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With a Body Like Mine: Relationship Between Body Esteem, Perceived Rivals, and Jealousy

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With a Body Like Mine:

Relationship Between Body Esteem, Perceived Rivals, and Jealousy

A Thesis

Presented to

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by Cheyenne Bourland

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Abstract

The current study sought to examine the relation of body dissatisfaction to jealousy and the role of perceived rivals in that relationship. Specifically, it examined whether, in women, the perceived number of rivals to a romantic relationship mediated the relationship between body dissatisfaction and jealousy in a romantic relationship. Results indicated that there was a significant relation of body dissatisfaction to jealousy in a romantic relationship through perceived rivals to that romantic relationship. Subsequent regression analyses indicated that when all variables are placed in the model, only the variables of self-esteem and narcissism were predictors of overall jealousy in the romantic relationships. Contrary to the hypothesis, with all variables placed in the model, body dissatisfaction was not a predictor of jealousy; however, results did support the hypothesis that women with higher body dissatisfaction would report more perceived rivals.

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Chapter I: Introduction

Jealousy is defined as an emotion that is evoked upon the threat to (or the loss of) one's current valued relationship, due to an actual, or imagined, rival for the partner's attention (Buunk & Dijkstra, 2000; Daly, Wilson, & Weghorst, 1982). Evolutionary psychologists suggest that the purpose of jealousy may be to alert an individual to take action to guard their mate against sexual competitors and therefore prevent the partner from abandoning the relationship (Buunk, Massar, & Dijkstra, 2007). This would suggest that jealousy has evolved to help guard one's mate from interlopers, and thus increasing one's chance of successful genetic reproduction. In fact, romantic jealousy may be strategically employed by those of low mate value, due to being unattractive, or who are more vulnerable to infidelity (Brown & Moore, 2003).

Jealousy could potentially serve all species in an evolutionarily adaptive way. For human females, although infidelity from a partner does not risk a lowered maternity probability, it does increase the chances of lowering their partner's commitment, and therefore resources (Buss, Larsen, Westen, & Semmelroth, 1992). Perhaps then, suspecting a partner of cheating or actively guarding against a partner's betrayal lessens the risk of missing an infidelity and potentially losing that partner to a rival or threat (Buss & Abrams, 2016).

Part of the real question is, what makes another woman a threat to the relationship? From an evolutionary point of view, the threat may result from individuals

who are more likely to reproduce, which could be indicated by youth or health as symbolized by body type (Buss & Schmitt, 1993; Tovee, Maisey, Emery, & Cornelissen, 1999). From a sociocultural point of view, feelings of jealousy could be evoked through a process of social comparison where individuals may compare themselves and their characteristics to those of others, especially rivals (Desteno & Salovey, 1996). Societies that openly accept adulterous behaviors, (e.g. swingers), would likely report less feelings of jealousy than monogamous cultures, because adulterous behaviors are commonly practiced and accepted, whereas those who come from a society that strongly frowns upon infidelity would likely report more jealous feelings in response to those behaviors (Sagarin, 2005).

Commitment to the relationship is another important factor that may alter feelings of jealousy. Commitment represents long term orientation, including feelings of attachment to the partner and the desire to maintain a relationship (Rusbult & Buunk, 1993). According to the Investment Model, commitment is the experience of relying on a romantic relationship to fulfill and satisfy important interpersonal and intrapersonal needs, and that the quality of alternatives is poor or the individual's needs cannot be gratified outside of the relationship by others (Agnew, Van Lange, Rusbult, & Langston, 1998). Rydell, Mcconnell, and Bringle (2004) found that those participants who reported greater relationship commitment experienced more feelings of jealousy when they received negative information about their relationship compatibility. The researchers also found that those participants who were in more committed relationships experienced greater feelings of jealousy when they were induced to consider having unattractive relationship alternatives.

When sizing up potential rivals, men and women tend to place importance on different characteristics as threatening. For example, Easton, Schipper, and Shackelford (2006) found that jealous men focused more on indicators of a rival's status while jealous women focused more on a rival's physical attractiveness. This is consistent with the findings that men report more jealousy of a rival when the rival is high in social dominance, physical dominance, and social status, while women report more jealousy when a rival is high in physical attractiveness (Dijkstra & Buunk, 2002) and/or in youthfulness (Easton et al., 2006). Buunk, Solano, Zurriaga, and Gonzalez (2011) supported those findings when they found in their study that in both men and women, social attributes were the most jealousy-evoking characteristics, men experienced more jealousy than women when their rival was high in social dominance and women experienced more jealousy than men when their rival was high in physical attractiveness. Massar and Buunk (2010) showed that perceiving or recognizing others as potential romantic rivals can also occur outside of consciousness, which could be an evolutionary advantage. They found through a priming experiment that women report significantly more jealousy after being exposed to a picture of an attractive rival than after being exposed to an unattractive rival, even when they were not consciously aware of the exposure (Massar & Buunk, 2010).

Body Image

Body image, or the perception of one's own body, can be influenced by several factors including culture (Frederickson, Roberts, Noll, Quinn, & Twenge, 1998), the proportion of obese people in an individual's surrounding environment (Bagrowicz,

Watanabe, & Umezaki, 2013), and the media (Groesz, Levine, & Murnen, 2002). Past research has shown that body image and, specifically, dissatisfaction with one's body is connected to jealousy (Ambwani & Strauss, 2007), and that jealousy is connected to rivals with specific characteristics (Dijkstra & Buunk, 2002). For women, jealousy may be associated with body esteem, although this pattern is not typically seen in men. Ambwani and Strauss (2007) suggest that for women, body shape and weight concerns could lead to questioning their partners' fidelity, and that even as early as adolescence, body image dissatisfaction has been related to negative changes in body-esteem. Research has shown that women sometimes associate body dissatisfaction with body-esteem (Furnham, Badmin, & Sneade, 2002), and body image and dissatisfaction is related to depression and other forms of psychological distress (Friedman, Reichmann, Costanzo, & Musante, 2002). Body image is a social construct that is particularly relevant to women because Western culture, in particular, has created an environment that objectifies women and socializes women to see themselves in this way (Frederickson et al., 1998).

Men do not appear to experience the same level of objectification when it comes to body image as women (McKinley, 1998). One source of body dissatisfaction in women appears to be the widely believed notion that men desire extremely thin women, a message argued to spawn from the media (Meltzer & McNulty, 2015). Media displayed images of thin-ideal female beauty has an immediate effect on the mood states of women. Specifically, after looking at thin-ideal images of female beauty in the media, women report more anger and a greater depressed mood (Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999). Research has also suggested that exposure to media images depicting

thin-ideal bodies for women are linked to women's dissatisfaction with their own bodies (Groesz et al., 2002; Grabe, Ward, & Hyde, 2008). When women are told that men find larger, rather than the thin-ideal body shapes attractive, they experience increased weight satisfaction compared to those women who were not given any information and those who were told that men preferred the ultra-thin body shape (Meltzer & McNulty, 2015). Women's body satisfaction is significantly lower after viewing media images of thin female models than after viewing media images of average size models or overweight models, as well as nonhuman images such as cars or houses (Groesz et al., 2002). Pujols, Meston, and Seal (2010) found that several aspects of body image, including weight concern, physical condition and sexual attractiveness, predicted sexual satisfaction for women.

The way that one looks, even as specific as how symmetrical one's face is, influences romantic jealousy because being less symmetrical, therefore less attractive, lowers one's mate value, potentially, increasing rivals (Brown & Moore, 2003; Massar & Buunk, 2009). For example, Buss, Shackelford, Choe, Buunk, and Dijkstra (2000) demonstrated that rivals who are perceived as surpassing the partner on their own qualities, such as physical attractiveness, are more likely to be seen as a threat to the relationship, evoking more feelings of jealousy. Dijkstra and Buunk (2002) demonstrated that more jealousy is evoked from women if their perceived rivals are high in physical attractiveness. Specifically, Brown and Moore (2003) found that individuals with asymmetrical features report more jealous feelings than those individuals whose features are symmetrical. Moreover, jealous feelings can be evoked from women without even using actual images of attractive bodies, but by using words that are related to

 attractiveness such as "sexy", "beautiful", and "slender" (Massar, Buunk, & Dechesne, 2009).

Although past research has indicated that jealousy can be evoked under the threat of potential attractive rivals, little known research has examined what the underlying process entails. That is, research has not examined how one's own body dissatisfaction is specifically related to jealousy, and how the threat of potential rivals can influence that relationship. Research has shown that women with body dissatisfaction are more adversely affected by media images of thin women than women without body dissatisfaction issues (Groesz, et al., 2002; Pinhas et al., 1999). Thus, one might argue that this is because the individual perceives the thin women as a direct threat. That is, an individual who is dissatisfied with her current weight may perceive more potential rivals, than someone who is satisfied with her current weight. The current study will examine how the number of perceived rivals may mediate the relationship between body dissatisfaction and jealousy.

Chapter II: The Current Study

The current study examined the potential mediating influence of perceived rivals on the relationship between body esteem and jealousy in romantic relationships. As there was no known research investigating whether perceived number of rivals mediates the relationship between body esteem and jealousy, hypotheses and a set of research questions were made.

H1. Body satisfaction will negatively predict number of perceived rivals.

H2. Body satisfaction and perceived rivalry will predict jealousy.

RQ1: What role does commitment play in women's perceptions of rivals?

RQ2: Does the number of perceived rivals in a romantic relationship mediate the relationship between body satisfaction and jealousy? (See Figure 1)
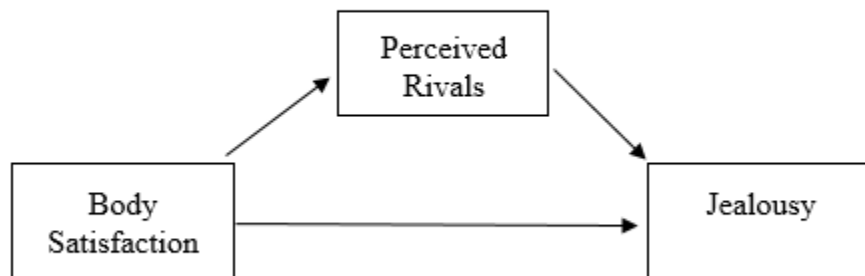

Figure 1. *Mediation of perceived rivals between body esteem and jealousy*

Chapter III: Methodology

Participants

Initially, 350 participants attempted the survey; however, multiple participants had to be deleted from the data set for various reasons. Participants were required to be currently in a romantic relationship in order to complete the survey. Due to this requirement, participants ($n = 2$) were deleted from the data due to them endorsing a "single" relationship status. Participants ($n = 22$) were deleted from the data due to not consenting to be in the study, participants ($n = 3$) were deleted due to identifying their gender as "male", and participants ($n = 85$) were deleted due to skipping over half of the primary variable items. The final number of participants in this study ($N = 238$) were all females who ranged in age from 18-68 years. The mean age of participants was 31.71 years of age ($SD = 12.03$).

Of the 206 participants that completed the sexual orientation question on the demographics questionnaire, 75.2% reported heterosexuality as their sexual orientation, 7.1% as homosexual, 3.4% as bisexual, .8% as pansexual, and 13.4% did not answer the question.

In addition to the 212 participants who reported White/Caucasian as their ethnicity, there were also participants who were African American ($n = 2$), Hispanic ($n = 3$), Asian ($n = 1$), First Nation People ($n = 1$), and biracial ($n = 1$), and 18 participants who did not disclose ethnicity.

Materials and Procedure

Some of the participants ($N = 42$) in this study were recruited through SONA, a research and recruitment system maintained by the Psychology department, and through advertising via flyers in Murray State University psychology classes. On SONA, the study appeared in a list of potential research participation opportunities, listed under the title of "Personal Factors in Relationships". Other participants were recruited via Facebook, on which the research study was advertised along with a link to the website in which the survey was housed. Participants who chose to participate in this study clicked on a link that then redirected them to an online survey housed in surveymonkey.com.

Upon clicking the link, participants were shown an informed consent form that explained their rights as a participant, and the expectations of their participation. They were then instructed to click on the "I Consent" button, in order to participate. Upon consent, participants were asked to complete a series of measures presented in random order.

Body Image Attitudes. The Body Uneasiness Test (BUT; Cuzzolaro, Vetrone, Marano, & Garfinkel, 2006; $\alpha =.96$), measures weight phobia ($\alpha =.84$), body image concern ($\alpha =.90$), avoidance ($\alpha =.79$), compulsive self-monitoring ($\alpha =.82$), depersonalization ($\alpha =.85$) and feelings towards groups of individual body parts. Participants were asked to rate how often they experience various thoughts and feelings about their body on a Likert scale ranging from 0 (never) to 5 (always). Scores were averaged, where higher scores represent higher body image disturbances.

Jealousy. Multidimensional Jealousy Scale (Pfeiffer & Wong, 1989; $\alpha = .88$), consists of 24 items on a Likert scale ranging from 1 (*never*) to 7 (*all the time*). Final scores were calculated by averaging participant's responses. The instrument is broken down into three separate subscales: cognitive (e.g. 'How often do you have the following thoughts about X,' $\alpha = .92$), emotional (e.g. 'How would you emotionally react to the following situations,' $\alpha = .85$), and behavioral (e.g. 'How often do you engage in the following behaviors,' $\alpha = .89$).

Commitment. The participant's commitment to their romantic relationship was measured using a commitment measure ($\alpha = .95$) from the Investment Model Scale (Rusbult, Martz, & Agnew, 1998). The measure consists of 15 items on a Likert scale ranging from 0 (*do not agree at all*) to 8 (*agree completely*). Final scores reflecting global commitment to their romantic relationship were calculated by averaging the responses.

Perceived Number of Rivals. One way that the participant's number of perceived rivals was measured was through using the figure in Appendix C. Participants identified which body type they identify as their own, which body type is their ideal body and which body types they believe their significant other finds attractive (scores could range from 0 to 9).

Participants were also given a hypothetical situation in which they were asked to imagine that their significant other is in a room with 100 random women. Participants were then asked to estimate how many women, out of 100, that their significant other would likely find attractive (scores could range from 0 to 100). Participants were also asked to consider their significant other's social network and in the categories of close friends, associates and colleagues, and others, to list the initials of all the women they

can think of who they believe their significant other likely finds attractive. The number of women identified in these questions as their significant other finding attractive is considered the amount of perceived rivals the participant has.

Neuroticism. The participant's traits of neuroticism was measured using the Big Five Inventory – 10 (Rammstedt & John, 2007; $r(231) = .50$, $p < .0001$), a short form version of the Big Five Personality Inventory. The measure consists of 10 items on a Likert scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Final scores were calculated by summing participant's responses and separating those into five personality facets: extraversion, agreeableness, conscientiousness, neuroticism, and openness.

Narcissism. The participant's narcissistic personality traits was measured using the Narcissism Personality Inventory-16 (Ames, Rose, & Anderson, 2006; $\alpha = .70$). Participants were asked to read 16 pairs of statements and indicate the one statement from each pair that describes them best. The measure is scored by computing the number of responses that are consistent with narcissism.

Self-Esteem. Participant's self-esteem was measured using the Texas Social Behavioral Inventory-16 (Helmreich & Stapp, 1974; $\alpha = .82$). The measure consists of 16 items on a Likert scale ranging from A (*not at all characteristic of me*) to E (*very characteristic of me*). The measure is scored by summing the responses that are consistent with low or high self-esteem (scores could range from 0 to 58).

Demographics. The final portion of the questionnaire inquired about participants' age, weight and weight history, dieting history, sexual orientation, relationship history, and relationship status. Upon completion of the study, participants viewed a debriefing statement explaining the purpose of the study.

Chapter IV: Results

Pearson's correlation tests were conducted to gather preliminary knowledge about all of the relevant variables. These tests revealed that body dissatisfaction was significantly correlated with participants' answers to how many women in a room of 100 their partner would find attractive $r(200) = .17, p = .007$. As this was the only question pertaining to rivals that was correlated with body esteem, as can be seen in Figure 2, it will be used as the primary rival operationalization in the remaining analysis. Correlations, means and standard deviations for variables are presented in Table 1.
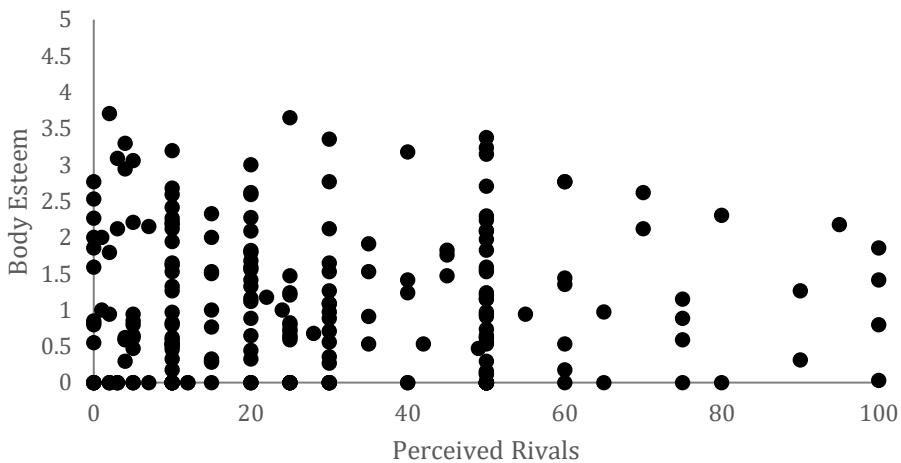
Figure 2. *Scatter Plot of Correlation Between Body Esteem and Perceived Rivals.*

A secondary exploratory regression analysis was conducted placing all variables in the regression model to explore which variables would significantly predict jealousy. As can be seen in Table 2, the results indicated that when all variables were entered into the analysis model, only self-esteem and narcissism were significant predictors of jealousy, $F(9, 193) = 2.02$, $p = .039$, $R^2 = .086$.

Table 1.

Intercorrelations Among Possible Predictors of Jealousy Among Women in Romantic Relationships

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	*M(SD)*
1. Jealousy	___	.08	-.03	.14*	-.13*	.09	-.02	.09	.04	.04	4.12(.58)
2. BUT-A		___	.66***	.49***	-.26***	--.12	.03	-.02	.08	.17*	1.39(.88)
3. BUT-B			___	.39***	-.24***	-.22**	.05	-.05	.02	.17	.98(.56)
4. Body Discrepancy				___	-.09	-.02	-.04	-.04	.18**	.10	1.31(1.4)
5. Self-Esteem					___	.057	-.15*	.46***	.04	-.06	33.9(11.2)
6. Commitment						___	.06	.04	-.02	-.23***	6.74(1.4)
7. Neuroticism							___	-.09	-.02	-.10	6.53(1.1)
8. Narcissism								___	.14*	.02	2.78(2.5)
9. Rival Body Types									___	.27***	3.08(1.5)
10. Out of 100										___	

*Note: * p < .05, ** p < .01, *** p < .001*

Table 2.

Regression on Possible Predictors of Jealousy in Romantic Relationships

Predictor Variables	*β*	*t*	*p*
BUT-A	.06	.59	.56
BUT-B	-.16	-1.64	.10
Body Discrepancy	.15	1.86	.06
Self-Esteem	-.23	-2.85	.01
Commitment	.08	1.14	.26
Neuroticism	-.03	-.40	.69
Narcissism	.20	2.48	.01
Rival Body Types	-.20	-.26	.79
Out of 100	.05	.61	.55

Note: N = 238

Hypothesis 1

A hierarchical regression analysis examined the hypothesis that body satisfaction would negatively predict the number of perceived rivals an individual has. Results indicated that body satisfaction did predict the number of perceived rivals an individual has when perceived rivals was measured by asking the "out of 100" question, $F(1, 206) = 7.28$, $p = .0075$, $R^2 = .03$. However, body satisfaction did not predict perceived rivalry when it was measured by body types a participant's partner may be attracted to, $F(1, 229) = .52$, $p = .473$, $R^2 = .00$, or when asking about people in their close social group the participant's partner may be attracted to, $F(1, 131) = .75$, $p = .389$, $R^2 = .01$.

Hypothesis 2

Another regression analysis was conducted to test the hypothesis that body satisfaction and perceived rivalry would predict jealousy. In the regression, the jealousy total score was conducted with body satisfaction entered in the first level, and perceived number of rivals entered in the second level. The results were significant, $F(2, 205) = 3.94$, $p = .021$, $R^2 = .037$, indicating that, together, body satisfaction and perceived rivalry predict jealousy.

Hypothesis 3

An additional regression analysis examined whether body satisfaction, perceived rivals, and commitment to the relationship could be used as potential predictors of jealousy. The results were not significant, $F(3, 201) = 2.49$, $p = .061$, $R^2 = .036$.

Hypothesis 4

A mediated regression analysis was conducted to investigate the research question that asks if number of perceived rivals in a romantic relationship is a mediator to the relationship between body satisfaction and jealousy. All analyses were conducted using the SPSS software program with the PROCESS macro (Hayes, 2012). As can be seen in Figure 2, results were significant and indicated that body satisfaction was a significant predictor of perceived rivals, when measured using the "out of 100" question, $F(1, 206) = 7.28$, $p = .008$, $R^2 = .04$, $b = 5.16$, $SE = 1.91$, 95% CI[1.38, 8.92], and a predictor of jealousy, $b = .06$, $SE = .03$, 95% CI[.002, .112], $p = .041$. Perceived rivals did not predict jealousy, $b = .002$, $SE = .001$, 95% CI[.00, .00], $p = .136$. Approximately four percent of the variance in perceived rivalry was accounted for by the predictors $F(2, 205) = 3.94$, $p = .021$, $R^2 = .04$. The indirect effect was tested using a bootstrap estimation approach with 5000 samples (Shrout & Bolger, 2002). The results suggested the indirect coefficient was significant, $b = .01$, $SE = .01$, 95% CI [.0003, .0248].
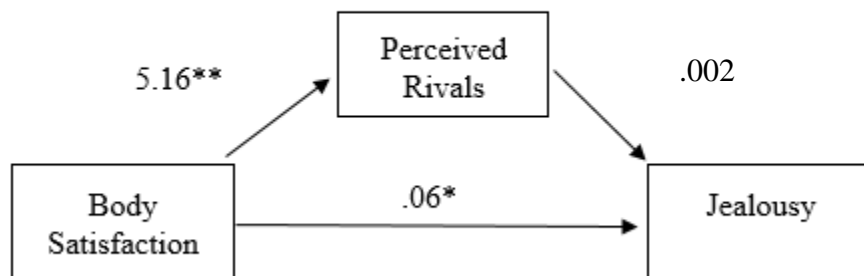

Figure 3. *Results of mediation of perceived rivals between body esteem and jealousy.*

Chapter V: Discussion

This study sought to understand if perceived rivals, or threats, to a romantic relationship would interact with body satisfaction in such a way as to influence feelings of jealousy in a romantic relationship. The data supported the hypothesis that the perceived rivals to a relationship would mediate the relationship between body satisfaction and jealousy. The results would suggest that those women who have lower body satisfaction do see more potential rivals to their romantic relationship, which may therefore affect the amount of jealousy they experience in their relationship.

From an evolutionary perspective, jealousy may serve a woman in that it can help prevent her from losing her mate to another female, and therefore allow her to keep that mate's commitment and resources (Buss et al., 1992). If a woman believes that she is not attractive, she may benefit from seeing others as rivals, and becoming jealous. When a woman's perceived rivals are high in physical attractiveness, she will likely experience more jealousy (Dijkstra and Buunk, 2002). The results of the current study supported the hypothesis that the lower a woman's body satisfaction, the higher amount of perceived rivals she would have. Being less attractive is equated to having a lower mate value, which could potentially increase the amount of rivals one has (Brown & Moore, 2003; Massar & Buunk, 2009).

The current study found that measuring perceived rivals by asking about females in one's close social group who their partner may find attractive was not a significant predictor of jealousy. This could be due to the large amount of people that did not

complete this question, or because people that we are close to are not as threatening to our romantic relationships as rival strangers, perhaps due to trust. Measuring perceived rivals by having participants identify body types in which they believe their partner would be attracted to was not a significant predictor of jealousy. The only measure of perceived rivals that significantly predicted jealousy was when participants were asked to consider the hypothetical situation that their partner was in a room with 100 other women, and asked to estimate how many women in that room their partner would likely find attractive. It could be that actually imagining the situation where potential rivals are introduced to the participant's partner is more realistic than looking at drawings of body types or naming people that you know.

It is important to note that when all variables were placed in the regression, the only two that predicted jealousy were self-esteem and narcissism. Self-esteem may be a better predictor than body esteem or body satisfaction because women tend to associate body dissatisfaction with the concept of self-esteem (Furnham et al., 2002). Narcissism could affect commitment, which may affect how jealous someone is in a relationship. Narcissism could also mean inflated self-esteem, and less worries about rivals, therefore less need for jealousy (Campbell & Foster, 2002).

The findings of the study did support the hypothesis that perceived rivals mediates the relationship between body satisfaction and jealousy in romantic relationships. However, it is important to note that there are some limitations to the current study. The sample in this study is largely from the same region in a Midwestern area, which may

make results difficult to generalize to other populations. It may be that religiosity is higher in this area, which can affect relationships in that monogamy is more important and the norm. The ethnicity of participants in the current study was mostly white, which could affect results due to ideal body sizes varying between different ethnicities, therefore caution should be taken when applying these results to other populations.

In conclusion, the data suggested that perceived rivals and body satisfaction significantly predict jealousy, and that perceived rivals mediates the relationship between body satisfaction and jealousy in a romantic relationship, in women. The findings of the current study support previous findings that body satisfaction is related to perceived rivals, and the current study extended those findings in that it added that as women are more dissatisfied with their bodies, the amount of rivals that they perceive to their relationship increases.

Chapter VI: References

Agnew, C., Van Lange, P., Rusbult, C., & Langston, C. (1998). Cognitive

    interdependence: Commitment and the mental representation of close

    relationships. *Journal of Personality and Social Psychology, 74,* 939-954.

Ambwani, S., & Strauss, J. (2007). Love thyself before loving others? A qualitative and

    quantitative analysis of gender differences in body image and romantic love. S*ex*

    Roles, 56, 13-21. doi: 10.1007/s11199-006-9143-7

Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of

    narcissism. *Research in Personality, 40,* 440-450. doi:10.1016/j.jrp.2005.03.002

Bagrowicz, R., Watanabe, C., & Umezaki, M. (2013). Is obesity contagious by way of

    body image? A study on Japanese female students in the United States. *Journal of*

    Community Health, 38, 834-837. doi: 10.1007/s10900-013-9686-9

Brown, W., & Moore, C. (2003). Fluctuating asymmetry and romantic jealousy.

    Evolution and Human Behavior, 24, 113-117. doi: 10.1016/S1090

    5138(02)00148-4

Buss, D., & Abrams, M. (2016). Jealousy, infidelity, and the difficulty of diagnosing

    pathology: A CBT approach to coping with sexual betrayal and the green eyed

    monster. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 34,* doi:

    10.1007/s10942-016-0248-9.

Buss, D., Larsen, R., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy:

    Evolution, physiology, and psychology. *Psychological Science, 3,* 251-255.

Buss, D., & Schmitt, D. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review, 100,* 204-232.

Buss, D., Shackelford, T., Choe, J., Buunk, B., & Dijkstra, P. (2000). Distress about mating rivals. *Personal Relationships, 7,* 235-243. doi: 10.1111/j.1475 6811.2000.tb00014.x

Buunk, B., & Dijkstra, P. (2000). Extradyadic relationships and jealousy. *Close relationships: A sourcebook,* 317-329. Thousand Oaks, CA: SAGE.

Buunk, A., Massar, K., & Dijkstra, P. (2007). A social cognitive evolutionary approach to jealousy: The automatic evaluation of one's romantic rivals. *Evolution and the social mind: Evolutionary Psychology and Social Cognition.* 213-238. New York: Psychology Press.

Buunk, A., Solano, A., Zurriaga, R., & Gonzalez, P. (2011). Gender differences in the jealousy evoking effects of rival characteristics: A study in Spain and Argentina. *Journal of Cross Cultural Psychology, 42,* 323-339. doi: 10.1177/0022022111403664

Campbell, W., & Foster, C. (2002). Narcissism and commitment in romantic relationships: An investment model analysis. *Personality and Social Psychology Bulletin, 28,* 484-495. doi: 10.1177/0146167202287006

Cuzzolaro, M., Vetrone, G., Marano, G., & Garfinkel, P. (2006). The body uneasiness test (BUT): Development and validation of a new body image assessment scale. *Eating and Weight Disorders, 11,* 1-13. doi: 10.1007/BF03327738

Daly, M., Wilson, M., & Weghorst, S. (1982). Male sexual jealousy. *Ethology and Sociobiology, 3,* 11-27.

DeSteno, D., & Salovey, P. (1996). Evolutionary origins of sex differences in jealousy? Questioning the "fitness" of the model. *Psychological Science, 7*, 367-372.

Dijkstra, P. & Buunk, B. (2002). Sex differences in the jealousy-evoking effect of rival characteristics. *European Journal of Social Psychology, 32,* 829-852. doi: 10.1002/ejsp.125

Easton, J., Schipper, L., & Shackelford, T. (2006). Morbid jealousy from an evolutionary psychological perspective. *Evolution and Human Behavior, 28,* 399-402. doi: 10.1016/j.evolhumbehav.2007.05.005

Frederickson, B., Roberts, T., Noll, S., Quinn, D., & Twenge, J. (1998). That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology, 75,* 269-284.

Friedman, K., Reichmann, S., Costanzo, P., & Musante, G. (2002). Body image partially mediates the relationship between obesity and psychological distress. *Obesity Research, 10,* 33-41. doi: 10.1038/oby.2002.5

Furnham, A., Badmin, N., & Sneade, I. (2002). Body image dissatisfaction: Gender differences in eating attitudes, self-esteem, and reasons for exercise. *The Journal of Psychology, 136,* 581-596. doi: 10.1080/00223980209604820

Grabe, S., Ward, L., & Hyde, J. (2008). The role of media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin, 134,* 460-476. doi: 10.1037/0033-2909.134.3.460

Groesz, L., Levine, M., & Murnen, S. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders, 31,* 1-16. doi: 10.1002/eat.10005

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable

    mediation, moderation, and conditional process modeling.

Helmreich, R., & Stapp, J. (1974). Short forms of the Texas Social Behavior Inventory

    (TSBI) an objective measure of self-esteem. *Bulletin of the Psychonomic Society,*

    45, 473-475.

Massar K., & Buunk, A. (2009). Rivals in the mind's eye: Jealous responses after

    subliminal exposure to body shapes. *Personality and Individual Differences, 46,*

    129-134. doi: 10.1002/ejsp.579

Massar, K., Buunk, A. (2010). Judging a book by its cover: Jealousy after subliminal

    priming with attractive and unattractive faces. *Personality and Individual*

    Differences, 49, 634-638. doi: 10.1016/j.paid.2010.05.037

Massar, K., Buunk, A., & Dechesne, M. (2009). Jealousy in the blink of an eye: Jealous

    reactions following subliminal exposure to rival characteristics. *European Journal*

    of Social Psychology, 39, 768-779. doi: 10.1002/ejsp.579

McKinley, N. (1998). Gender differences in undergraduates' body esteem: The mediating

    effect of objectified body consciousness and actual/ideal weight discrepancy. *Sex*

    Roles, *39*, 113-123.

Meltzer, A., & McNulty, J. (2015). Telling women that men desire women with bodies

    larger than the thin-ideal improves women's body satisfaction. *Social*

    Psychological and Personality Science, 6, 391-398. doi:

    10.1177/1948550614561126

Pfeiffer, S., & Wong, P. (1989). Multidimensional jealous. *Journal of Social and*

    Personal Relationships, 6, 181-196.

Pinhas, L., Toner, B., Ali, A., Garfinkel, P., & Stuckless, N. (1999). The effects of the
ideal of female beauty on mood and body satisfaction. *International Journal of
Eating Disorders, 25,* 223-226.

Pujols, Y., Meston, C., & Seal, B. (2010). The association between sexual satisfaction
and body image in women. *The Journal of Sexual Medicine, 7,* 905-916. doi:
10.1111/j.1743-6109.2009.01604.x

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10
item short version of the Big Five Inventory in English and German. *Journal of
Research in Personality, 41,* 203-212. doi: 10.1016/j.jrp.2006.02.001

Rusbult, C., & Buunk, B. (1993). Commitment processes in close relationships: An
interdependence analysis. *Journal of Social and Personal Relationships, 10,* 175
204.

Rusbult, C., Martz, J., & Agnew, C. (1998). The investment model scale: Measuring
commitment level, satisfaction level, quality of alternatives, and investment size.
Personal Relationships, 5, 357-391.

Rydell, R., McConnell, A., & Bringle, R. (2004). Jealousy and commitment: Perceived
threat and the effect of relationship alternatives. *Personal Relationships, 11,* 451
468. doi: 10.1111/j.1475-6811.2004.00092.x

Sagarin, B. (2005). Reconsidering evolved sex differences in jealousy: Comment on
Harris (2003). *Personality and Social Psychology Review, 9,* 62-75. doi:
10.1207/s15327957pspr0901_5

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental

studies: New procedures and recommendations. *Psychological Methods, 7,* 422

445. doi: 10.1037//1082-989X.7.4.422

Tovee, M., Maisey, D., Emery, J. L., & Cornelisson, P. L. (1999). Visual cues to female

physical attractiveness. *Proceedings of the Royal Society of London, 266,* 211-

218.

Appendix A: Body Uneasiness Test

Mark with an X the answer which best expresses your experience at the moment

0-never   1-seldom   2-sometimes   3-often   4-very often   5-always

1). I spend a lot of time in front of the mirror   0 1 2 3 4 5

2). I don't trust my appearance: I'm afraid it will change suddenly 0 1 2 3 4 5

3). I like those clothes which hide my body   0 1 2 3 4 5

4). I spend a lot of time thinking about some defects of

   my physical appearance 0 1 2 3 4 5

5). When I undress, I avoid looking at myself   0 1 2 3 4 5

6). I think my life would change significantly if I could

   correct some of my aesthetic defects 0 1 2 3 4 5

7). Eating with others causes me anxiety   0 1 2 3 4 5

8). The thought of some defects of my body torments me 0 1 2 3 4 5

    so much that it prevents me being with others

9). I'm terrified of putting on weight   0 1 2 3 4 5

10). I make detailed comparisons between my appearance

   and that of others 0 1 2 3 4 5

11). If I begin to look at myself, I find it difficult to stop   0 1 2 3 4 5

12). I would do anything to change some parts of my body   0 1 2 3 4 5

13). I stay at home and avoid others seeing me   0 1 2 3 4 5

14). I am ashamed of the physical needs of my body   0 1 2 3 4 5

15). I feel I am laughed at because of my appearance   0 1 2 3 4 5

16). The thought of some defects of my body torments

    me so much that it prevents me studying or working 0 1 2 3 4 5

17). I look in the mirror for an image of myself which satisfies

    me and I continue to search until I am sure I have found it 0 1 2 3 4 5

18). I feel I am fatter than others tell me 0 1 2 3 4 5

19). I avoid mirrors 0 1 2 3 4 5

20). I have the impression that my image is always different 0 1 2 3 4 5

21). I would like to have a thin and bony body 0 1 2 3 4 5

22). I am dissatisfied with my appearance 0 1 2 3 4 5

23). My physical appearance is disappointing compared to

    my ideal image 0 1 2 3 4 5

24). I would like to undergo plastic surgery 0 1 2 3 4 5

25). I can't stand the idea of living with the appearance I have 0 1 2 3 4 5

26). I look at myself in the mirror and have a sensation of

    uneasiness and strangeness 0 1 2 3 4 5

27). I am afraid that my body will change against my will,

    in a way I don't like 0 1 2 3 4 5

28). I feel detached from my body 0 1 2 3 4 5

29). I have the sensation that my body does not belong to me 0 1 2 3 4 5

30). The thought of some defects of my body torments me

    so much that it prevents me having a sexual life 0 1 2 3 4 5

31). I observe myself in what I do and ask myself how I seem to others 0 1 2 3 4 5

32). I would like to decide what appearance to have 0 1 2 3 4 5

33). I feel different to how others see me 0 1 2 3 4 5

34). I am ashamed of my body 0 1 2 3 4 5

Mark with an X the answer which best expresses your experience at the moment

Of my body, in particular, I hate

0-never   1-seldom   2-sometimes   3-often   4-very often   5-always

1). Height 0 1 2 3 4 5

2). The shape of my head 0 1 2 3 4 5

3). The shape of my face 0 1 2 3 4 5

4). Skin 0 1 2 3 4 5

5). Hair 0 1 2 3 4 5

6). Forehead 0 1 2 3 4 5

7). Eyebrows 0 1 2 3 4 5

8). Eyes 0 1 2 3 4 5

9). Nose 0 1 2 3 4 5

10). Lips 0 1 2 3 4 5

11). Mouth 0 1 2 3 4 5

12). Teeth 0 1 2 3 4 5

13). Ears 0 1 2 3 4 5

14). Neck 0 1 2 3 4 5

15). Chin 0 1 2 3 4 5

16). Moustache 0 1 2 3 4 5

17). Beard 0 1 2 3 4 5

18). Hairs 0 1 2 3 4 5

19). Shoulders 0 1 2 3 4 5

20). Arms 0 1 2 3 4 5

21). Hands 0 1 2 3 4 5

22). Chest 0 1 2 3 4 5

23). Breasts 0 1 2 3 4 5

24). Stomach 0 1 2 3 4 5

25). Abdomen 0 1 2 3 4 5

26). Genitals 0 1 2 3 4 5

27). Buttocks 0 1 2 3 4 5

28). Hips 0 1 2 3 4 5

29). Thighs 0 1 2 3 4 5

30). Knees 0 1 2 3 4 5

31). Legs 0 1 2 3 4 5

32). Ankles 0 1 2 3 4 5

33). Feet 0 1 2 3 4 5

34). Odour 0 1 2 3 4 5

35). Noises 0 1 2 3 4 5

36). Sweat 0 1 2 3 4 5

37). Blushing 0 1 2 3 4 5

Appendix B: Multidimensional Jealousy Scale

Instructions:
Please think of a person with whom you are having or have had a strong romantic/love relationship. This person is referred to as X in this questionnaire. Please rate your response to the following questions by circling the appropriate number beside each item.

Cognitive:
How often do you have the following thoughts about X?

Rating Scale

All the time   Never

1.) I suspect that X is secretly seeing someone of the opposite sex.   1   2   3   4   5   6   7

2.) I am worried that some member of the opposite sex may be   1   2   3   4   5   6   7

     chasing after X.

3.) I suspect that X may be attracted to someone else.   1   2   3   4   5   6   7

4.) I suspect that X may be physically intimate with   1   2   3   4   5   6   7

     another member of the opposite sex behind my back.

5.) I think that some members of the opposite   1   2   3   4   5   6   7

     sex be romantically interested in X.

6.) I am worried that someone of the opposite   1   2   3   4   5   6   7

     sex is trying to seduce X.

7.) I think that X is secretly developing an intimate   1   2   3   4   5   6   7

     relationship with someone of the opposite sex.

8.) I suspect that X is crazy about members of the opposite sex.   1   2   3   4   5   6   7

Emotional:

How would you emotionally react to the following situations?

Rating Scale

Very Pleased   Very Upset

1.) X comments to you on how great
looking a particular member of the opposite   1   2   3   4   5   6   7
sex is.

2). X shows a great deal of interest or
excitement in talking to someone of   1   2   3   4   5   6   7
the opposite sex.

3). X smiles in a very friendly manner to someone of   1   2   3   4   5   6   7
the opposite sex.

4). A member of the opposite sex is trying to   1   2   3   4   5   6   7
get close to X all the time.

5). X is flirting with someone of the opposite   1   2   3   4   5   6   7
sex.

6). Someone of the opposite sex is dating X.   1   2   3   4   5   6   7

7). X hugs and kisses someone of the opposite sex.   1   2   3   4   5   6   7

8). X works very closely with a member of the opposite   1   2   3   4   5   6   7
sex (in school or office)

Behavioral:

How often do you engage in the following behaviors?

	Never					Always	
1). I look through X's drawers, handbag, or pockets.	1	2	3	4	5	6	7
2). I call X unexpectedly, just to see if s/he is there.	1	2	3	4	5	6	7
3). I question X about previous or present romantic relationships.	1	2	3	4	5	6	7
4). I say something nasty about someone of the opposite sex if X shows an interest in that person.	1	2	3	4	5	6	7
5). I question X about his/her telephone calls.	1	2	3	4	5	6	7
6). I question X about his/her whereabouts.	1	2	3	4	5	6	7
7). I join in whenever I see X talking to a member of the opposite sex.	1	2	3	4	5	6	7
8). I pay X a surprise visit just to see who is with him/her	1	2	3	4	5	6	7

Appendix C: Commitment Scale

My Goals for the Future of our Relationship

<u>Instructions:</u>
To what extent does each of the following statements describe your feelings regarding your relationship? Please use the following scale to record an answer for each statement listed below.

Response Scale:

0	1	2	3	4	5	6	7	8

Do Not Agree   Agree   Agree
At All   Somewhat   Completely

<u>Response</u>

1)   I will do everything I can to make our relationship last for the rest of our lives.

2)   I feel completely attached to my partner and our relationship.

3)   I often talk to my partner about what things will be like when we are very old.

4)   I feel really awful when things are not going well in our relationship.

5)   I am completely committed to maintaining our relationship.

6)   I frequently imagine life with my partner in the distant future.

7)   When I make plans about future events in life, I carefully consider the impact of my decisions on our relationship.

8)   I spend a lot of time thinking about the future of our relationship.

9)   I feel really terrible when things are not going well for my partner.

10) I want our relationship to last forever.

11) There is no chance at all that I would ever become romantically involved with another person.

12) I am oriented toward the long-term future of our relationship (for example, I imagine life with my partner decades from now).

13) My partner is more important to me than anyone else in life – more important than my parents, friends, etc.

14) I intend to do everything humanly possible to make our relationship persist.

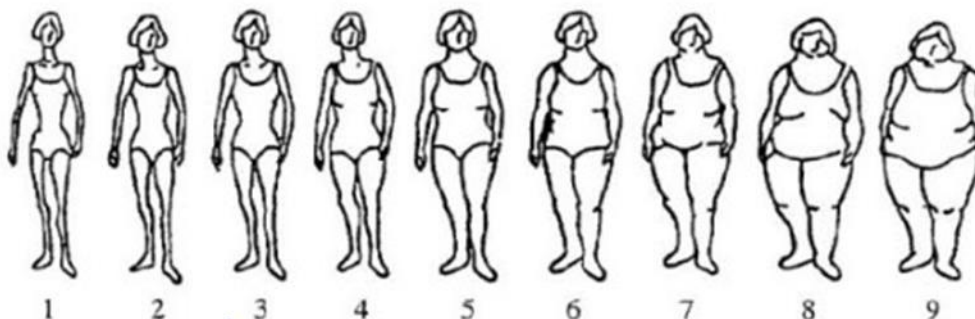15) If our relationship were ever to end, I would feel that my life was destroyed.

Appendix D: Perceived Rivals Measure

1 2 3 4 5 6 7 8 9
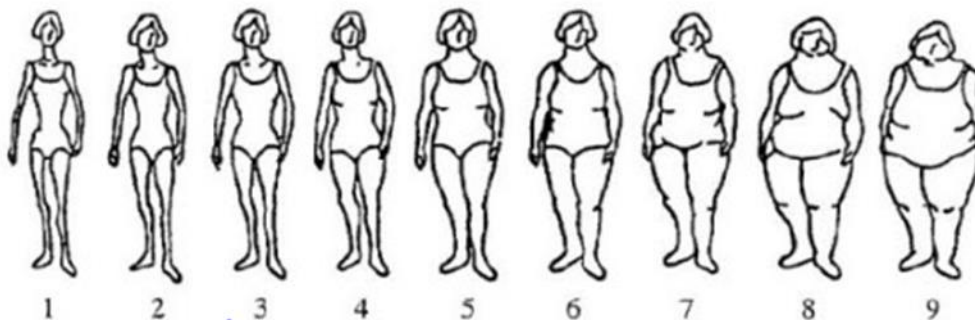
1.) Looking at the image above, circle which figure represents you best.

1 2 3 4 5 6 7 8 9
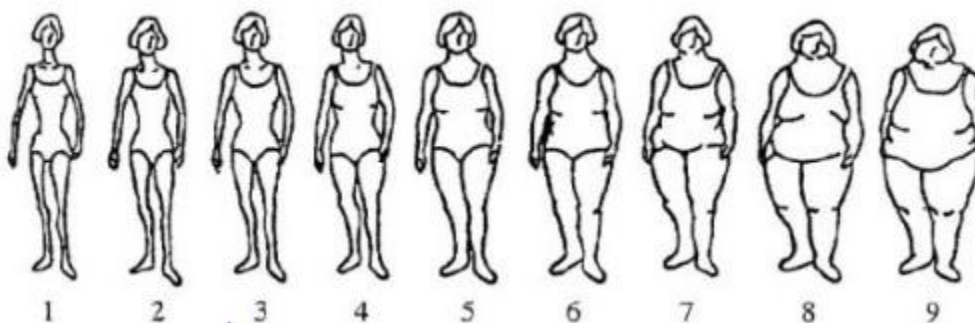
2.) Looking at the image above, circle which figure is your ideal body type.

1 2 3 4 5 6 7 8 9

3.) Looking at the image above, which figure(s) do you think your significant other would find attractive (list all that apply)? CIRCLE ALL THAT APPLY

4.) Imagine that your significant other were in a room with 100 other random women, how many of those women do you think your significant other would find physically attractive?

5.) Now, please think about your significant other's social network. For each of the categories below, please list the initials of all of the people that your significant other finds physically attractive. (List as many as you can think of – if you do not know their full initials, do the best you can.)

A: Close Friends

B: Associates and Colleagues (e.g., classmates, co-workers, friends of friends)

C: Other (e.g., celebrities)

Appendix E: Big Five Inventory - 10

Instructions: How well do the following statements describe your personality?

I see myself as someone who…

Disagree Strongly (1) Disagree A Little (2) Neither Agree Nor Disagree (3) Agree A Little (4) Agree Strongly (5)

…is reserved ___

…is generally trusting ___

…tends to be lazy ___

…is relaxed, handles stress well ___

…has few artistic interests ___

…is outgoing, sociable ___

…tends to find fault with others ___

…does a thorough job ___

…gets nervous easily ___

…has an active imagination ___

Appendix F: Narcissism Personality Inventory- 16

Instructions: Read each pair of statements below and place an "X" by the one that comes closest to describing your feelings and beliefs about yourself. You may feel that neither statement describes you well, but pick the one that comes closest. **Please complete all pairs.**

1. ___ I really like to be the center of attention.
   ___ It makes me uncomfortable to be the center of attention.

2. ___ I am no better or worse than most people.
   ___ I think I am a special person.

3. ___ Everybody likes to hear my stories.
   ___ Sometimes I tell good stories.

4. ___ I usually get the respect that I deserve.
   ___ I insist upon getting the respect that is due me.

5. ___ I don't mind following orders.
   ___ I like having authority over people.

6. ___ I am going to be a great person.
   ___ I hope I am going to be successful.

7. ___ People sometimes believe what I tell them.
   ___ I can make anybody believe anything I want them to.

8. ___ I expect a great deal from other people.
   ___ I like to do things for other people.

9. ___ I like to be the center of attention.
   ___ I prefer to blend in with the crowd.

10. ___ I am much like everybody else.
    ___ I am an extraordinary person.

11. ___ I always know what I am doing.
    ___ Sometimes I am not sure of what I am doing.

12. ___ I don't like it when I find myself manipulating people.
    ___ I find it easy to manipulate people.

13. ___ Being an authority doesn't mean that much to me.
    ___ People always seem to recognize my authority.

14. ___ I know that I am good because everybody keeps telling me so.
___ When people compliment me I sometimes get embarrassed.

15. ___ I try not to be a show off.
___ I am apt to show off if I get the chance.

16. ___ I am more capable than other people.
___ There is a lot that I can learn from other people.

Appendix G: Texas Social Behavioral Inventory- 16

Please use the following scale to record an answer for each statement listed below.

A- Not at all characteristic of me
B- Not very
C- Slightly
D- Fairly
E- Very much characteristic of me

1. I am not likely to speak to people until they speak to me.
2. I would describe myself as self-confident.
3. I feel confident of my appearance.
4. I am a good mixer.
5. When in a group of people, I have trouble thinking of the right things to say.
6. When in a group of people, I usually do what others want rather than make suggestions.
7. When I am in disagreement with other people, my opinion usually prevails.
8. I would describe myself as one who attempts to master situations.
9. Other people look up to me.
10. I enjoy social gatherings just to be with people.
11. I make a point of looking other people in the eye.
12. I cannot seem to get others to notice me.
13. I would rather not have very much responsibility for other people.
14. I feel comfortable being approached by someone in a position of authority.
15. I would describe myself as indecisive.
16. I have no doubts about my social competence.

Appendix H: Demographics Questionnaire

Please answer the following questions.

What is your age?
How do you prefer to identify your gender?
What is your sex assigned at birth?
How do you prefer to identify your sexual orientation?
What is your ethnicity/race?

What is your current weight?
What is your current height?
Are you currently over the weight recommended by your doctor?   Yes   No   Maybe
If you answered no, have you ever been over the weight recommended by your doctor?
        Yes   No   Maybe
Are you currently under the weight recommended by a doctor?   Yes   No   Maybe
If you answered no, have you ever been under the weight recommended by your doctor?
        Yes   No   Maybe

Have you ever used dieting methods in order to control your weight?
Approximately how often do you exercise?
___Never
___ Once or twice a year
___ About once a month
___ About once a week
___ Multiple times a week
___ Daily
___ Multiple times a day
What is your current relationship status?
____Single/Dating Casually _____ Dating Regularly   ___Dating Exclusively
(Committed)
____Engaged   ___Married/Civil Union

How long (in months) have you been in your current relationship? _____

Appendix I: Institutional Review Board Approval Letter

TO: Jana Hackathorn
    Psychology

FROM: Institutional Review Board
        Jonathan Baskin, IRB Coordinator

DATE: 3/6/2017

RE: Human Subjects Protocol I.D. – IRB # 17-121

The IRB has completed its review of your student's Level 1 protocol entitled Personal Factors in Relationships. After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

The forms and materials that have been approved for use in this research study are attached to the email containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB Procedures and Guidelines section 20.3. Your stated data collection period is from 3/6/2017 to 5/1/2017. If data collection extends beyond this period, please submit an Amendment to an Approved Protocol form detailing the new data collection period and the reason for the change.

This Level 1 approval is valid until 3/5/2018. If data collection and analysis extends beyond this date, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 3/5/2018. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/irb). You must allow ample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB review so that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a timely manner.

The protocol is approved. You may begin data collection now.