

Body Image, Self-Esteem, and Interpersonal Relationships in Adulthood

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Body Image, Self-Esteem, and Interpersonal Relationships in Adulthood

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Abstract

This research assessed the association between body image, self-esteem and quality of peer and romantic relationships in adulthood. Several pre-existing self-report questionnaires were used, seven subscales were used to assess aspects of body image, one scale to assess self-esteem (RSE), one scale to assess peer relationships and one scale to assess romantic relationship satisfaction, intimacy, and trust. Participants were undergraduate students recruited from a New Zealand university and a total of 91 completed questionnaires were used for the analysis. The data was first assessed to ensure it was fit for analysis and then subsequent multiple linear regressions and correlational analyses were undertaken. Results found a relationship between body image and self-esteem and body image and romantic relationship quality. A relationship between self-esteem and peer and romantic relationships was also found. Additionally, it was found that aspects of body image were predictors for self-esteem and peer relationships and that self-esteem was a predictor for peer and romantic relationships.

Never think that you're not good enough yourself. A man should never think that. People will take you very much at your own reckoning. -- Anthony Trollope

Body image is a construct of which much modern discussion and research is centred on, within a cultural setting where individuals are becoming less likely to fulfil the ideals set by the media (Markey & Markey, 2006). Literature indicates investigations into dissatisfaction of body image have focused on the numerous social interactions for individuals involved (Styce, 2001). Research investigating the relationship between body dissatisfaction and interpersonal relationships, has had little focus in past research, especially when assessing aspects of romantic relationship satisfaction.

Relationships between individuals are an area of influence within a social setting. How we relate within these relationships can be impacted by not only our perception of others, but also our perception of ourselves (Josephs, Markus, Tafarodi, 1992). Research indicates that body image and an individual's perception surrounding this are integral in the development of a variety of social relationships (Kleck & Strenta, 1980).

Differences exist surrounding the influence of an individual's self perception, impacting their relationships with others. As individuals have differing relationship types with different individuals, this can be expected. These types can be seen as inclusive of either same sex peer relationships, opposite sex relationships, and romantic relationships.

Body Image Research

The notion of body image is one which carries significant value, as has been identified amongst numerous studies surrounding the issue of self-perception of female individuals (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Although significant research surrounding the issue of body image has been presented around the concept of female perception, much analysis has been ignored on the issue of male perception of body

image. Taking this factor into consideration, when research is found to be inclusive of a male population, the majority of it treats perceptions of body image by male participants, as being their view of body image of their female counterparts (Markey & Markey, 2006). What this essentially means is that little research has been conducted surrounding the issue of male body image of either male participants, or themselves.

One common theory referred to in analysis of body image is the looking glass effect, this phenomenon exemplifies individuals that both see themselves, and define their own self-worth, through the eyes of others. What they see through the looking glass may be used as a form of integration into their own self-concept (Sciangula & Morry, 2009). This theory is an example of how concepts of body image are centred on personal and social values of an individual, therefore one's perceptions of others opinions towards themselves are more likely to be a product of internalisation rather than actual opinions and judgements of one's peers.

A major concern with the issue of how an individual perceives one's body is the arena of gender differences and how to deal with these from a research perspective. Research present in current literature has established body image dissatisfaction as a form of normative concern for young women. It is also suggested that more widespread measures of body image perception need to be considered, and made sure to be inclusive of both genders, and young men are increasingly becoming concerned with their own body image (Davison & McCabe, 2005).

Measuring the Construct of Body Image

When building points of comparison for the construct of body image, it is important to consider the means of collecting, attributing, and evaluating data. Individuals predominantly consider the issue of body image as one which is largely an individualistic issue, which one may have reluctance to share intimate details about. This is understandable, due to the fact that individuals whose overall self-image is constructed as negative, are at a greater chance to exhibit difficulty and have trouble when encountering intimacy from individuals of either the same, or opposite sex, and experience high levels of anxiety (Davison & McCabe, 2005).

What this suggests, is that an individual with a negative self-concept of body image, is going to be anxious, and therefore unreliable in the reporting of data in an interview scenario. It was initially considered that the reporting of data by participants through means of a questionnaire in a lecture theatre situation may formulate socially-desirable answers and be detrimental to the reliability of the data. When considering the alternative, a face-to-face interview, the literature suggests participants holding negative ideas positioned around their own body image would be impacted in a manner which may impact the results (Davison & McCabe, 2005).

Body Image and Links to Psychosocial Functioning

Psychosocial functioning encompasses an individual and their expressive behaviours which influence their social surrounds (Davison & McCabe, 2006). The two fields interrelate with one another, and express an individual and their ability to function within an everyday setting. In respect to psychosocial functioning, the purpose of this topic is to consider how aspects of body image impact individuals on an operational level.

When assessing the association between perceptions of body image and psychosocial functioning, research must be done to consider the overall behaviours of individuals, and how the behaviours that they express will impact lives. As discussed previously, relationships such as romantic, same sex, and opposite sex, provide a core level of social interactions when interacting with others. Investigations into relationships have shown that individuals exert a more constructive form of assertion, and display less aggressive behaviours toward individuals that they deem to be physically attractive and possess a positive body image (Weller & Dziegielewski, 2004). This creates an environment whereby an importance is attributed toward body image, on the treatment of others for social functioning.

When considering how body image influences the psychosocial functioning on an individual, the construct of Body Mass Index (BMI) is one which is predominantly utilised (Markey, Markey, & Birch, 2001; Sheets & Ajmere, 2005; Boyes & Latner, 2009). BMI is concerned with the consideration of a quantitative factor which can be attributed to the weight of an individual in relation to their height.

Research has shown that female adolescents who self identify as overweight, report their weight as having a detrimental impact on their social activities (Tiggeman & Rothblum, 1988). For example, pursuing romantic relationships, and holding the mindset that others consider them attractive. The overweight individuals were found as more likely - than their average-weight peers - to have difficulty in meeting partners with the possibility of developing a relationship, and experienced a greater level of being dissatisfied with their status (Neumark-Sztainer, Story, & Faibisch, 1998). This form of attribution of self-image towards how one expects to be viewed by others; can create a mindset where the individual behaves in a way that they perceive themselves, regardless over the opinions of others.

Although these findings suggest that overweight women experience difficulties in initiating lasting partnerships, literature examining associations between women's body mass

index (BMI; kg/m²) and the quality of established romantic relationships is sparse and characterized by inconsistent findings (Markey, Markey, & Birch, 2001; Sheets & Ajmere, 2005; Boyes & Latner, 2009).

Body Image and Interpersonal Relationships

Body image is a multidimensional trait, and consists of numerous components, namely physiological, sociological, and psychological. (Cash & Pruzinsky, 1990). These factors contribute to the overall impact of body image. Many aspects of body image focus on an individualistic approach, and research has failed to investigate the role of body image on peer and romantic relationships (Markey & Markey, 2006). It is essential to consider these when considering the social and cultural implications of body image on society.

It is important to explore the association between body image, and romantic relationships between individuals. Romantic relationships are an integral part of social interaction, as a romantic partner is often referred to as one's "significant other," or "better half." This type of colloquial terminology exemplifies the importance of a romantic partner within a social setting. On the exploration of what this means, it can be said that the romantic experiences of individuals are in fact influenced by perceptions of body image, as seen by both the individual concerned, and their current or prospective romantic partner.

Literature states that gender differences exist between male and female individuals, largely based upon what each gender defines as aspects of importance (Sanchez, Good, Kwang, & Saltzman, 2008). Men are said to value short-term relationships, with a predominant concern with physical attractiveness. It is therefore understandable how heterosexual women may feel the need for exerting greater importance on physical attractiveness (Sanchez et al., 2008). What this means is that women have a greater desire to be seen as physically attractive by prospective mates, reinforcing the construct previously

discussed that concepts of body image are presented by how we see ourselves in relation to others.

Research has highlighted the importance of investigating the role of relationship satisfaction and body image phenomena within females in their twenties (Markey & Markey, 2006). This is largely due to the particular developmental period when social experiences change from familial influence to be predominantly concerned with peer influence (Markey & Markey, 2006). This is consistent with reports from individuals in this demographic feeling influenced by both the carefree aspects of adolescence and the solidity of adulthood, with individuals often engaging in identity exploration, self-focus, and unstable intimate partnerships (Arnett, 2000). This is parallel with previous research which addresses the behaviours of weight and BMI when an individual is looking for prospective partners for a relationship (Sanchez et al., 2008). At this point of an individual's life, self-discovery is the main motivation for development of romantic associations.

Possible Contributors to Negative Body Image.

The arena of body image constructs factors of self analysis, one that is constantly under influence from the accuracy of an individual's perception of body image and what body image means to them (Thompson, 1996). What this implies is that individuals construct their own behaviours toward body image and that this perception is due to perceived abnormalities in the brain. These abnormalities can be attributed to visual-spatial deviations - also referred to as the catch-up effect - whereby changes in the physical state of an individual's body, have a delayed reaction of registration by the brain (Braun & Chounard, 1992; Thompson & Spana, 1991).

When investigating points for comparison of causal factors of negative body image beliefs, numerous research has pointed toward the phenomenon that adolescent

females who enter puberty before eleven years of age, exhibit a more negative and detrimental viewpoint in relation to body image than their peers who develop at more than fourteen years of age (Weller & Dziegielewski, 2004).

Body Image and Self-esteem

In respect to self-esteem, the terminology is used to refer to the extent by which individuals view themselves as “good, competent, and decent” (Aronson, Wilson, Akert, & Fehr, 2001, p. 19). This gives the overall picture of an individual, and their desire for self-extension. Self esteem is a major contributing factor in the perception that an individual places on themselves, and their own self worth (Sanchez et al., 2008). This in turn creates an environment whereby individuals are expected to place a greater emphasis on appearance and looks in order to gain a greater level of self-worth.

Concepts surrounding human development also suggest that societies place such an emphasis on being attractive, that having a body that society values as appealing, equates to an individual being seen as ‘good’ as a person (Thompson, 1996; Cash & Grant, 1996; Heinberg & Thompson, 1995). This is consistent in explaining why attractiveness and social appeal are seen as desirable traits, and what possessing these traits means for an individual.

Current research on the issue has signalled individuals who intrinsically have a high self-esteem, are generally aware of their flaws, however still feel confident and respect themselves as people (Weller & Dziegielewski, 2004). Although they are aware of their weaknesses, unlike individuals with low self-esteem, they do not allow their flaws to dominate their cognitive behaviour. (Weller & Dziegielewski, 2004). What this is signifying, is that the self-esteem that an individual exhibits, has no impact over how an individual perceives their flaws, only impact over how their perception impacts their psychosocial functioning.

Furthermore to the research conducted on the involvement of body image and its impact on relationships, research investigating the correlational role of self-esteem and relationship satisfaction on body image has found that individuals who experience low levels of self-esteem, have a tendency to feel rejected in relationships with others (Baumeister, Campbell, Krueger, & Vohs, 2003).

Another influential theory explaining why we seek self-esteem is the sociometer theory (Baumeister & Leary, 1995; Leary et al. 1995), which proposes that we have a powerful need to belong and that self-esteem is a buffer against anxiety about being alone and social rejection. Thus one would expect those that had greater quality of relationships would also have higher self-esteem.

The Current Study: Aim and Hypotheses

Previous research in the area of body image, psychological, and interpersonal functioning have reported contradictory findings (Cash, Theriault, & Milkewicz, 2004; Davison & McCabe, 2006), thus the present research was conducted in an effort to clarify the relationship between these variables. The study was a partial replication of the study conducted by Davison and McCabe (2006) with the addition of romantic relationship quality and deletion of the anxiety and depression measures. The decision to exclude the depression and anxiety questionnaires was made after being informed by previous data replication research (Kliem, 2008) on the non-significance returned by the two scales. After careful consideration the decision was made to change the sequence of the questionnaire so that the relationship scales for both peer and romantic relationships were administered in the middle of all the body image scales. This decision was made after previous research found evidence of straight line responding due to the scales being at the end of an 103-item questionnaire (Kliem, 2008).

The present study assessed the association between body image, self-esteem and quality of peer and romantic relationships in adulthood. Several pre-existing self-report questionnaires were used to measure aspects of body image which include body image satisfaction, body image importance, self-rated physical attractiveness, social comparison, social physique anxiety and body image behaviours. Self-esteem was measured using the Rosenberg Self Esteem scale (RSE). Peer relationships were measured by two pre-existing questionnaires one measuring same-sex relations and one measuring opposite-sex relations. Romantic relationship quality was assessed with regards to three constructs - relationship satisfaction, intimacy, and trust.

The majority of the research suggests body image can affect psychological functioning and interpersonal relationships, thus it was predicted there would be a significant

relationship between positive body image, high self-esteem, and strong perceived quality of relationships with peers of the same and opposite sex and romantic partners. In addition it was predicted that there would be a significant relationship between high self-esteem and strong perceived quality of relationships with peers of the same and opposite sex and romantic partners. The relationship between aspects of body image and self-esteem and interpersonal relationships will also be assessed using stepwise multiple linear regression.

Method:

Participants

112 students from the Akoranga campus at the Auckland University of Technology were given the questionnaires to fill out. Participants were undergraduate students recruited from first year psychology and health papers and were asked to fill out the questionnaires at the end of their tutorial or lecture classes. In total 91 of the 112 participants correctly filled out the questionnaires and their answers were able to be used for analysis. Of the 91 participants, 73 were female ($\bar{x} = 23.34$, $SD = 7.402$) and 18 were male ($\bar{x} = 24.83$, $SD = 12.761$). The height for females ($\bar{x} = 1.66$, $SD = 0.072$) ranged from 1.50m to 1.85m and the weight for females ($\bar{x} = 62.22$, $SD = 12.730$) ranged from 43kg to 100kg. The height for males ($\bar{x} = 1.78$, $SD = 0.089$) ranged from 1.55m to 1.92m and the weight for males ($\bar{x} = 80.56$, $SD = 16.191$) ranged from 62kg to 120kg. The Body Mass Index (BMI) for females ($\bar{x} = 22.40$, $SD = 3.802$) ranged from 17 to 33 and the BMI for males ($\bar{x} = 25.62$, $SD = 5.149$) ranged from 19 to 36 (see Table 1).

The length of the romantic relationship ($\bar{x} = 27.86$, $SD = 45.385$) ranged from 1 month to 283 months. Of the 91 participants, 51 completed the relationship section of the survey with regards to their current relationship. 35 with regards to their most recent previous relationship and 5 participants chose to leave the relationship section blank. With regards to relationship status at the time of completing the survey, 47 participants were in an exclusive relationship, 13 were casually dating one or more people (non-exclusive), and 31 were not currently dating anyone.

Table 1. Demographics of Participants

	<i>N</i>	Minimum	Maximum	\bar{x}	σ
Gender					
Male (Age)	18	18	69	24.83	12.761
Female (Age)	73	17	50	23.34	7.402
Height					
Male	18	1.55	1.92	1.78	0.089
Female	73	1.50	1.85	1.66	0.072
Weight					
Male	18	62	120	80.56	16.191
Female	73	43	100	62.22	12.730
BMI					
Male	18	19	36	25.62	5.149
Female	73	17	33	22.40	3.802
Length of Relationship					
	86	1	283	27.86	45.385

Instruments

For the current study eleven pre-existing self-report questionnaires were used. The advantages of using pre-existing questionnaires are a *priori* validation and standardisation, the latter permitting a direct comparison of data across different studies.

Measurements of Body Image

Two subscales from the Body Image and Body Change Questionnaire (Ricciardelli & McCabe, 2001) were used to measure Body Image Satisfaction (BISAT) and Body Image Importance (BIIMP). Each scale consisted of 10 items such as how satisfied one was with their weight or body shape and how important ones weight or body shape was compared to other things in their life (Ricciardelli & McCabe, 2001). Responses were made on a 5-point Likert-type scale ranging from 1 (extremely dissatisfied / unimportant) to 5 (extremely satisfied / important). Scores ranged from 10 to 50 for each scale, with higher scores indicating higher body image satisfaction, and higher body image importance.

The Physical Attractiveness Scale (PHYATT; Davison & McCabe, 2006) was included in the questionnaire to measure an individual's opinion on how attractive they believe themselves to be, in terms of general appearance. The scale consisted of 5 items such as how one feels about their face or their appearance compared with others. Responses were made on a 5-point Likert-type scale from 1 (extremely unattractive) to 5 (extremely attractive). Scores ranged from 5 to 25 with higher scores indicating a higher self-perception of physical attractiveness.

Two body image behaviours – Body Concealment (BODCON) and Body Improvement (BODPROV) – were assessed using eight items from the Body Image Behaviour Scale (Davison & McCabe, 2005). The Body Concealment Scale contained 5 items measuring one's tendency to conceal their body from the gaze of others such as "I choose clothes that hide the parts of my body I don't like". The Body Improvement Scale contained 3 items measuring one's engagement in attempts to improve their body such as "I spend time making my body look better". Responses were made using a 6-point Likert-type scale from 1 (Never) to 6 (Always). Scores for the Body Concealment Scale ranged from 5 to 30, with higher scores indicating a higher attempt to conceal one's body. Scores on the Body Improvement Scale ranged from 3 to 18, with higher scores indicating a higher attempt to improve one's body.

The Social Physique Anxiety Scale (PHYSANX; Hart, Leary, & Rejeski, 1989) was included in the questionnaire to assess participants concern about others' judgment of their body. The scale consisted of 12 items (5 of which were reversed scored) such as how comfortable one felt with the appearance of their body or how nervous one felt when wearing a bathing suit. Responses were made on a 5-point Likert-type scale anchored 1 (Not at all characteristic of me) to 5 (Extremely characteristic of me) with scores ranging from 12 to 60. Higher scores indicated a high level of concern about others' judgment of one's body.

The Physical Appearance Comparison Scale (COMPAR; Thompson, Heinberg, & Tantleff, 1991) was used to measure the level to which participants compared their own appearance with the appearance of others'. The scale contained 5 items (with item 4 being reversed scored) such as the degree to which one compares their physical appearance to the physical appearance of others'. Responses were made on a 5-point Likert-type scale from 1 (Never) to 5 (Always) and scores ranged from 5 to 25. Item 4 showed poor correlation with the other 4 items and was dropped from the analysis meaning scores ranged from 4 to 20. Higher scores indicated a stronger tendency to compare one's own appearance with the appearance of others'.

Scoring the Body Image scales was straightforward. Scales used to respond to each item varied slightly (e.g., some ranged from "extremely dissatisfied/unimportant" to "extremely satisfied/important", while others ranged from "never" to "always"), however all items were initially scored so that 1=1, 2=2, 3=3, 4=4, 5=5 (with the exception of the Body Concealment and Improvement scales which also had 6=6). After reverse scoring items, all of the scores were totaled for each scale.

Measurement of Psychological Functioning

Self esteem (SLFESTM) was measured with the Rosenberg Self-Esteem Scale (Rosenberg, 1965). It is a 10-item Likert-scale measuring overall self-esteem, such as how much respect one has for oneself or how much they feel they have to offer (Rosenberg, 1965). Responses were made on a four-point Likert-type scale, anchored 1 (strongly disagree) and 4 (strongly agree). Scores ranged from 10 to 40, with higher scores indicating higher levels of self-esteem. It has been used in numerous studies to measure self-esteem with consistent high validity and reliability (Rosenberg, 1965).

Scoring the RSE was straightforward. Scales used to respond to each item ranged from “strongly disagree” to “strongly agree”, however all items were initially scored so that 1=1, 2=2, 3=3, 4=4. After reverse scoring 5 of the items, all of the scores were totaled.

Measurements of Interpersonal Relationships

Perceived quality of same-sex and opposite sex peer relationships were assessed using two four-item subscales from the Self-Description Questionnaire III (Marsh, 1994). The same-sex scale (SMSX) assessed the perceived peer relationship with members of the same-sex such as whether participants found it difficult or easy to make friends with members of their own sex. The opposite-sex scale (OPSX) assessed the perceived peer relationship with members of the opposite-sex such as whether participants perceived themselves as popular with members of the opposite-sex. Responses for each scale was made using a 6-point Likert-type scale anchored at 1 (False) and 6 (True) with two of the items in each scale being reversed scored. Scores ranged from 4 to 24 for each scale.

Scoring the Opposite-Sex and Same-Sex scales was straightforward. Scales used to respond to each item ranged from “False” to “True”, however all items were initially scored so that 1=1, 2=2, 3=3, 4=4, 5=5, 6=6. After reverse scoring 2 items on each scale, all of the scores were totaled (see Table 1.3).

Relationship satisfaction was measured with the Perceived Relationship Quality Components Scale (PRQC; Fletcher, Simpson, & Thomas, 2000). It was developed by Fletcher, Simpson and Thomas (2000) to measure a single construct – one’s perceived relationship quality. It has 6 subscales – Relationship Satisfaction, Commitment, Intimacy, Trust, Passion and Love - which can be used if researchers want to assess relationship evaluations in specific domains. For the present study, three romantic relationship quality components were measured – Relationship Satisfaction (RELSAT), Intimacy (RELINT), and

Trust (RELTRU). Each perceived relationship quality component was assessed by three questions such as “How much do you trust your partner?” and responses were made using a 7-point Likert-type scale ranging from 1 (Not at all) to 7 (Extremely). Total scores for each component ranged from 3 to 21 with higher scores indicating greater satisfaction / intimacy / trust (Fletcher, Simpson, & Thomas, 2000). The use of the words “relationship” and “partner” make the survey applicable to anyone in an intimate relationship, including dating, cohabiting, and engaged couples, while retaining high internal consistency.

Scoring the Relationship scales was straightforward. Scales used to respond to each item ranged from “Not at all” to “Extremely”, however all items were initially scored so that 1=1, 2=2, 3=3, 4=4, 5=5, 6=6, 7=7. Scores were totaled for each of the three relationship components (See Table 1.3).

Procedure

Data collection took place during the second half of the academic year after obtaining ethics approval from the Auckland University of Technology Ethics Committee (AUTEK). Questionnaires were handed out to students following an announcement in lectures and tutorials informing them about the research and aims of the study. The criteria for participation was for participants to be 18 years of age or older. Participants who were not presently in a relationship were asked to base their answers on their most recent previous relationship when answering the relationship section of the survey. There was no identifying information and names were not asked. A few demographics were asked including age, gender, weight and height, how long they have been in their romantic relationship and their current relationship status.

The questionnaires were printed and attached together along with an information sheet. Instructions on how to fill out the questionnaires were given on the front page of each

questionnaire. Participants were also given further verbal instructions highlighting the criteria and importance of completing all the surveys in full including demographics. Particular emphasis was placed on students' right to withdraw from the study at any time, if they did not want to continue and anonymity and confidentiality was discussed and assured. Completions of the questionnaires took between 10 to 15 minutes and were handed back to the researcher at the end.

Data Analysis

Out of the 112 sets of questionnaires, 91 were able to be used for the analysis and 21 were discarded due to having either too many questions left blank, or not completing demographics. Data was inputted into an excel spreadsheet and 15 items which were reverse scored were recoded before converting to Statistical Package Social Sciences Version 14 (SPSS. V14). Composite variables were created for each scale of body image, self-esteem, and peer and romantic relationships and assigned an abbreviated term. Body mass index (BMI) was calculated using the formula: $BMI = \text{weight}/\text{height}^2$ using participants self-reported height and weight.

All analysis was conducted in SPSS and involved the calculation of descriptive statistics, the construction of composite variables, the evaluation of validity and reliability and the calculation of inferential statistics. Inferential statistics consisted of correlational analysis and multiple linear regression.

Results:

Missing Data

There was no missing data from any of the Body Image scales with the exception of the Physical Appearance Comparison Scale but only for one participant on question 5 of the questionnaire (0.00220 of the data – refer Appendix 2). SPSS managed how the missing data affected the analysis and since the participant only missed out one question out of five the data was still able to be included in some analyses.

There was no missing data for either of the peer relationship scales (same-sex and opposite-sex). There was missing data on the romantic relationship scales (satisfaction, intimacy and trust) for five participants who left this part of the questionnaire blank due to not having been in a romantic relationship before. SPSS managed how the missing data affected the analysis and since the participants only missed out the relationship questionnaire the rest of the data was still able to be included in some analyses (Body Image, Self Esteem and Peer Relationships).

Of the 21 rejected cases, all had too much missing data to be used for analysis. The cases were discarded due to uncompleted surveys (several questions left unanswered) or missing demographics (such as weight or height needed to calculate BMI).

Descriptive Statistics and Psychometric Assessment

Body Image Scales

No floor or ceiling effects were found for any of the Body Image scales (See Appendix 2). Item 2 on the Physical Appearance Comparison scale was arguably approaching a possible floor effect however because of the nature of the question and the adequate standard deviation it was retained for the analysis. On all items including total scores for Body Image Satisfaction and Importance, Physical Attractiveness, Body

Concealment and Improvement, Physical Appearance Comparison and Social Physique Anxiety no extreme averages were found and all items had adequate standard deviations. This implies the items had good discriminatory power.

All items on the Body Image scales showed acceptable Cronbach's alphas except for items on the Social Comparison scale which had a Cronbach's alpha below 0.7 of $\alpha_c = 0.685$ (see Appendix 2). Analysis showed that by deleting item 4 of the Social Comparison scale the Cronbach's alpha increased to an acceptable level of $\alpha_c = 0.821$ (see Table 2). The decision was made to remove item 4 from the scale and a new composite variable was created for the Social Comparison scale. With the elimination of item 4 on the Social Comparison scale all Body Image scales reported excellent Cronbach's alphas indicating high internal consistency for each scale. Because Cronbach's alpha is greater than 0.7 for each Body Image scale, we can be sure that the scales are measuring aspects of body image and thus all scales were deemed reliable and the measure consistent.

Table 2. Descriptive and reliability statistics for the Body Image scales

	<i>N</i>	Minimum	Maximum	\bar{x}	σ	Cronbach's α
BI Satisfaction	91	11.00	47.00	31.7176	7.50652	.883
BI Importance	91	10.00	50.00	32.4353	6.71964	.877
Physical Attractiveness	91	6.00	25.00	16.3882	3.35621	.928
Body Concealment	91	5.00	30.00	14.4588	5.86871	.874
Body Improvement	91	3.00	18.00	10.6824	3.90120	.905
Physique Anxiety	91	11.00	54.00	32.5055	9.43795	.909
Social Comparison	90	4.00	20.00	11.9000	3.63519	.821

The item total correlations were all well above 0.3 for each Body Image scale with the exception of the Social Physique Anxiety scale where item 2 had an item-total correlation score of 0.183. Deletion of this item increased the Cronbach's alpha from $\alpha_c = 0.897$ to $\alpha_c = 0.909$ (see Appendix 2). Due to the particular issues participants pointed out with regards to this question, as well as the information gained above, the decision was made to eliminate this item from further analysis.

Principle Components Analyses (PCA) were undertaken on all items for each body image scale to validate the questionnaires. A Kaiser-Meyer-Olkin (KMO) Measure of Sampling Accuracy test was performed to see if there was sufficient common variance amongst the variables. A KMO greater than 0.5 indicates enough common variance and a PCA can be performed. KMO scores for each of the scales were all well above the 0.5 threshold (see Table 3). Additionally, a Bartlett's test of Sphericity was also performed to determine if the correlation matrix differentiated from the identity matrix. If the p-value is less than 0.05 then the correlation matrix is distinguishable from the identity matrix and can be considered factorable. Each scale reported a significant *p-value* ($p < 0.001$) which indicated the correlation matrix is distinguishable from the identity matrix and thus factorable.

Table 3. PCA results of each scale used in the questionnaire

	<i>N</i>	KMO	Eigenvalues greater than 1	Eigenvalue	% variance explained	range of item loadings
BI Satisfaction	10	.828	2	4.9	48.998	0.636 - 0.830
				1.027	10.266	-0.385 - 0.445
BI Importance	10	.797	3	4.843	48.425	0.501 - 0.815
				1.393	13.927	-0.566 - 0.568
				1.079	10.79	-0.56 - 0.531
Physical Attractiveness	5	.815	1	3.924	78.482	0.856 - 0.921
Body Concealment	5	.815	1	3.36	67.203	0.771 - 0.908
Body Improvement	3	.753	1	2.527	84.223	0.908 - 0.927
Physique Anxiety	12	.900	2	5.827	52.976	0.617 - 0.816
				1.434	13.041	-0.418 - 0.584
Social Comparison	5	.780	1	2.626	65.648	0.624 - 0.890

Communalities for each of the items on each of the scales show the amount of variance of an item that is accounted for by the other components where an extraction value usually above 0.5 is usually deemed sufficient. Extraction values for all items on each of the body image scales were well above 0.5.

Initial Eigenvalues were calculated for each body image scale and three scales emerged with more than one component with an Eigenvalue greater than one (see Table 3). Cattell (1966) suggests plotting the Eigenvalues on a Scree plot, drawing a line through the lower values and retaining only those factors that remain above the line. After applying Cattell's (1966) criteria for retaining factors and confirmation by the scree plots we decided to keep one component for each of the scales. Each scale showed that 48% or greater of the variance was accounted for by the one component. Thus it was concluded that all scales measuring aspects of body image showed good reliability and validity.

Rosenberg Self-Esteem Scale (RSE)

No floor or ceiling effects were found for the RSE (See Appendix 3). No extreme averages were found for any of the 10 items and all had adequate standard deviations. Thus the RSE was found to have good discriminatory power.

Internal consistency of the RSE was excellent with Cronbach’s alpha of $\alpha_c = 0.877$ (see Table 4). All items had high item total correlations well above 0.3 and deletion of any of the items did not increase Cronbach’s alpha (see Appendix 3). Thus we can be sure that all the items on the scale are measuring the same construct - Self-Esteem.

Table 4. Descriptive and reliability statistics for the total scores on the Self-Esteem and Relationship scales

	<i>N</i>	Minimum	Maximum	\bar{x}	σ	Cronbach's α
Same-Sex	91	7.00	24.00	19.4353	4.41169	.812
Opposite-Sex	91	6.00	24.00	18.4118	3.77427	.663
REL Satisfaction	86	3.00	21.00	14.7294	4.71418	.932
REL Intimacy	86	3.00	21.00	15.6824	4.31832	.900
REL Trust	86	3.00	21.00	14.9882	4.84152	.888
Self Esteem	91	18.00	40.00	30.6706	5.81129	.877

A Principle Components Analysis (PCA) was undertaken on all items in the RSE to validate the questionnaire. The KMO test was performed to determine if there was sufficient common variance amongst the variables. A KMO of 0.862 was found for the RSE - well above the 0.5 threshold (see Table 5). A Bartlett’s test was also performed to determine if the correlation matrix differentiated from the identity matrix. For the RSE items a Bartlett’s test returned a significant *p*-value ($\chi^2(45) = 418.41, p < .001$) which indicated the correlation matrix was distinguishable from the identity matrix and thus factorable.

Communalities showed the amount of variables of an item that are accounted for by the other components where extraction values were all above 0.5. Initial Eigenvalues were calculated with the results returning more than one component with an Eigenvalue greater

than one (see Table 5). Cattell's (1966) criteria for retaining factors was applied for the RSE and confirmed when eyeballing the results of the Scree plot. The decision was made to retain one component for the scale which accounted for 48.614% of the variance. Thus it was concluded that the RSE showed good reliability and validity.

Table 5. PCA results for the Self-Esteem and Relationship measures

	<i>N</i>	KMO	Eigenvalues greater than 1	Eigenvalue	% variance explained	range of item loadings
Same-Sex	4	.654	1	2.581	64.529	0.703 - 0.922
REL Satisfaction	3	.757	1	2.645	88.177	0.923 - 0.951
REL Intimacy	3	.716	1	2.509	83.64	0.868 - 0.941
REL Trust	3	.715	1	2.457	81.906	0.863 - 0.935
Self Esteem	10	.862	2	4.861	48.614	0.579 - 0.773
				1.509	15.085	-0.564 - 0.521

Peer Relationships Scale

No floor or ceiling effects were found for the Opposite-Sex scale (see Appendix 3). No floor or ceiling effects were found for the Same-Sex scale. Item 1 was approaching a possible floor effect however because of the nature of the question and the standard deviation it was decided it was not necessary to discard it from the analysis.

Internal consistency of the Opposite-Sex scale was poor with reliability analysis revealing a low Cronbach's alpha score of $\alpha_c = 0.663$ (see Table 4). Deletion of any of the items did not increase the Cronbach's alpha to an acceptable level (above 0.7) and therefore the scale was discarded from any future analyses. Internal consistency of the Same-Sex scale was excellent with Cronbach's alpha of $\alpha_c = 0.812$ (see Table 4). All items on the Same-Sex scale had high item total correlations well above 0.3 and deletion of any of the items did not increase Cronbach's alpha (see Appendix 3). We can therefore be sure that all the items on the scale are measuring the same construct – Quality of Same-Sex Relationships.

A Principle Components Analysis (PCA) was undertaken on all items in the Same-Sex scale to validate the questionnaire. Due to the elimination of the Opposite-Sex scale – no PCA was performed for this scale. A KMO test was performed to determine if there was sufficient common variance amongst the variables. A KMO of 0.654 was returned (above the 0.5 threshold) meaning it was safe to assume there was enough variance and a PCA could be performed (see Table 1.4). A Bartlett’s test was also performed to determine if the correlation matrix differentiated from the identity matrix. The test returned a significant p -value ($\chi^2(6) = 160.74, p < .001$) indicating the correlation matrix is distinguishable from the identity matrix and can be considered factorable.

Communalities for each of the items showed extraction values well above the 0.5 threshold. Initial Eigenvalues were calculated for the Same-Sex scale which revealed only one component with an Eigenvalue greater than one (see Table 5). This one component accounted for 64.529% of the variance. Thus it was concluded that the Same-Sex scale showed good reliability and validity.

Romantic Relationship Scales

No floor or ceiling effects were found for the Relationship Satisfaction, Intimacy or Trust scales (see Appendix 3). All items on each of the three scales including totals found no extreme averages and all items had adequate standard deviations. This implies the scales had good discriminatory power.

Internal consistency of the Relationship Satisfaction component was excellent with Cronbach’s alpha of $\alpha_c = 0.932$. The Relationship Intimacy component also showed excellent internal consistency with a Cronbach’s alpha of $\alpha_c = 0.900$. There was one item (Item 1) on the Intimacy scale which if deleted would increase Cronbach’s alpha, however the decision to keep this item as part of the analysis was made since the increase was not deemed

considerable (see Appendix 3). The Relationship Trust component showed excellent internal consistency as well, with a Cronbach's alpha of $\alpha_c = 0.888$. There was one item (Item 3) on the Trust scale which if deleted would increase Cronbach's alpha, however the increase was not deemed substantial and the decision was made to retain the item as part of the analysis.

All items on all three of the relationship scales (satisfaction, intimacy, and trust) showed high item total correlations well above 0.3 and deletion of any of the items did not increase Cronbach's alphas (see Appendix 3). We can therefore be sure that all the items on the scales are measuring the same construct – Satisfaction, Intimacy, and Trust respectively.

Principle Components Analyses (PCA) were undertaken on all of the items on each of the relationship scales to validate the questionnaires. The KMO test was performed on each scale to determine if there was a common variance amongst the variables. KMO scores for each of the scales were all well above the 0.5 threshold (all above 0.7) indicating there was enough common variance for a PCA to be performed (see Table 5). Bartlett's tests were also performed to determine if the correlation matrix differentiated from the identity matrix. Bartlett's tests returned a significant *p*-value for relationship satisfaction ($\chi^2(3) = 211.84$, $p < .001$), relationship intimacy ($\chi^2(3) = 175.04$, $p < .001$), relationship trust ($\chi^2(3) = 154.20$, $p < .001$).

Communalities for each of the items on each of the scales show the amount of variables of an item that are accounted for by the other components where an extraction value usually above 0.5 being sufficient. Extraction values for all items on each of the relationship scales were well above 0.5.

Initial Eigenvalues were calculated for each relationship scale and all three scales emerged with only one component with an Eigenvalue greater than one (see Table 5). Each scale showed that 80% or greater of the variance was accounted for by the one component.

Thus it was concluded that all scales measuring aspects of relationship quality showed excellent reliability and validity.

Hypothesis One: There is a significant relationship between negative body image (measured by body image scales), low self-esteem (measured by RSE), and poor perceived quality of peer relationships of the same and opposite sex (measured by peer scales) and romantic relationship quality (measured by relationship scales).

Spearman correlation coefficients were computed between the body image scores and the RSE scores using SPSS. Table 6 shows the correlation matrix between Total RSE scores, Body Image subscales and BMI scores. Significant correlations were found between the Body Image Scales and Self-Esteem. Correlations indicate participants who reported low self-esteem were more likely to engage in body concealing behaviours, reported more anxiety with regards to how others evaluated their appearance, and were more likely to compare themselves to others than participants with higher levels of self-esteem. Those who reported low self-esteem were also less satisfied with aspects of their body, and were less likely to rate themselves as physically attractive.

Table 6. Spearman Correlations between RSE Score, Body Image Subscales, and BMI Scores.

		Self Esteem	BI Sat	BI Imp	Phys Att	Body Con	Body Prov	Phys Anx	Compa	BMI
Self Esteem	ρ	1	.583**	.053	.498**	-.542**	-.017	-.630**	-.229*	-.058
BI Sat	ρ	.583**	1	.185	.510**	-.430**	-.049	-.692**	-.208*	-.306*
BI Imp	ρ	.053	.185	1	.051	.001	.254*	-.043	.046	-.050
Phys Att	ρ	.498**	.510**	.051	1	-.373**	.019	-.469**	.030	-.145
Body Con	ρ	-.542**	-.430**	.001	-.373**	1	.196	.672**	.204	.258*
Body Prov	ρ	-.017	-.049	.254*	.019	.196	1	.244*	.220*	.226*
Phys Anx	ρ	-.630**	-.692**	-.043	-.469**	.672**	.244*	1	.364**	.302*
Compare	ρ	-.230*	-.208*	.046	.030	.204	.220*	.364**	1	-.268*
BMI	ρ	-.058	-.306*	-.050	-.145	.258*	.226*	.302*	-.268*	1

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

Spearman correlations between BMI and total RSE score and Body Image scores were also computed using SPSS. Significant correlations were found between BMI and Body Image Scores. Correlations indicate participants with higher BMIs are less satisfied with aspects of their body, more likely to engage in body concealing and body improvement behaviours, and have higher levels of social physique anxiety, however were less likely to make social comparisons. No significant correlation was found between BMI and Self-Esteem.

Spearman correlation coefficients were computed between the body image scores and the peer and romantic relationships scores using SPSS. Table 7 shows the correlation matrix between body image subscales and peer and romantic relationship quality. No significant correlations were found between the body image subscales and peer relationship quality. Significant correlations were found between the body image subscales and romantic relationship quality – as measured by Relationship Satisfaction, Intimacy, and Trust scales.

Table 7. Spearman Correlations between Body Image Subscales, Peer and Romantic Relationship Quality.

		REL			
		Same-Sex	Satisfaction	REL Intimacy	REL Trust
Same-Sex	ρ	1	.195	.208	.210
REL Satisfaction	ρ	.195	1	.807**	.833**
REL Intimacy	ρ	.208	.807**	1	.757**
REL Trust	ρ	.210	.833**	.757**	1
BI Satisfaction	ρ	.159	.291*	.235*	.267*
BI Importance	ρ	-.014	-.097	.001	-.073
Physical Attract	ρ	.114	.304*	.279*	.259*
Body Concealment	ρ	.025	-.217*	-.086	-.170
Body Improvement	ρ	.067	.021	.062	.032
Physique Anxiety	ρ	-.132	-.262*	-.201	-.214*
Social Comparison	ρ	-.201	-.165	-.070	-.044
BMI	ρ	.187	-.092	-.097	-.095

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

Correlations indicate participants who reported greater relationship satisfaction, intimacy, and trust were more satisfied with their appearance and more likely to rate themselves as physically attractive. Those who reported greater relationship satisfaction were

also less likely to engage in body concealing behaviours. Participants who reported higher levels of concern on others evaluation of their appearance reported lower levels of relationship satisfaction and trust in their romantic relationship.

Spearman correlations between BMI and peer and romantic relationship quality scores were also computed using SPSS. No significant correlations were found between BMI and same-sex, relationship satisfaction, intimacy, or trust scales.

Hypothesis Two: There is a significant relationship between low self-esteem (measured by RSE) and poor perceived quality of peer relationships of the same and opposite sex (measured by peer scales) and poor romantic relationship satisfaction, intimacy, and trust (measured by relationship scales).

Spearman correlation coefficients were computed between the RSE score and the peer and romantic relationships scores using SPSS. Table 8 shows the correlation matrix between self-esteem and peer and romantic relationship quality. Significant correlations were found between self-esteem and peer relationship quality. Significant correlations were also found between self-esteem and romantic relationship quality – relationship satisfaction, intimacy, and trust.

Correlations indicate that participants who reported higher levels of self-esteem had more satisfying peer relationships and greater relationship satisfaction, intimacy, and trust in their romantic relationship.

Table 8. Spearman Correlations between Self-Esteem and Peer and Romantic Relationship Quality.

		Self Esteem	Same-Sex	REL SAT	REL INT	REL TRU
Self Esteem	ρ	1	.361**	.364**	.340**	.324*
Same-Sex	ρ	.361**	1	.195	.208	.210
REL SAT	ρ	.364**	.195	1	.807**	.833**
REL INT	ρ	.340**	.208	.807**	1	.757**
REL TRU	ρ	.324*	.210	.833**	.757**	1

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

Multiple Linear Regression

A Multiple Linear Regression (MLR) was employed to help determine which aspects of body image best predicted self-esteem and relationships with same-sex peers and romantic relationships. The specific MLR model that was utilized was a stepwise multiple regression, in which the order of the variables is determined by SPSS with regards to the best fit (Field, 2005).

Table 9 shows the R^2 value, adjusted R^2 value, and the standard error along with the beta value (B), standard error (*Std Error*), standardized beta value (β) and significance level (*Sig*) for each of the predictors that returned a significant result ($< .05$). The R^2 value determines the amount of variability in the outcome that is explained by the predictors and the adjusted R^2 value indicates the generalizability of the model (Field 2005). The relationship between the body image, self-esteem and interpersonal relationship variables are indicated by the beta value. Values which are positive indicate a positive relationship between the predictor variable and the outcome variable and negative values indicate a negative relationship.

Table 9. Multiple regression statistics for body image and self esteem predictors of psychological functioning and interpersonal relationships.

	<i>B</i>	<i>Std. Error</i>	β	<i>Sig.</i>
Relationship Satisfaction				
$R^2 = 0.077$				
$R^2\text{-adj} = 0.066$				
S.E. est. = 4.55				
Self Esteem	.226	.086	.278	.010
Relationship Intimacy				
$R^2 = 0.118$				
$R^2\text{-adj} = 0.107$				
S.E. est. = 4.08				
Self Esteem	.255	.077	.343	.001
Relationship Trust				
$R^2 = 0.083$				
$R^2\text{-adj} = 0.072$				
S.E. est. = 4.66				
Self Esteem	.240	.088	.288	.008
Same-Sex Peer Relationships				
$R^2 = 0.100$				
$R^2\text{-adj} = 0.090$				
S.E. est. = 4.32				
$R^2 = 0.170$				
$R^2\text{-adj} = 0.151$				
S.E. est. = 4.17				
Self Esteem	.250	.080	.317	.002
Body Concealment	.024	.090	.319	.008
Self-Esteem				
$R^2 = 0.402$				
$R^2\text{-adj} = 0.396$				
S.E. est. = 4.47				
$R^2 = 0.446$				
$R^2\text{-adj} = 0.434$				
S.E. est. = 4.32				
Social Physique Anxiety	-.384	.050	-.634	< .001
Physical Attractiveness	.427	.162	.247	.010

The results of the analyses indicate the self-esteem variable significantly predicted relationship satisfaction ($F(1,83) = 6.97, p = .01$) among the participants. Self-esteem ($\beta = .278, p = .01$) accounted for 7.7% of the variance in relationship satisfaction. Self-esteem was also a unique predictor of relationship intimacy ($F(1,83) = 11.07, p = .001$) and relationship trust ($F(1,83) = 7.51, p = .008$) where self-esteem accounted for 11.8% ($\beta = .343, p = .001$) and 8.3% ($\beta = .288, p = .008$) of the variance respectively. With regards to same-sex peer relationships ($F(1,88) = 9.82, p = .002$), self-esteem ($\beta = .317, p = .002$) accounted for 10% of the variance and body concealment ($\beta = .319, p = .008$) accounted for an additional 7%.

When looking at predictors of self-esteem ($F(1,88) = 59.26, p < .001$), social physique anxiety ($\beta = -.634, p < .001$) accounted for 40.2% of the variance and physical attractiveness ($\beta = .247, p = .01$) accounted for an additional 4.4%.

Discussion:

The aim of the current study was to investigate the relationship between body image, psychological functioning, and interpersonal relationships. The first aim was to determine whether there was a correlation between body image and self-esteem, and peer and romantic relationship quality. The second objective was to determine whether there was a correlation between self-esteem and peer and romantic relationship quality and the third to determine which aspects of body image could be used to predict self-esteem and peer and romantic relationship quality.

Relationship between Body Image and Self-Esteem, as well as Peer and Romantic Relationship quality

This study has found there is evidence of a correlation between Body Image and Self-Esteem with this student population. This supports past research which has provided evidence for a positive relationship between body image and self-esteem in terms on self rated physical attractiveness (Feingold, 1992) and body image dissatisfaction (Kostanski & Gullone, 1998; Davison & McCabe, 2005). The results also showed those with low self-esteem were more likely to engage in body concealing behaviours, were more likely to compare themselves to others, and reported higher levels of anxiety with regards to others evaluation of their appearance. All three aspects relate to how a person feels about themselves with regards to others. For example, body concealing behaviours such as covering up are mainly done to hide one's body from others. It is not surprising that these additional findings were present since self-esteem has been defined as the degree to which one values oneself in terms of self worth (Malanchuk & Eccles, 2006) and the degree to which one feels worthy is cued by their interactions with others (Josephs, Markus, Tafarodi, 1992).

No correlations were found between BMI and self-esteem. This leads one to believe that it may not necessarily be one's body size that is important in determining their overall self worth but more about how comfortable they are with their body size and whether they feel their size is acceptable or not. Correlations between BMI and body image revealed participants with a higher BMI were less satisfied with their body, more likely to engage in body concealing and improving behaviours, and have higher levels of physique anxiety but were less likely to make social comparisons. When looking at these results along with no significant results for body image and self-esteem one may wonder if a higher BMI does in fact effect psychological functioning. If someone is unhappy with their body and chooses to exercise and dress for their figure these behaviours may in turn have a positive effect rather than a negative one. These results reflect the ideas by Weller & Dziegielewski (2004) who suggest those who do not let their flaws dominate their cognitive behavior are less likely to have low self-esteem.

With regards to interpersonal relationships no correlations were found between body image and peer relationships. Previous research has shown significant relationships between body image and interpersonal relationships (Nezlek, 1999) and thus it cannot be ruled out – our sample size was relatively small and could be the reason for no significant result.

Correlations were found between body image and romantic relationship satisfaction, intimacy, and trust. Participants with greater relationship satisfaction, intimacy, and trust were more satisfied with their appearance and more likely to rate themselves as physically attractive. Maybe because they are in a romantic relationship which is satisfying, intimate, and trusting it can be inferred they are attuned with their partner who in turn is supportive and complimenting. A satisfying relationship brings feelings of contentment and acts as a safe haven where one can feel comfortable with who they are as a person, both physically and emotionally (Hoyt & Kogan, 2001). Those who had lower levels of relationship satisfaction

and trust reported higher levels of anxiety on others evaluation of their appearance. This may suggest when a person is with someone who does not make them happy and they do not trust, they may be more inclined to feel insecure about the possibility their partner may leave them for someone else and thus be more worried about what other people (including their partner) think of them.

Relationship between Self-Esteem and Peer and Romantic Relationship quality

It was hypothesised that participants who had high self-esteem would also have more satisfying relationships both with their peers and in their romantic relationships. This study has found there is evidence of a correlation between self-esteem and both peer (same-sex) and romantic relationships with this student population. In previous research, self-esteem has been associated with one's interpersonal connectedness (Josephs, Markus, Tafarodi, 1992) If self-esteem is based on interpersonal connectedness it is not surprising that those who had higher levels of self-esteem also reported greater quality of relationships with peers and romantic partners.

These findings fit with the sociometer theory (Baumeister & Leary, 1995; Leary et al. 1995), which proposes that we have a strong need to belong and that self-esteem is a buffer against anxiety about being social isolated or rejected. Thus one would expect those that had greater quality of relationships would also have higher self-esteem.

Body Image as predictors of Self-Esteem and Peer and Romantic Relationship quality

It was hypothesized that aspects of body image could be used as predictors of self-esteem and quality of peer and romantic relationships. Additionally it was hypothesized that self-esteem may be used as a predictor of quality of peer and romantic relationships. Using multiple linear regression (stepwise) we were able to assess the relationship between the predictor variables and the outcome variable. Results showed that with regards to relationship satisfaction, intimacy, and trust, only self-esteem was found as a predictor variable. Self-esteem was also the main predictor variable for same-sex peer relationships with body concealment also predicting a decent amount of the variance. This may be explained by the research which suggests those with low levels of self-esteem, have a tendency to feel rejected in relationships with others (Baumeister, Campbell, Krueger, & Vohs, 2003). Results may also have been skewed for the romantic relationship scales due to some participants completing the scales with regards to a previous relationship rather than a current one; hence they should be interpreted with caution.

Self-esteem was found to have two predictor variables – the main variable being social physique anxiety followed by self-rated physical attractiveness. Self esteem is a major contributing factor in the perception that an individual places on themselves and their own self worth (Sanchez et al., 2008). This in turn places great emphasis on appearance in order to gain a greater level of self-worth. Thus it seems fitting that the two predictor variables concentrate on one's feelings towards what they perceive others evaluations to be and how attractive one judges themselves to be.

Limitations of the Study and Suggestions for Further Research

In terms of the participants the ratio of females to males was largely in favour of females and thus gender differences could not be assessed. An increase in the number of males would allow a comparison with females. While most of the participants were in their early 20's, ages ranged up to 69 and due to the small sample effects with regards to age could not be assessed. This should be taken into consideration for future research and the suggestion for more emphasis to be placed on finding male participants may return more extensive, accurate and detailed results.

Furthermore, because some participants were completing the relationship scales on a previous relationship, satisfaction may have been underrepresented in this sample. Trying to remember how one felt when they were in a relationship they are no longer in may be difficult especially if the relationship ended badly. This is an identifiable short coming of the study.

When comparing this study to others the sample size is relatively small. A larger sample would have permitted analyses to be conducted with regards to gender – as the likelihood of male participants would undoubtedly increase with a larger sample size. Also, because there was no total overall score for body image only the subscales could be used for correlational analysis. There were 7 subscales for body image and most of the time was taken up completing this part of the questionnaire. Future studies may look at employing a shorter scale which may measure a more global aspect of body image.

An additional shortcoming is that the research relied on self-reported height and weight measurements to calculate BMI scores. It was clear some participants were very unsure how much they weighed or how tall they were, while others may have felt inclined to lie about their details to fit into socially desirable body sizes. Future research should look at measuring participants weight and height more accurately or take into consideration other

ways of collecting the data that may be more discrete – such as an online survey or allowing participants time to fill in the survey outside the lecture theatre.

With respect to romantic relationships the current study assessed relationship satisfaction with regards to only one partner in the relationship. In future studies, the relationship scales along with body image and self-esteem scales could be completed by both partners in the relationship and an overall level of satisfaction, intimacy, and trust could be calculated. This would allow for any biases that may appear from just one person assessing their relationship. Additionally, results may be improved by only including participants who are currently in a romantic relationship given that participants completing the relationship scales with regards to a previous relationship may effect the overall result due to possible mixed feelings about their ex-partner.

Research focusing on certain aspects of the romantic relationship with regards to body image and self-esteem needs to be more widely explored such as the makeup of romantic relationships. Do those who report high levels of self-esteem and positive body image choose partners who also have high self-esteem and positive body image? Are there particular pairings in romantic relationships that are more common than others and are certain pairings more beneficial than others? For example, are a couple who both have a positive body image likely to have higher relationship satisfaction, intimacy, and trust than a couple where one person has a more positive body image than the other? Research looking at whether body image or self-esteem has an affect on a person's choice of romantic partner or whether relationship satisfaction differs depending on the pairing type are also areas of interest needing more attention.

The small study undertaken here suggests this is a fruitful area of research. It suggests that body image and self-esteem may play a vital role with respect to creating and maintaining satisfying romantic relationships. While a lack of research in this area makes it

difficult to compare these findings, this study has shown there is a possibility that body image and self-esteem may be influencing factors in the development and sustainability of healthy and satisfying relationships in adulthood.

Conclusion

The aim of the current study was to assess the relationship between body image, self-esteem and interpersonal peer and romantic relationships. It was also to assess whether body image and self-esteem is predictive of romantic relationship satisfaction, intimacy, and trust. The paper started with a review of body image, self-esteem, and interpersonal relationships.

Several hypotheses were obtained with regards to the research question – *Is body image and self-esteem a predictor for peer and romantic relationship quality in adulthood?* First, it was hypothesised that there would be a positive relationship between body image and self-esteem, peer and romantic relationships. Second, it was hypothesised that there would be a positive relationship between high self-esteem and peer and romantic relationship quality. Third, it was hypothesised that scores on the body image scales could be used to predict self-esteem and peer and romantic relationship quality.

In order to assess these hypotheses, undergraduate students were recruited to take part in the study. Participants were asked to complete several pre-existing self-report questionnaires, including seven scales assessing aspects of body image, one scale assessing self-esteem, one questionnaire assessing peer relationships and one questionnaire assessing romantic relationships. Hypothesis one was supported, with a positive relationship between body image and self-esteem and between body image and romantic relationship quality evident. Though no relationship was found between body image and peer relationships. Hypothesis two was supported, with a positive relationship between self-esteem and peer and romantic relationships. Hypothesis three was semi supported, showing body image to be a predictor of self-esteem and peer relationship quality but not romantic relationship quality. However, it was additionally found that self-esteem was a predictor of romantic relationship quality. These findings had interesting implications. They indicated romantic relationship satisfaction, intimacy, and trust may be effected more by level of self-esteem than by the

presence of a positive body image. Limitations were discussed and recommendations for further research were made. However, the findings of the present study need to be interpreted with caution, given the methodological limitations (i.e., sample size). However, the findings help clarify the role body image and self-esteem may have on interpersonal relationships - romantic relationships in particular. It is hoped that the contributions of this study will encourage others to explore the romantic relationship in more depth with regards to body image and self-esteem and will facilitate future studies on this topic.

Appendix 1



Body Image Questionnaire

This questionnaire is designed to obtain information on how you feel about your body, & behaviours that you engage in To change aspects of it. It also contains questions relating to your self-esteem and peer and romantic relationships.

Your completion of this survey will be taken as your consent to participate in the study. Your anonymity is secure – no information is collected from which you can be identified. If you do not wish to answer a question simply omit it and move to the next item.

There are no right or wrong answers for any items. We simply require honest responses with respect to your feelings and actions. It is important not to take too long to answer each question. Simply circle the response that best applies to You, it is your honest and immediate response that is required. Your participation in this study is greatly appreciated.

Body Image (Concern)

The rating scale is as follows:

- 1 - Extremely dissatisfied
- 2 - Fairly dissatisfied
- 3 - Neutral
- 4 - Fairly satisfied
- 5 - Extremely satisfied

How satisfied are you with your **weight**?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

How satisfied are you with your **body shape**?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

How satisfied are you with your **muscle size**?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

The remainder of the questions in this section ask about how satisfied you feel with different parts of your body.

Your hips?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

Your thighs?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

Your chest?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

The questions in this section ask about how satisfied you feel with different parts of your body.

The rating scale is as follows:

- 1 - Extremely dissatisfied
- 2 - Fairly dissatisfied
- 3 - Neutral
- 4 - Fairly satisfied
- 5 - Extremely satisfied

Your abdominal region/stomach?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

The size/width of your shoulders?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

Your legs?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

Your arms?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

Body Image (Importance)

The rating scale is as follows:

- 1 - Extremely unimportant
- 2 - Fairly unimportant
- 3 - Neutral

- 4 - Fairly important
- 5 - Extremely important

How important to you is **what you weigh** compared to other things in your life?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

How important is the **shape of your body** compared to other things in your life?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

How important is the **size and strength of your muscles** compared to other things in your life?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

The remainder of the questions in this section ask about how important to you is the look of different Parts of your body

Your hips?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

Your thighs?

1	2	3	4	5
Extremely Dissatisfied		Neutral		Extremely Satisfied

The questions in this section ask about how important to you is the look of different parts of your body.

The rating scale is as follows:

- 1 - Extremely unimportant
- 2 - Fairly unimportant
- 3 - Neutral
- 4 - Fairly important
- 5 - Extremely important

Your chest?

1	2	3	4	5
Extremely Unimportant		Neutral		Extremely Important

Your abdominal region/stomach?

1	2	3	4	5
Extremely Unimportant		Neutral		Extremely Important

The size/width of your shoulders?

1	2	3	4	5
Extremely Unimportant		Neutral		Extremely Important

Your legs?

1	2	3	4	5
Extremely Unimportant		Neutral		Extremely Important

Your arms?

1	2	3	4	5
Extremely Unimportant		Neutral		Extremely Important

The questions below ask how you feel about your appearance. There are no right or wrong answers. Please circle the response that best applies to you

The rating scale is as follows:

- 1 - Extremely unattractive
- 2 - Fairly unattractive
- 3 - Of average attractiveness
- 4 - Fairly attractive
- 5 - Extremely attractive

Compared to other members of my sex, I am...

1	2	3	4	5
Extremely Unattractive		Average		Extremely Attractive

Members of the opposite sex usually think I am...

1	2	3	4	5
Extremely Unattractive		Average		Extremely Attractive

When it comes to my looks, I am...

1	2	3	4	5
Extremely Unattractive		Average		Extremely Attractive

I feel that my face is...

1	2	3	4	5
Extremely Unattractive		Average		Extremely Attractive

If people had to rate my appearance, they would probably say I am...

1	2	3	4	5
Extremely Unattractive		Average		Extremely Attractive

The below questions ask how you feel about body image behaviours. There are no right or wrong answers. Please circle the response that best applies to you.

The rating scale is as follows:

- 1- Never
- 2 - Rarely
- 3 - Sometimes
- 4 - Often
- 5 - Usually
- 6 - Always

I wear clothes that will divert attention from my body shape or weight.

1	2	3	4	5	6
---	---	---	---	---	---

Never

Always

I try to make sure people can't see what my body really looks like

1
Never

2

3

4

5

6
Always

I choose clothes that hide the parts of my body I don't like.

1
Never

2

3

4

5

6
Always

I avoid wearing 'revealing' clothes, like shorts or bathing suits.

1
Never

2

3

4

5

6
Always

I avoid situations where people are likely to 'check out' my appearance.

1
Never

2

3

4

5

6
Always

I try hard to improve my body shape.

1
Never

2

3

4

5

6
Always

I exercise in order to get a better body.

1
Never

2

3

4

5

6
Always

I spend time making my body look better.

1
Never

2

3

4

5

6
Always

Below are some questions that ask about your interpersonal relationships. Please circle the answer that best suits you.

The rating scale is as follows:

1 - False

2 - Mostly false

3 - More false than true

4 - More true than false

5 - Mostly true

6 - True

I have good friends who are members of my **own** sex.

1
False

2

3

4

5

6
True

It is difficult to make friends with members of my **own** sex.

1
False

2

3

4

5

6
True

I don't get along very well with members of the **opposite** sex.

1
False

2

3

4

5

6
True

I get a lot of attention from members of the **opposite** sex.

1 2 3 4 5 6
False True

I make friends easily with members of my **own** sex.

1 2 3 4 5 6
False True

I don't get along very well with members of my **own** sex.

1 2 3 4 5 6
False True

I make friends easily with members of the **opposite** sex.

1 2 3 4 5 6
False True

I'm not very popular with members of the **opposite** sex.

1 2 3 4 5 6
False True

Below are some questions that ask about your **intimate / romantic relationships**. Please circle the answer that best describe your **current partner** and **relationship**. *If not currently in a relationship please fill out with regards to you most recent previous relationship or leave blank*

The rating scale is as follows:

- 1 - Not at all
- 2 - Slightly
- 3 - Less than average
- 4 - Moderately
- 5 - More than average
- 6 - Very much
- 7 - Extremely

How satisfied are you with your relationship?

1 2 3 4 5 6 7
Not at all Moderately Extremely

How intimate is your relationship?

1 2 3 4 5 6 7

Not at all		Moderately		Extremely
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How much do you trust your partner?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

How content are you with your relationship?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

How close is your relationship?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

How much can you count on your partner?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

How happy are you with your relationship?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

How connected are you to your partner?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

How dependable is your partner?

1	2	3	4	5	6	7
Not at all			Moderately			Extremely

Questions above have been answered with regards to my:

- Current Relationship**
- Most Recent Previous Relationship**
- No Relationship**

Length of Relationship -- Years _____ Months _____.

The following questions contain statements concerning your body physique or figure. By physique or figure we mean your body's form and structure; specifically, body fat, muscular tone, and general body proportions.

Please read each item carefully and indicate how characteristic it is of you according to the following scale.

- 1 - Not at all characteristic of me
- 2 - Slightly characteristic of me
- 3 - Moderately characteristic of me
- 4 - Very characteristic of me
- 5 - Extremely characteristic of me

I am comfortable with the appearance of my physique or figure.

1	2	3	4	5
Not at all				Extremely

I would never worry about wearing clothes that might make me look too thin or overweight.

1 2 3 4 5
Not at all Extremely

I wish I wasn't so up-tight about my physique or figure.

1 2 3 4 5
Not at all Extremely

There are times when I'm bothered by thoughts that other people are evaluating my weight or muscular development negatively

1 2 3 4 5
Not at all Extremely

When I look in the mirror I feel good about my physique or figure.

1 2 3 4 5
Not at all Extremely

Unattractive features of my physique or figure make me nervous in certain social settings.

1 2 3 4 5
Not at all Extremely

In the presence of others, I feel apprehensive about my physique or figure.

1 2 3 4 5
Not at all Extremely

I am comfortable with how my body appears to others.

1 2 3 4 5
Not at all Extremely

It would make me uncomfortable to know others were evaluating my physique or figure.

1 2 3 4 5
Not at all Extremely

When it comes to displaying my physique or figure to others, I am a shy person.

1 2 3 4 5
Not at all Extremely

I usually feel relaxed when it's obvious that others are looking at my physique or figure.

1 2 3 4 5
Not at all Extremely

When in a bathing suit, I often feel nervous about how well proportioned my body is.

1 2 3 4 5
Not at all Extremely

Using the following scale please select a number that comes closest to how you feel:

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

At parties or other social events, I compare my physical appearance to the physical appearance of others.

1 2 3 4 5

Never

Always

The best way for a person to know if they are overweight or underweight is to compare their figure to the figure of others.

1	2	3	4	5
Never				Always

At parties or other social events, I compare how I am dressed to how other people are dressed.

1	2	3	4	5
Never				Always

Comparing your "looks" to the "looks" of others is a bad way to determine if you are attractive or unattractive.

1	2	3	4	5
Never				Always

In social situations, I sometimes compare my figure to the figures of other people.

1	2	3	4	5
Never				Always

Below is a list of statements dealing with your general feelings about yourself. The rating scale is as follows:

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Agree
- 4 - Strongly agree

On the whole, I am satisfied with myself.

1	2	3	4
Strongly Disagree			Strongly Agree

At times, I think I am no good at all.

1	2	3	4
Strongly Disagree			Strongly Agree

I feel that I have a number of good qualities.

1	2	3	4
Strongly Disagree			Strongly Agree

I am able to do things as well as most other people.

1	2	3	4
Strongly Disagree			Strongly Agree

I feel I do not have much to be proud of.

1	2	3	4
Strongly Disagree			Strongly Agree

I certainly feel useless at times.

1	2	3	4
Strongly Disagree			Strongly Agree

Below is a list of statements dealing with your general feelings about yourself. The rating scale is as follows:

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Agree
- 4 - Strongly agree

I feel that I'm a person of worth, at least on an equal plane with others.

1	2	3	4
Strongly Disagree			Strongly Agree

I wish I could have more respect for myself.

1	2	3	4
Strongly Disagree			Strongly Agree

All in all, I am inclined to feel that I am a failure.

1	2	3	4
Strongly Disagree			Strongly Agree

I take a positive attitude toward myself.

1	2	3	4
Strongly Disagree			Strongly Agree

Please state your:

Age:

Height:

Gender:

Weight:

Current Relationship Status (please tick one):

- have never dated anyone
- not dating anyone currently
- casually dating one or more people (not exclusive)
- dating one person exclusively
- engaged or planning to marry

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Appendix 2

Descriptive Statistics for the Body Image Scales Including Cronbach's Alphas if item deleted

	N	Minimum	Maximum	\bar{x}	σ	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
BI SAT1	91	1	5	3.15	1.084	.699	.865
BI SAT2	91	1	5	3.21	1.150	.765	.859
BI SAT3	91	1	5	3.18	.961	.618	.871
BI SAT4	91	1	5	3.32	1.063	.581	.874
BI SAT5	91	1	5	3.00	1.145	.611	.871
BI SAT6	91	1	5	3.23	1.106	.536	.877
BI SAT7	91	1	5	2.62	1.143	.601	.872
BI SAT8	91	1	5	3.71	.946	.549	.876
BI SAT9	91	1	5	3.40	1.134	.567	.875
BI SAT10	91	1	5	3.19	1.064	.604	.872
BI SAT TOT	91	11.00	47.00	32.0000	7.54689		
BI IMP1	91	1	5	3.15	1.064	.654	.860
BI IMP2	91	1	5	3.32	1.010	.703	.857
BI IMP3	91	1	5	2.93	1.009	.424	.878
BI IMP4	91	1	5	3.19	.977	.500	.872
BI IMP5	91	1	5	3.33	.989	.558	.868
BI IMP6	91	1	5	3.45	.992	.580	.866
BI IMP7	91	1	5	3.69	.927	.654	.861
BI IMP8	91	1	5	2.87	1.128	.527	.871
BI IMP9	91	1	5	3.51	.982	.683	.858
BI IMP10	91	1	5	3.42	.967	.745	.854
BI IMP TOT	91	10.00	50.00	32.8571	6.92270		
PHYS ATT1	91	1	5	3.21	.738	.823	.910
PHYS ATT2	91	1	5	3.44	.897	.781	.921
PHYS ATT3	91	1	5	3.20	.703	.861	.904
PHYS ATT4	91	1	5	3.20	.749	.812	.912
PHYS ATT5	91	1	5	3.40	.787	.805	.913
PHYS ATT TOT	91	6.00	25.00	16.4396	3.42607		
BOD CON1	91	1	6	3.01	1.418	.646	.861
BOD CON2	91	1	6	2.76	1.319	.836	.819
BOD CON3	91	1	6	3.13	1.477	.691	.851
BOD CON4	91	1	6	2.99	1.609	.712	.847
BOD CON5	91	1	6	2.75	1.387	.650	.860
BOD CON TOT	91	5.00	30.00	14.6374	5.89636		
BOD PROV1	91	1	6	3.56	1.343	.813	.866
BOD PROV2	91	1	6	3.70	1.479	.795	.880
BOD PROV3	91	1	6	3.52	1.456	.831	.847
BOD PROV TOT	91	3.00	18.00	10.7802	3.92655		
PHYS ANX1	91	1	5	2.68	.976	.636	.888
PHYS ANX2	91	1	5	3.12	1.143	.182	.909
PHYS ANX3	91	1	5	2.63	1.297	.660	.886
PHYS ANX4	91	1	5	2.79	1.269	.688	.884
PHYS ANX5	91	1	5	2.89	.983	.647	.888
PHYS ANX6	91	1	5	2.75	1.252	.755	.881
PHYS ANX7	91	1	5	2.75	1.071	.702	.884
PHYS ANX8	91	1	5	2.80	1.128	.711	.884
PHYS ANX9	91	1	5	3.42	1.212	.538	.892
PHYS ANX10	91	1	5	3.18	1.296	.600	.889
PHYS ANX11	91	1	5	3.43	1.117	.542	.892
PHYS ANX12	91	1	5	3.20	1.368	.728	.882

PHYS ANX TOT	91	12.00	57.00	35.6264	9.71099		
COMPAR1	91	1	5	3.14	1.117	.672	.529
COMPAR2	91	1	5	2.18	1.097	.482	.617
COMPAR3	91	1	5	3.46	1.133	.585	.569
COMPAR4	91	1	5	2.52	1.173	-.035	.821
COMPAR5	90	1	5	3.12	1.160	.624	.548
COMPAR TOT	90	5.00	25.00	14.4222	3.78043		

Appendix 3

Descriptive Statistics for the Self-Esteem and Relationship Scales Including Cronbach's Alphas if item deleted

	<i>N</i>	Minimum	Maximum	\bar{x}	σ	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
SLF ESTM1	91	1	4	2.93	.772	.607	.864
SLF ESTM2	91	1	4	2.73	.908	.630	.862
SLF ESTM3	91	1	4	3.32	.713	.636	.863
SLF ESTM4	91	1	4	3.27	.700	.583	.867
SLF ESTM5	91	1	4	3.21	.925	.582	.867
SLF ESTM6	91	1	4	2.84	.969	.718	.855
SLF ESTM7	91	1	4	3.33	.651	.493	.872
SLF ESTM8	91	1	4	2.56	1.046	.503	.876
SLF ESTM9	91	1	4	3.34	.778	.637	.862
SLF ESTM10	91	1	4	3.13	.806	.682	.859
OP SX1	91	1	6	5.00	1.506	.331	.672
OP SX2	91	1	6	3.84	1.393	.470	.579
OP SX3	91	1	6	4.64	1.418	.540	.530
OP SX4	91	1	6	4.65	1.486	.445	.594
SM SX1	91	1	6	5.18	1.226	.555	.798
SM SX2	91	1	6	4.78	1.611	.656	.755
SM SX3	91	1	6	4.64	1.426	.812	.672
SM SX4	91			4.89	1.370	.526	.810
REL SAT	86	1	7	4.94	1.662	.866	.897
REL SAT	86	1	7	4.87	1.644	.886	.882
REL SAT	86	1	7	4.99	1.739	.831	.926
REL INT	86	1	7	5.36	1.637	.725	.925
REL INT	86	1	7	5.27	1.582	.853	.813
REL INT	86	1	7	5.12	1.522	.835	.831
REL TRU	86	1	7	5.01	1.869	.799	.826
REL TRU	86	1	7	5.17	1.703	.842	.790
REL TRU	86	1	7	4.84	1.761	.710	.901

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