$, $p < .001$, respectively. The bivariate correlation between SA (measured with the Liebowitz Social Anxiety Scale) and body appreciation was also negative and significant ($r(138) = -.40$, $p < .001$). The confidence intervals for the above correlations also demonstrated that the upper and lower limits between the three measures of SA and body appreciation did not cross the value of 0. Therefore, it is likely that a negative correlation exists within the broader population for each of these variables as well. This suggests that as symptoms of SA increase, appreciation for one's body decreases.

Summary of Quantitative Analysis

In summary, participants reported moderate levels of body dissatisfaction, body image disturbance, body appreciation, and SA. Consistent with predictions, greater body dissatisfaction and disturbance was related to decreased body appreciation. SA was related to increased body dissatisfaction and disturbance as well as lower body appreciation.

Qualitative Data Analysis

Interviews regarding body image disturbance were analyzed using thematic content analysis (Braun & Clarke, 2006) to explore the themes that characterized participants'

perspectives on body image and how difficulties with their body image impacted their lives. A total of five questions (See Appendix A) were included in the thematic analysis. The first two questions explored specific appearance concerns and preoccupation with appearance. The final three questions refer to a physical characteristic that participants felt particularly negative about and how this interfered with their social life, schoolwork, job, and overall functioning, and what they avoid because of this physical characteristic.

Coding and Reliability

To begin, 46 of the transcripts were randomly selected for review (ages ranging from 17-29 years). Saturation (i.e., when data is being repeated and new codes are no longer emerging; Saunders et al., 2018) was established upon reviewing these 46 transcripts; therefore, further review of the transcripts stopped. Participant responses began adding to the richness of what was already disclosed in earlier reviewed transcripts. This sample size is consistent with the past qualitative research that suggests saturation can be achieved with a smaller sample size (Hennink & Kaiser, 2022).

From this review, themes were identified from the responses to each question. Preliminary codes and corresponding descriptors based on participant responses were generated. Initially, the responses to each question were coded, resulting in over 10 distinct codes. The final three questions generated similar codes and were therefore merged. By merging the codes, the overall themes were captured better. The preliminary code manual for the respective questions (see Appendix B) was refined until there were two final themes (with five sub-themes) to represent the first question, three themes representing the second question, and two themes representing the final three merged questions.

For reliability, a second rater reviewed a random sample of 26 transcripts to confirm the

seven main themes that were found within the transcripts and establish reliability of the codes. Minor revisions of the code manual were made during this initial review with the second rater. These revisions consisted of terminology choice for the theme names. A random sample of the eight transcripts were then reviewed for a final time, using the completed code manual by a third rater. Quotes that corresponded to one of the codes in the code manual were highlighted accordingly. The coding done by the third rater was consistent with the first and second raters; therefore, did not proceed past the initial eight reviews. Upon completion of reliability among the reviewers, all 46 transcripts were coded using the completed code manual. To help illustrate the participants' authentic responses, verbatim quotes are used in the findings below.

Reflexivity

Qualitative research requires reflexivity to ensure the integrity of the results. Reflexivity was prioritized during the interviews and throughout the data analysis phase. Given the sensitive nature of the topic, participant comfort was regarded as one of the top priorities during the interviews. It was acknowledged that participants may have been more reserved with a person of a different gender. For this reason, an initial quantitative analysis was conducted to see if there were any indicators that participants may have been influenced by the gender of the research assistants. In preparation of this potential influence, all research assistants were trained to foster an empathic approach, listen actively, ask clarifying questions, and avoid inserting their own interpretation of the participant's perspectives. In addition to the interviews, reflexivity was practiced when reviewing the transcripts during the coding phase. While reviewing the transcripts, a discussion of the emerging themes with the second rater was done to establish alternative viewpoints and mitigate any biases. With the inclusion of the third rater, additional discussions took place to validate the initial themes. Adopting these practices throughout the

study supported the rigor and authenticity of the research, aiding in a more thorough understanding of the topic.

Qualitative Data Results

A total of seven main themes were identified from the questions regarding body image disturbance. The first two themes, physical attributes, and societal influence were prominent in responses to question 1, which asked participants what bothered them about the appearance of the body parts they discussed. The second question, "What effect has your preoccupation with your appearance had on your life", generated the next three themes (appearance-drive coping strategies, impact on social life and relationships, and discomfort with appearance). Questions five to seven, asked about how one's physical defect interfered with their social life, school, job, functioning, and what forms of avoidance were occurring. This question generated the final two themes of social avoidance and appearance-monitoring.

Body Image Disturbance Question 1: Appearance Concerns

Physical Attributes. When asked to reflect on appearance concerns, participants mentioned five primary physical attributes that they found especially unattractive and were concerned with. These physical attributes included: teeth, hair, skin, face, and specific body areas (e.g., breasts).

Teeth. Concerns regarding teeth included tooth positioning with one individual stating, "My teeth – I don't have perfectly straight teeth makes me sad" (Participant 85861, 29 years, M). Having straight teeth with an aligned bite was desirable to participants and not having a certain set of teeth appeared to have a negative impact on them. In addition to the positioning of the teeth, tooth colour was also noted as a concern with one individual stating, "Maybe just teeth, the whiteness – teeth is not like white enough, yellow-ish" (Participant 86935, 19 years, F). Thus, a

common concern for young adults in the present sample were teeth alignment and colour. Although teeth were a focus during these interviews, the described appearance concerns also encompassed hair.

Hair. Notably, a portion of hair concerns related to the density (i.e., thickness or thinness) with one saying, "my hair. It's so thin" (Participant 91519, 25 years, F), with another adding, "I find my hair really thin […] It's a little bit annoying" (Participant 86959, 18 years, F). Perceiving one's own hair as thin appeared to be a concern and was viewed as having a negative impact on the participant. Meanwhile, others experienced a similar concern with their hair for an opposite reason with one saying, "Hair thickness I don't know, just hair. It's just too thick" (Participant 86935, 19 years, F) and another adding, "the thickness of my hair sometimes can be a lot" (Participant 91020, 17 years, F). Thus, hair density (thick or thin) was an appearance concern for young adults in the present sample. Another prominent concern that arose during the interviews was skin.

Skin. Individuals noted various concerns regarding their skin, including acne, with one saying, "My skin. I-I break out often" (Participant 91519, 25 years, F). Another reflected on a specific area of their body where their acne bothered them by saying, "Like shoulder acne. Just too much of it sometimes" (Participant 86935, 19 years, F). The frequency in which acne appears and the number of acne marks that develop on one area of the body was a concern for these young adults. In addition to acne, a skin condition called psoriasis was also discussed with one saying, "I have a skin condition, it's called psoriasis so if I have like a flare up it's like a very unflattering rash" (Participant 86443, 28 years, F). Thus, marks on the skin, consisting of acne and rashes are seen as an appearance concern for young adults in the present sample. In addition

to the physical attributes described, participants also disclosed facial features being a

consideration when asked to reflect on their appearance concerns.

   Face. Facial feature concerns were described by the young adult participants as physical

attributes that are on the face, such as, eyes, eyelashes, lips, and the nose. Notably, noses were a

re-occurring concern, with one individual saying, "Like my nose, I would say is too big or that's

what I thought in the past" (Participant 90919, 17 years, F), and another adding, "I think my nose

is too – has like a lump on it or isn't – doesn't turn up" (Participant 82132, 21 years, F). Thus,

the size and the shape of their noses became focal points for self-critique for these young adults.

Although worries about the features of the face were prominent, appearance concerns also

included aspects of the body.

   Specific Body Areas. Parts of the body that were discussed were diverse and included

appendages (legs, arms, fingers), the ribs, chest, and the waist. Notably, the size of certain body

parts was discussed, in the context of being too large or too small. For instance, female

participants expressed concern with the size of their chest, or breasts, with one saying, "chest

size, sometimes I just find it too small" (Participant 86935, 19 years, F), and another adding,

"breasts are too small" (Participant 82132, 21 years, F). These statements demonstrate how

breast size is evaluated by participants, and more importantly what they thought of having

smaller chests. Legs were another body area discussed with size being a concern when they were

viewed as being larger than self-preferred. For instance, one individual said, "probably my legs

just because, like I am really tall, so they're more stocky than I would have liked" (Participant

81796, 22 years, F). With respect to body parts being considered too large, arms were also a

concern with one stating, "My arms look really big" (Participant 92275, 19 years, F). These

statements illustrate how different body areas are considered by the participants when asked to

reflect on appearance concerns. Although physical attributes were described by many participants, the theme of societal influence also emerged during the interviews.

Societal Influence. Societal influence was described as feeling appearance shamed, not conforming to social norms, and fear of appearance-related judgement. One participant stated, "I would just say not fitting social norms" (Participant 83749, 20 years, F). This illustrates how participants considered social norms when reflecting on their appearance and how they felt a departure from these appearance norms was a concern. In addition, it seemed that a departure from social norms may contribute to negative interpretation biases; participants believed that others might think negatively about their appearance with one stating, "I feel like it's mostly like the judgment aspect. I feel like I'm going to get judge for looking a certain way sometimes. Or like the fear of being made fun of, yeah" (Participant 84427, 21 years, F). Thus, social norms and a departure from these norms appeared to influence participants' appearance perceptions.

Taken collectively, the young adults in this sample experience numerous concerns with their appearance, including different physical attributes such as the teeth, hair, skin, facial features, and body areas. In addition to these concerns, participants also discussed how they are influenced by societal standards, with the topic of not fitting in with social norms arising.

Body Image Disturbance Question 2: Appearance Preoccupation Effects

When asked to reflect on how appearance preoccupations effect their lives, three main themes emerged: 1) appearance-driven coping strategies, 2) impacts on social life and relationships, and 3) a degree of discomfort with their appearance.

Appearance-Driven Coping Strategies. Individuals regularly employ strategies to cope with a variety of situations and experiences. When appearance concerns arise, individuals may attempt to cope, which was demonstrated in the present transcripts. Appearance-driven coping

strategies were described by participants as engaging in strategies to alleviate the impact of appearance, such as wearing certain clothing items that conceal or cover up the insecurity. Multiple individuals shared their choices to wear certain clothing when asked to reflect on their preoccupation with their appearance. For instance, one individual said they, "tend to wear long sleeves" (Participant 86443, 28 years, F), with another explaining, "I definitely wear baggier clothing like I have to put more effort I guess into how I dress" (Participant C00005, 27 years, M). Thus, appearance concerns seemed to contribute to clothing choices by some participants. In addition to appearance-driven strategies, participants also disclosed how their social lives and relationships had been impacted by their appearance preoccupations.

Impact on Social Life and Relationships. This theme was described as social situations that have been impacted because of an appearance-related reason. The impact was generally regarded as social avoidance with one participant saying, "less likely to like, go out certain places and do certain things" (Participant 75331, 23 years, F). Another participant was more specific stating, "my sex life, I would say it affects it. Just being uncomfortable with being fully naked around a partner" (Participant 93070, 18 years, O). Thus, participants indicated their preoccupation with their appearance contributed to decisions to withdrawal socially, in general and in intimate relationships. Appearance concerns also were reported to have a more direct impact on participants, as they described general discomfort with their appearance.

Discomfort with Appearance. This theme was described as appearance-related internalized thoughts and emotions. One participant expanded on these internalized thoughts by saying, "there are periods of time where I think about my weight a lot and that causes me stress too, so mostly just causing stress" (Participant 79573, 22 years, M). When discussing appearance, participants commented on internalized thoughts and emotions with one reflecting,

"it made me really emotional or sensitive when topics of appearance would come up" (Participant 90919, 17 years, F). Furthermore, another participant noted how these internalized thoughts and emotions impact how their life is experienced by saying, "the thoughts in my head, caring too much about my appearance and not focused enough on what I'm doing or being in the moment and feeling self-conscious about" (Participant 82132, 21 years, F). Thus, participants in the present study disclosed thoughts and emotions, related to their appearance preoccupations, that were troubling for them.

In summary, these findings expand upon the existing body image literature by clarifying how appearance concerns impact participant's daily lives. Specifically, the young adults in the present sample explained the various ways they attempt to cope with their appearance preoccupations, which involved modifying their appearance. Participants also disclosed that their appearance preoccupations also led to social withdrawal and thoughts and feelings related to their appearance concerns.

Body Image Disturbance Questions 3-5: Defect Interference

Social Avoidance. Described as being less inclined to attend social events, not making social plans because of appearance, difficulty preparing one's appearance for social outings, avoid engaging in certain behaviours in front of others, and avoiding close friends and/or family. For instance, one individual stated, "not being able to approach or talk to some people. I get shy and scared to make friends. Avoid meeting people" (Participant 86377, 18 years, F), while another contributed, "If I am having a self-conscious day, makes me want to not see people" (Participant 81796, 22 years, F). Other participants specified close or intimate relationships as the social setting they avoid most often because of their appearance with one saying, "Don't really like going out much, especially with friends" (Participant 84193, 21 years, F). Thus,

comments regarding appearance concerns suggest these concerns interfered with a variety of social interactions that participants have had the opportunity to engage in. In addition to avoiding social interactions, participants also disclosed that they monitored their appearance when they were asked to reflect on their perceived physical defect.

  Appearance Monitoring. The final theme, being appearance monitoring, was described as the monitoring of one's own appearance through behavioural choices and thoughts. This included being conscientious of clothing choice, with one saying, "I've avoided wearing a swimsuit at all or just going not going swimming because I didn't want to have to wear something uncomfortable like that or if I have to wear like really tight clothing somewhere it's another thing a little bit too revealing for my comfort" (Participant 86959, 18 years, F). Self-reflection on specific body areas was also described, with another participant reflecting, "I used to work at Tim Horton's, and you know, every new face I'm like what my teeth, what I'm- 'what are they thinking about my teeth' kind of thing" (Participant 86221, 27 years, F). Thoughts related to this perceived defect occurred with each new interaction for this person. Time spent on appearance was also elaborated on with one participant saying, "I just think that like there was too much time spent on looking through social media and thinking about how I look. Instead of allocating that time to other things that were so much more important" (Participant 90919, 17 years, F). For this individual, much of their time was devoted to thoughts related to their defect and not on topics they felt were more important to them.

  Overall, these young adults disclosed experiencing social avoidance and the monitoring of their appearance when asked to reflect of the ways in which their self-perceived physical defect interfered with their lives. Social avoidance was generalized, with participants disclosing the desire to not engage with others. Appearance monitoring included behavioural choices,

similar to coping strategies, but also included thoughts related to their defect. These results add to the growing body of literature that has linked SA and body dissatisfaction.

Discussion

The aim of the present study was to explore the relation between symptoms of SA and body dissatisfaction, body image disturbance, and body appreciation in young adults. Consistent with the first prediction, body dissatisfaction (e.g., appearance evaluation and orientation), body image disturbance, and body appreciation are all related. Greater body dissatisfaction is related to greater body image disturbance and lower body appreciation and greater body disturbance is related to less appreciation for the body. Consistent with the second hypothesis, greater SA symptoms are related to greater body dissatisfaction and body image disturbance. Lastly, also as hypothesized, individuals with heightened SA exhibit lower levels of body appreciation.

Body Dissatisfaction and Body Appreciation

Consistent with past literature (More et al., 2022; Tobin et al., 2019), and in support of the first hypothesis, our results demonstrate a relation between the attitudinal component of body dissatisfaction (measured by appearance evaluation and body areas satisfaction) and body appreciation, suggesting that both exist on opposite sides of the same continuum. This supports More et al. (2022) and Tobin et al. (2019) who suggested that the two concepts share a negative relation. Important to note, however, both More et al. and Tobin et al. assessed body dissatisfaction with a scale that primarily focuses on body shape concerns, rather than overall dissatisfaction with appearance. Examining appearance evaluation and body areas satisfaction allows for a more comprehensive evaluation. The current results support the idea that greater dissatisfaction with various aspects of appearance is linked with less body appreciation, but also demonstrates that overall appearance concerns are also negatively related to body appreciation.

This suggests that dissatisfaction with appearance, beyond that of shape concerns, is indicative of less appreciation for the body as well. Perhaps dissatisfaction with the body, generally (e.g., height or weight) or for specific areas (e.g., breasts), is challenging to cope with and reduces the ease with which body appreciation can be practiced.

The present results also expand our understanding of the association between the behavioural component of body dissatisfaction and body appreciation by including the orientation component of body dissatisfaction. In addition to the evaluative component of body dissatisfaction, a cognitive-behavioural model suggests that appearance orientation is a component of this concept as well (Cash & Smolak, 2011; Senín-Calderón et al., 2017); past studies have ignored this, however. Although exploratory, this result does not support the first hypothesis. Greater investment in appearance is not related to body appreciation. It is possible that behavioural investment is not always linked with appreciation for the body. Some young adults could invest considerably in their appearance, for reasons that are central to showing love and respect for their bodies, which aligns with body appreciation. Other young adults may invest in their appearance, perhaps excessively and for reasons central to maintaining an appearance ideal, which would not align with body appreciation. It is also possible that young adults invest more in their appearance than the quantitative data suggests. Prioritizing appearance can be stigmatized and participants in the current study may feel reluctant to provide responses that suggest defying a growing societal norm (i.e., less value placed on appearance or vanity). Consequently, an individual's investment in their appearance may present in a more complex way than what is currently being captured through a questionnaire that does not assess time spent on appearance investments and asks direct questions such as, "it is important that I always look good". Instead, when given the opportunity to verbally elaborate, the qualitative results from the

present study demonstrate that young adults engage in appearance-driven coping strategies.

The use of strategies to alleviate the impact of appearance preoccupations suggests a degree of investment placed on appearance. For instance, participants reflected on clothing choices that were strategically made to cover up an insecurity, suggesting that thoughtful actions were made in relation to one's appearance. These thoughtful actions indicate that young adults place importance on their appearance by trying to not display certain physical attributes. Furthermore, decisions to modify one's habits (e.g., dietary, exercise) because of appearance, and feeling that one has overworked themselves also suggests that appearance is important to them as they take steps to enhance or modify their appearance. These results shed light on the experience one may have with appearance investment that goes beyond what can be assessed quantitatively, at this time. Despite this further insight, we do not know how the participants in the current study with greater body appreciation practice this daily through their behaviour. It is also possible that those with greater body appreciation and appearance satisfaction invest more into their appearance than is captured on a questionnaire and qualitative methods should continue to be utilized with this topic.

Body Image Disturbance and Body Appreciation

In additional support of the first hypothesis, our results reflect that body image disturbance and body appreciation share a negative relation. In the general population, these results suggest that we may expect individuals to view their body in a less harsh way if they have developed the capacity to love their bodies unconditionally and reject societal standards. Considering both body image disturbance and body appreciation exist in the general population and are respectively associated with either distressing symptoms or protective factors, understanding their relation in non-clinical samples is important. Thus, the present findings can

be generalized to the broader population and demonstrate that body image concerns coincide with less body appreciation. This adds to the growing body of literature that suggests body appreciation is a protective factor (Linardon et al., 2022, 2023; Urke et al., 2021). Perhaps less critical evaluations of the body can occur when body appreciation is regularly practiced. In clinical practice with individuals who suffer from body image disturbance (e.g., body dysmorphia), or have a specific concern with a perceived defect (e.g., acne), it may be beneficial to work on promoting body appreciation. This may reduce disturbance associated with any perceived defect, which demonstrates the utility of this psychological concept.

Social Anxiety and Body Dissatisfaction

The current study reaffirms the relation between the symptoms of SA and body dissatisfaction by also clarifying how symptoms characteristic of social avoidance and fear, as well as cognitive SA symptoms (e.g., attention and interpretation biases) are related to overall appearance dissatisfaction and body areas dissatisfaction (Vannucci & Ohannessian, 2018; Pawijit et al., 2017). Past research has made inferences about the relation between SA and body dissatisfaction using generalized anxiety scales (Vannucci & Ohannessian), which does not capture the full extent of SA symptoms that one would experience. The current findings expand the existing literature by clarifying that specific aspects of SA are related to difficulties with body image. Furthermore, the present results support Pawjiit et al. (2017) by demonstrating that fear of negative evaluation, a primary component of SA, is also linked with the appearance evaluation dimension of body dissatisfaction and body areas dissatisfaction. Thus, it is possible that a fear of negative evaluation exacerbates existing body image concerns by leading to thoughts that suggest judgement may ensue.

The qualitative results from the current study also lend support for the relation between

fear of negative evaluation and body dissatisfaction because one theme that emerged from the transcripts is appearance monitoring. These internal appearance monitoring thoughts could be related to a fear of a negative evaluation or mimic self-focused attention (biased attention on oneself in social settings; Nanamori et al., 2023). Nanamori et al. (2023) investigated self-focused attention, fear of negative evaluation, and SA. Their findings revealed that fear of negative evaluation triggered self-focused attention in those with SA. Thus, individuals with SA who experience a fear of negative evaluation and body dissatisfaction may monitor their appearance through self-focused attention, re-enforcing symptoms further. Although participants in the current study did not always refer to social settings when discussing appearance monitoring, this idea is supported by Biderman et al. (2023) who demonstrated that fear of negative evaluation, societal appearance pressures, and disordered eating were all related. For someone who experiences body dissatisfaction, SA and a fear of negative evaluation, these societal appearance pressures may internalize and arise as thoughts that they experience prior to entering a social setting. Importantly, the theme of societal influence emerging in the present sample further supports the idea that societal appearance pressures may internalize. This suggests that young adults may reflect about their appearance not fitting with social norms, contributing to symptoms characteristic of SA, such as appearance monitoring. As such, appearance monitoring could be an extension of self-focused attention, which is common in those with SA.

Moreover, for young adults with symptoms of SA and body dissatisfaction, attentional and interpretation biases in social settings may perpetuate further difficulties. For example, one may think that everyone will notice their stomach not being flat if they go to the beach and consequently fear and avoid this setting. This may be re-affirmed by them in past interactions where they did go to the beach and show their stomach and biasedly interpret social information

(e.g., a comment from a friend) negatively in relation to their perceived defect. The qualitative themes described as discomfort with appearance and societal influence may help to make sense of this. The young adults in the current study disclosed occurrences when others have mentioned appearance, and this generated troubling thoughts and emotions for them. They also disclosed how a departure from social norms or appearance ideals concerned them, further suggesting that social information related to appearance internalizes. Thus, it is possible that young adults with greater SA hear the topic of appearance in discussion with others and experience a negative bias (e.g., the appearance statement was shameful) which internalizes, perhaps as an appearance concern for them now. Consequently, when engaging in anticipatory or post event processing of similar social events, they may attribute appearance (e.g., stomach not being flat is shameful) as a factor that negatively impacts social interactions (e.g., being intimate with a partner).

The relation between SA and body image requires further examination as the effect of each one likely re-enforces the other. For instance, Miller et al. (2022) demonstrated that observing a peer cope adaptively with body image concerns can help to buffer personal body image distress. Thus, if we are observing a peer adaptively cope with their body dissatisfaction, we may feel less burdened by our own body image concerns. This suggests that certain social interactions may positively influence body image. However, for young adults with SA, opportunities to observe peers adaptively cope with body-related distress may be avoided. Consequently, individuals who struggle with SA and body dissatisfaction may experience symptoms that contribute to greater social avoidance, further impacting the development of stable relationships.

Social Anxiety and Body Image Disturbance

The present findings support the relation between SA and body image disturbance in a

non-clinical young adult population, which expands upon the results of Aderka et al. (2014) who

evaluated body image in those with SA disorder. The current study validates that individuals can

experience symptoms of SA and body image disturbance concurrently without meeting a clinical

threshold. Support for the social implications of body image disturbance are illustrated by the

qualitative findings. For instance, the themes of social avoidance and the impact on social life

and relationships emerged from participant responses and suggest that body image concerns

could contribute to social censoring (e.g., not engaging in certain behaviours in front of others),

withdrawal, and avoidance, which is characteristic of SA. Thus, not only are individuals in the

current study disclosing that they are experiencing more severe appearance concerns, but they

are reflecting extensively on the implications that these concerns have on their social lives.

Importantly, the responses that generated the theme of social avoidance were provided when

participants were asked to reflect on the ways their perceived defect has interfered with their

lives. Thus, participants were reflecting on one or more, specific defects, that contributed to this

social avoidance. It is plausible that a young adult would consider avoiding social interactions, or

experience SA symptoms, if they have concerns with one (e.g., teeth) or more (e.g., skin and

hair) areas of their body. Aside from actions that a young adult makes during social interactions,

the body is the primary point of display in social settings and an awareness of this may

contribute to greater anxiety.

Moreover, the quantitative results suggest that those with elevated SA also experience

considerable body-related distress and dysfunction. Further, the qualitative results suggest that

those with severe body image concerns also experience symptoms characteristic of SA. Thus,

young adults who present with one concern may also experience the other, which further

exacerbates the developmental challenges associated with this stage of life (e.g., building stable

relationships). If a young adult is focused on their body having one or more defects, they may be fearful of social interactions that would reveal this defect or avoid interactions that would result in these defects being visible to others.

Social Anxiety and Body Appreciation

Previously, SA was explored with body dissatisfaction with little attention to body appreciation. A growing body of literature suggested that body appreciation is a protective factor for self-esteem, overall well-being, anxiety, social physique anxiety, and depression (Linardon et al., 2022, 2023; Urke et al., 2021). Considering the existing research has examined anxiety and body appreciation without the inclusion of SA, specifically, the current results shed light on the relation between SA and body appreciation. These results demonstrate that, as expected, young adults with elevated SA demonstrate less body appreciation. Moreover, the symptoms of fear of negative evaluation were also related to body appreciation, suggesting that those with less fear of negative evaluation are more likely to experience greater body appreciation. It is logical that a young adult who experiences less SA, and therefore fewer attention and interpretation biases, would have greater appreciation for their body. If one is approaching a social interaction, knowing that their body will be on display, but has considerable love and respect for it, they may focus less on evaluation or scrutiny, and perhaps fearing this form of evaluation to a lesser degree. This is also consistent with Behrend et al. (2023) who demonstrated that greater body appreciation was associated with greater body flexibility and the perception that others were accepting of their body. Thus, those with high SA and low body appreciation may attend to and interpret body-related social information negatively because they may not perceive that others are accepting of their body.

Limitations and Future Directions

There are limitations in the current study that should be acknowledged. First, a specific fear of negative evaluation scale was not included. However, it could be argued that fear of negative evaluation is a core component of social anxiety and is what primarily describes social physique anxiety (i.e., fear of negative body evaluations by others). Since the present findings support a growing body of evidence that fear of negative evaluation may be one of the primary symptoms of SA that drives its relation with body dissatisfaction and disturbance, additional research is needed that includes a specific fear of negative evaluation scale and perhaps social physique anxiety. This will help disentangle the aspects of SA, and related concepts, that contribute to the various components of body image. It would also be advantageous for future studies to also explore self-focused attention with body image in those with varying symptoms of social anxiety. For instance, Junghans-Rutelonis et al. (2015) found that fear of negative evaluation mediated the relation between self-focused attention and self-esteem in young adults. Considering the above findings, and that self-esteem is related to both SA (Ahmad et al., 2013) and body dissatisfaction (Hysi, 2024), it would be advantageous to explore fear of negative evaluation, self-focused attention, and self-esteem with SA and body dissatisfaction in the future.

It is unclear from the qualitative findings if the monitoring of one's appearance occurs in social settings or in preparation for a social setting. Our results only demonstrate what participants think about when asked to reflect on interference caused by a perceived defect. This form of appearance monitoring may be a demonstration of self-focused attention. Future researchers should consider conducting an experimental study that aims to explore what young adults with varying levels of SA think about before and during social interactions, with respect to their bodies. This would help to clarify what type of thoughts are common and problematic (e.g., "my arms look fat and the crowd definitely notices") in different fearful social settings (e.g.,

presenting in front of large groups), therefore supporting the development of interventions that target re-framing harmful thoughts. An important distinction between the present study and past literature in this field is that much of the existing body image disturbance research has been conducted with samples who present with a physical difference (e.g., surgery scarring, pregnancy; Grant et al., 2024; Spinoni et al., 2023). As a result, it is unclear how body image disturbance and body appreciation are related in those who may not have a known or other-observed physical difference. The current study provides preliminary insight but future studies should continue to explore the relations between these two variables in populations who may not present with a physical difference but still perceive disturbance with their body image.

Conclusion

The present findings demonstrate that young adults experience SA alongside body dissatisfaction and disturbance, and less body appreciation. When asked to reflect, young adults in the current study with body image concerns expand on physical attributes that are distressing to them and the role that social influence has on these perceptions. They also report on the impact society has on these concerns and describe appearance-driven coping strategies, social and relational challenges, as well as generalized discomfort with appearance. Finally, these young adults describe how their body image concerns have interfered with their lives, emphasizing social avoidance and appearance-monitoring. These themes have considerable overlap with symptoms characteristic of SA and highlight the role each of these concerns has in the maintenance of the other. Future studies are needed that include fear of negative evaluation and self-focused attention, while continuing to utilize qualitative methods. This would help inform interventions that target one psychological factor (e.g., body appreciation) with the goal of improving other psychological symptoms (e.g., SA, body dissatisfaction). Past research

supports the idea that interventions targeting body appreciation improves symptoms of anxiety

(Winter et al., 2019) and body satisfaction but this has yet to be expanded to focus specifically

on SA.

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Appendix A

Semi-Structured Interview

Question 1	Not at all concerned	Somewhat concerned	Moderately concerned	Very concerned	Extremely concerned
Are you concerned about the appearance of some part(s) of your body which you consider especially unattractive?	1	2	3	4	5
What are these concerns? What specifically bothers you about the appearance of these body parts? (Please describe):					

Question 2	Not at all preoccupied	Somewhat preoccupied	Moderately preoccupied	Very preoccupied	Extremely preoccupied
If you are at least somewhat concerned, do these concerns preoccupy you? That is, you think about them a lot and they're hard to stop thinking about?	1	2	3	4	5
What effect has your preoccupation with your appearance had on your life? (Please describe):					

Question 3	No distress	Mild, and not too disturbing	Moderate and disturbing but still manageable	Severe, and very disturbing	Extreme, and disabling
Has your physical "defect" often caused you a lot of distress, torment, or pain? How much?	1	2	3	4	5

Question 4	No limitation	Mild interference but overall performance not impaired	Moderate, definite interference, but still manageable	Severe, causes substantial impairment	Extreme, incapacitating
Has your physical "defect" caused you impairment in social, occupational or other important areas of functioning? How much?	1	2	3	4	5

Question 5	Never	Occasionally	Moderately Often	Often	Very Often
Has your physical "defect" significantly interfered with your social life? How much?	1	2	3	4	5
If so, how? (Please describe):					

Question 6	Never	Occasionally	Moderately Often	Often	Very Often
Has your physical "defect" significantly interfered with your schoolwork, your job, or your ability to function in your role? How much?	1	2	3	4	5
If so, how? (Please describe):					

Question 7	Never	Occasionally	Moderately Often	Often	Very Often
Do you ever avoid things because of your physical "defect"? How often	1	2	3	4	5
If so, what do you avoid? (Please describe):					

Appendix B

Code Manual

Question 1:		
Are you concerned about the appearance of some part(s) of your body which you consider especially unattractive?		
Theme	Codes	Description
Physical Attributes	Teeth, hair, skin, face, body areas	Physical attributes that participants describe being concerned with the appearance of, including mention of teeth, hair, skin, face, and specific body areas.
Teeth	Teeth quality, teeth position, overbite, tooth discolouration	Physical attributes that are specific to the teeth, such as, crooked teeth, smile, and bite position.
Hair	Thinning hair, curly hair, thick hair, and body hair	Physical attributes that are specific to the hair. This includes hair thickness, hair texture, and body hair.
Specific body areas	Small breasts, thigh size, exposed ribs, stocky legs, big waist, non-flat stomach	Specific physical attributes that are on the body, such as, breast size, thighs, legs, ribs, and waist size.
Skin	Birth mark, breakouts, body acne, acne scars, injury scars, and moles	Physical attributes that are specific to the skin, such as, birth marks, acne, skin anomalies, and scars.
Face	Under eye dark circles, eyelash length, small lips, large nose	Specific physical attributes that are on the face, such as, eyes, eyelashes, lips, and nose.
Societal influence	Public shaming, non-conformity with social norms, social comparison, judgement by others	Feeling appearance shamed, not conforming to social norms, fear of appearance-related judgement

Question 2:		
What effect has your preoccupation with your appearance had on your life? (Please describe):		
Theme	Codes	Description
Appearance-Driven Coping Strategies	Baggy clothing, long sleeves, not wearing sleeves clothing, covering up in revealing settings	Engaging in coping strategies to alleviate the impact of appearance, such

	(i.e., beach), overworking oneself.	as, wearing certain clothing items that conceal or cover up the insecurity.
Impact on Social Life and Relationships	Dating, going out, social interactions.	Described as social situations that have been impacted because of an appearance-related reason.
Discomfort with appearance	Negative emotions experienced regarding appearance, other-monitoring of appearance, appearance-related reflection.	Described as appearance-related internalized thoughts and emotions.

Questions 5-7:

Has your physical "defect" significantly interfered with your social life? How much? – If so, how?

Has your physical "defect" significantly interfered with your schoolwork, your job, or your ability to function in your role? How much?

– If so, how?

Do you ever avoid things because of your physical "defect"?

– If so, what do you avoid?

Theme	Codes	Description
Social Avoidance	Missing social events, avoiding making plans, avoiding social activities that involve revealing clothing (e.g., swimming) struggling to find clothing for a social outing, avoiding intimacy.	Described as being less inclined to attend social events, not making social plans because of appearance, difficulty preparing one's appearance for social outings, avoid engaging in certain behaviours in front of others, and avoiding close friends and/or family
Appearance-monitoring	Conscientious of clothing choice, self-reflection on specific body areas, time spent on appearance, thoughts devoted to appearance, regularity of social comparison.	Described as the monitoring of one's own appearance through behavioural choices and thoughts.