Social Connectedness and Eating Disorder Symptomatology

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Social Connectedness and Eating Disorder Symptomatology

An honors thesis presented to the 
Department of Psychology, 
University at Albany, State University of New York 
in partial fulfillment of the requirements 
for graduation with Honors in Psychology 
and 
graduation from The Honors College

Nicole Nunez

Research Mentor: Christina Scharmer
Research Advisor: Drew Anderson, Ph.D.

March, 2019
Abstract

Eating disorders are a well-known and well-documented issue with known deleterious effects on one’s health. Because of this fact, it is important to identify protective factors against the development and/or maintenance of eating disorders. Social support has been identified as a factor that can play a role in recovery from eating disorders. While the importance of social support has been broadly examined in research, social connectedness specifically has been explored less explicitly. Social connectedness involves feelings of belonging, identification with others, and healthy social interaction. This study sought to assess the role of social connectedness in eating disorder symptomatology. We hypothesized that those with healthy levels of social connectedness are less likely to display symptoms. In testing this hypothesis we sought to be mindful of gender disparities in research on eating disorders. Oftentimes, the targets of research on eating disorders are women. While women are often affected by these disorders, it is important not to exclude an entire other group of individuals who are also susceptible to developing some kind of eating pathology. Men are more often affected than the public would think, due to lack of identification of an eating disorder or societal expectations. The current study aims to explore the link between social connectedness and eating disorders, with specific attention to gender.

Keywords: eating disorders, social connectedness, social support, gender
Acknowledgements

Firstly, I would like to acknowledge and thank Dr. Drew Anderson and the graduate students in his lab that assisted me throughout the entirety of my thesis. It was an honor to have been able to be a part of this lab for so long and learn so many new things along the way. It is because of the time I spent in this lab that I know what particular subject in psychology I would like to pursue as a career.

Next, I would like to specifically thank the graduate student that I spent most of my two and a half years in Dr. Anderson’s lab working with, Christina Scharmer. Christina has been an incredible inspiration to me and she has always held me to high standards which I believe ultimately helped me become a better student and research assistant. I started off in this lab nervous because I had never been involved in research before then, but it is because of the experiences I gained under Christina’s guidance that I am now able to confidently pursue research opportunities and feel as if I have a strong understanding of what is expected of me.

I would also like to thank Dr. Laurie Feldman and Dr. Julia Hormes for providing me and the rest of the honors students the necessary tools in order to create our theses, and for being reliable advisors throughout the process. They were vital for helping all of us create a sturdy thesis by providing necessary and constructive feedback and helping to clarify issues that came up along the way.

Finally, I would like to thank my family and friends who have been integral in my ability to persevere throughout all of the good and bad times of these past four years of university.
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Introduction

Eating Disorders

Eating disorders are known to be hazardous to one’s physical and mental health. For example, in terms of physical consequences, anorexia and bulimia can cause issues with hair and nails, vomiting from bulimia can damage the lining of the esophagus and cause dental issues. Individuals between the ages of 15 and 24 with eating disorders are significantly more likely to die from consequences related to their eating disorder than peers of the same age who do not experience eating pathology (Smink, Hoeken, & Hoek, 2012). Individuals with eating disorders are also likely to display comorbid issues of mental health, such as issues of anxiety, both before and after the onset of the eating disorder itself (Swinborne, Hunt, Abbott, Russell, St. Clare, & Touyz, 2012). College-age individuals are often more at risk for developing eating disorders, so it has become of great interest that we find ways to prevent eating disorders and to identify protective factors against their development.

Social Support and Eating Disorders

One factor that has been identified as being generally protective against the persistence of eating disorders is social support. Social support is one’s perception or the actual care provided by the a partner, community, or social network (Lin, Dean, & Ensel, 1986). It seems intuitive that this would help those struggling with, or recovering from eating disorders. Indeed, perceptions of social support have implications for individuals with eating disorders. This notion is supported by a 2012 study recording the perceptions of social support among women who recovered from eating disorders. This study consisted of twenty-two adult women from ages 25 to 35. The participants in this study reported that the recovery process was largely influenced by the sense of connection and support the individual felt within themselves, within their family and
friend groups, and within the patient-practitioner relationship (Linville, Brown, Sturm, & McDougal, 2012). Satisfaction with social support has also been shown to play a role in the display of eating disorder symptomatology. Females who are more satisfied with the form of social support they are receiving, say familial, peer, informative, emotional, etc., are less likely to display high levels of eating disorder symptoms (Limbert, 2010). Also, a study carried out in 2009 focused on the different dimensions of social support and their relation to patients with eating disorders. The participants for this study included 98 women diagnosed with eating disorders, ranging from ages 12 to 34 years. Of these women, 61.2% were diagnosed with anorexia nervosa and 27.6% were diagnosed with bulimia. 11.2% of the women had an unspecified eating disorder. This study found that the dimensions of social support (informative support, emotional support, and practical support) had a positive relationship with self-concept, and family self-concept in particular. Self-concept is one’s perception and evaluation of oneself, in this case, in a specific context. This study is of particular interest to the current study, as it suggests that one’s idea of oneself within a certain context plays an important role in the display of eating pathology and treads into the territory of social connectedness (Marcos & Cantero, 2009).

Social Connectedness and Eating Disorders

Social connectedness is a similar concept to social support. Social connectedness is related to feelings of affiliation and identification with other individuals, even outside of family and friends, or those who are akin to the individual (Lee & Robbins, 1995). A 2008 study consisting of 126 adults between the ages of 65 to 85 from an Ohio community found that social connectedness in older adults was shown to have a greater effect on health than feelings of social support. The participants had to map out their social network and answer questions regarding the
individual’s perceived availability of social support, as well as report their health status (Ashida & Heaney, 2008). While these health outcomes don’t necessarily involve eating disorders, this information is interesting because social support, and less so specifically connectedness, has been shown to serve a generally effective factor against severe eating disorder symptomatology. May an individual’s perception of social connectedness also have a role in an individual’s display of eating disorder symptoms?

Patients with and without eating disorders were interviewed on their feelings and experiences of loneliness, shyness, and feelings of inferiority in their childhood and adolescence (Troop & Bifulco, 2002). Women who had bulimia nervosa reported experiencing slightly greater levels of shyness in adolescence than non-eating disordered women. Those who had anorexia nervosa of the binge/purge subtype reported experiencing far greater levels of perceived inferiority, loneliness, and shyness than women without eating disorders. The differences in feelings were not apparent in childhood, but rather during adolescence, indicating a potentially critical period for the development of adequate social connection and integration (Troop & Bifulco, 2002). A 2018 study found that social difficulties have also been noted to predate eating disorders in a study on social difficulties as risk and maintaining factors in anorexia. The symptoms that played the biggest role for this particular study were involuntary submissiveness and fear of negative evaluation. The relationships between these factors and eating disorder symptoms were partially mediated by the perception of a lack of social competence (Cardi, Mallorqui-Bague, Albano, & Monteleone, 2018). All together, these data indicate an important role of properly socially integrating and connecting with other individuals in preventing the onset of eating disorders. The current study focuses on social connectedness as a factor related to the display of eating disorder symptoms.
Males and Eating Disorders

Eating disorders and related symptoms such as body dissatisfaction are concepts often looked for and at within women. For many, eating disorders are a “woman’s disease.” In fact, men are certainly not immune to eating disorders. It is estimated that 40% of individuals with binge eating disorder are male (Westerberg & Waitz, 2013). Men have been shown to be less affected by the perception of social support than women with regard to eating disorder symptomatology, which some speculate is due to a lack of self-disclosure about eating disorders related to societal expectations of the behaviors of men (Matud. Ibáñez, Bethencourt, Marrero, & Carballeira, 2003). In a qualitative interview study performed among 39 men and women with eating disorders in the United Kingdom, 10 men were interviewed regarding how they recognize eating disorder symptoms and their help-seeking behaviors, as well as their initial experience of receiving primary care. The men displayed less help-seeking than the women did, particularly with regard to help-seeking in cases of eating disorders. Men reported that this was related to the characterization, as mentioned earlier, of eating disorders as being primarily linked to women. This characterization can lead to the ignoring of eating disorder symptoms in men by peers and by the individual displaying detrimental eating behaviors. They also noted a lack of resources for men to turn to when they are the ones being affected, as much of the literature regarding eating disorders is catered more towards women (Räisänen & Hunt, 2014). Recently, literature within the eating disorders field has begun to pay more attention to how men may be affected.

The current study aims to observe the relationship between perceptions of social connectedness with eating disorder symptomatology, with attention to gender. We hypothesize that individuals who report greater levels of social connectedness would display lesser symptoms
of eating pathology. We also predicted that the association between social connectedness and eating disorder symptoms would be weaker in men than women.

**Methods**

**Participants**

Students enrolled in psychology classes at the University at Albany, SUNY (n=617; 390 females, 227 males). All participants were 18 years or older, with a mean age of 18.74 and a standard deviation of 1.512. Point 2 percent of individuals were American Indian or Alaska Native. 12.7% were Asian, 23.9% were of Black or African American, 13.8% were Hispanic or Latino, 44.7% were White/Caucasian, .5% did not disclose their race, and 3.8% reported being “other.” Students signed up through the University at Albany’s psychology research pool for course credit in exchange for time spent participating in the study. The mean Body Mass Index (BMI) score was 24.6601, with a standard deviation of 4.97943.

**Procedure**

All student participants signed up using the SONA systems through the University at Albany research pool. All participants then read provided informed consent and completed the study questionnaire. After the questionnaire was complete, the undergraduate research assistant recorded each participant’s height and weight for accuracy. All participants were given one and one half credits toward their psychology course for completing the survey.

**Measures**

**Social Connectedness Scale.** The Social Connectedness Scale is a self-report scale developed by Lee and Robbins (1995) which measures the level of interpersonal closeness individuals experience in their respective social world, along with the perceived difficulty of the maintenance of such relationships. It is an 20 item Likert scale ranging from 1 (strongly
disagree) to 6 (strongly agree). Sample items from this scale include “Even among my friends, there is no sense of brother/sisterhood,” “I don’t feel I participate with anyone or any groups,” and “I feel disconnected from the world around me.” Negatively worded items are reverse coded. The items are summed together, with a higher score indicating greater perceptions of social connectedness.

**Eating Disorder Examination Questionnaire.** The EDE-Q is a 28 item self-report questionnaire (© 2008 by Christopher G. Fairburn and Sarah Beglin) meant to assess the attitudes and behaviors associated with eating disorders so as to gauge their range and severity. Items are rated on a Likert scale ranging from 0 to 6, with 0 indicating no days, 1=1–5 days, 2=6–12 days, 3=13–15 days, 4=16–22 days, 5=23–27 days and 6= every day. Higher scores on this questionnaire indicate greater severity. This measure yields a Global score and four subscales measuring Restraint, Eating Concern, Weight Concern, and Shape Concern. Samples items from this scale include: “Have you had a definite desire to have a totally flat stomach?” and “Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?”

**Results**

Correlations between social connectedness, BMI, and eating disorder symptomatology were calculated for the total sample on both the Social Connectedness and the Eating Disorder Examination Questionnaire. A higher score on the social connectedness scale indicated greater perceptions of connectedness, and a higher score on the Eating Disorder Examination Questionnaire indicated greater eating disorder symptomatology. The results of this analysis indicate that there was, indeed, a negative correlation between social connectedness and eating disorder symptomatology for both males and females (Table 1). EDE-Q scores are negatively
correlated with SCS score. EDE-Q is positively correlated with BMI and dichotomized sex. There was a significant difference in the variances between males and females (Table 2). There was a significant difference in EDE-Q scores, with females showing higher EDE-Q scores (Table 2). There was no significant difference in scores of social connectedness (Table 2). Regression analysis (Tables 3, 4) showed that one-unit increase in social connectedness was associated with a decrease of -.059 on EDE-Q score. Linear regression analyses, controlling for BMI and gender, examined the association between social connectedness and eating disorder pathology. The final model including SCS did not account for significantly more variance in EDE-Q global score ($\Delta R^2 = .052$, $F (1,599) = 39.180$, $p = .000$. However, within the final model ($R^2 = .201$, $F (3,599) = 50.219$, $p = .000$), SCS total was negatively associated with EDE-Q global score (Table 5).
Table 1

<table>
<thead>
<tr>
<th>Correlations</th>
<th>EDEQ Global Score</th>
<th>BMI</th>
<th>Dichotomized Sex</th>
<th>SCS total</th>
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<tbody>
<tr>
<td>Pearson Correlation</td>
<td>EDEQ score</td>
<td>.253</td>
<td>.276</td>
<td>-.247</td>
</tr>
<tr>
<td></td>
<td>BMI</td>
<td>1.000</td>
<td>-.057</td>
<td>-.018</td>
</tr>
<tr>
<td></td>
<td>Dichotomized Sex</td>
<td>-.57</td>
<td>1.000</td>
<td>-.046</td>
</tr>
<tr>
<td></td>
<td>SCS total</td>
<td>-.247</td>
<td>-.018</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>EDEQ score</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>BMI</td>
<td>.000</td>
<td>.081</td>
<td>.328</td>
</tr>
<tr>
<td></td>
<td>Dichotomized Sex</td>
<td>.000</td>
<td>.081</td>
<td>.132</td>
</tr>
<tr>
<td></td>
<td>SCS total</td>
<td>.000</td>
<td>.328</td>
<td>.132</td>
</tr>
<tr>
<td>N</td>
<td>EDEQ score</td>
<td>603</td>
<td>603</td>
<td>603</td>
</tr>
<tr>
<td></td>
<td>BMI</td>
<td>603</td>
<td>603</td>
<td>603</td>
</tr>
<tr>
<td></td>
<td>Dichotomized Sex</td>
<td>603</td>
<td>603</td>
<td>603</td>
</tr>
<tr>
<td></td>
<td>SCS total</td>
<td>603</td>
<td>603</td>
<td>603</td>
</tr>
</tbody>
</table>

*Note.* EDEQ here indicates the Eating Disorder Examination Questionnaire. BMI is calculated by \((\text{Weight(lbs)/Height(inches)})^2*703\). SCS indicated Social Connected Scale.
Table 2

*Levene’s Test for Equality of Variances and t-test for Equality of Means*

<table>
<thead>
<tr>
<th>Test for Equality of Variance</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( F )</td>
</tr>
<tr>
<td>EDEQ global score</td>
<td>Equal Variances Assumed</td>
</tr>
<tr>
<td></td>
<td>Equal Variances not assumed</td>
</tr>
<tr>
<td>SCS total score</td>
<td>Equal Variances Assumed</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>

Table 3

*Model Summary of Regression*

<table>
<thead>
<tr>
<th>Model</th>
<th>( R \text{ Square} )</th>
<th>( \Delta R^2 )</th>
<th>( F \text{ Change} )</th>
<th>( \text{df1} )</th>
<th>( \text{df2} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.149</td>
<td>.149</td>
<td>52.404</td>
<td>2</td>
<td>600</td>
</tr>
<tr>
<td>2</td>
<td>.201</td>
<td>.052</td>
<td>39.180</td>
<td>1</td>
<td>599</td>
</tr>
</tbody>
</table>
### Table 4

**Analysis of Variance**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>12.555</td>
<td>2</td>
<td>6.277</td>
<td>52.404</td>
<td>.000&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>71.873</td>
<td>600</td>
<td>.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>84.428</td>
<td>602</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Regression</td>
<td>16.967</td>
<td>3</td>
<td>5.656</td>
<td>50.219</td>
<td>.000&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>67.460</td>
<td>599</td>
<td>.113</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>84.428</td>
<td>602</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5

*Regression Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient B</th>
<th>SE</th>
<th>Beta</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig.</th>
<th>95% Confidence Interval for B</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>.914</td>
<td>.075</td>
<td></td>
<td></td>
<td>12.190</td>
<td>.000</td>
<td>.767</td>
<td>1.062</td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>.020</td>
<td>.003</td>
<td>.270</td>
<td></td>
<td>7.144</td>
<td>.000</td>
<td>.015</td>
<td>.026</td>
<td></td>
</tr>
<tr>
<td>Dichotomized Sex</td>
<td>.225</td>
<td>.029</td>
<td>.292</td>
<td></td>
<td>7.728</td>
<td>.000</td>
<td>.168</td>
<td>.283</td>
<td></td>
</tr>
<tr>
<td>2 (Constant)</td>
<td>1.185</td>
<td>.085</td>
<td></td>
<td></td>
<td>14.004</td>
<td>.000</td>
<td>1.019</td>
<td>1.352</td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>.020</td>
<td>.003</td>
<td>.265</td>
<td></td>
<td>7.236</td>
<td>.000</td>
<td>.015</td>
<td>.025</td>
<td></td>
</tr>
<tr>
<td>Dichotomized Sex</td>
<td>.217</td>
<td>.028</td>
<td>.281</td>
<td></td>
<td>7.669</td>
<td>.000</td>
<td>.162</td>
<td>.273</td>
<td></td>
</tr>
<tr>
<td>SCS total</td>
<td>-.059</td>
<td>.009</td>
<td>-.229</td>
<td></td>
<td>-6.259</td>
<td>.000</td>
<td>-.077</td>
<td>-.040</td>
<td></td>
</tr>
</tbody>
</table>

**Discussion:**

In this study, we looked at perceptions of social connectedness and reported eating thoughts and behaviors suggestive of the presence of eating disorder symptomatology. Social connectedness was inversely correlated with levels of eating disorder symptoms, such that greater sense of connection was associated with fewer eating disorder symptoms. We found that females showed a stronger relationship between scores on the Social Connectedness Scale and the Eating Disorder Examination Questionnaire.

The finding of a significant association between social connectedness and eating disorder symptoms contributes to previously conducted research on the role of social connections in eating disorders (Troop & Bifulco, 2002). Differences in effect size between males and females may be related to differences in what contributes to one’s perception of social connected. Men’s
sense of social connectedness is built around ideas of reassurance of worth, whereas women’s sense of connectedness is built upon relationships that entail intimacy and physical proximity (Lee & Robbins, 2000). Given what we know about how perception of social support and eating disorders interact, we speculate that because of the emphasis on physical proximity and intimacy on the part of women to feel connected to an individual, their connections may be stronger, thus leading to a larger effect size for women.

The results of this study may have implications for future research and future investigations into factors that play a protective role against eating disorders. Promoting social integration early on may help in protecting an individual against the development of a clinical eating disorder. Being aware of social connectedness as a factor in eating disorders may also assist practitioners in tackling eating disorders at multiple levels. For example, social anxiety is inherently and by definition going to interrupt development of proper social connections. If practitioners work through and treat issues of social anxiety, this may help in the prevention of the onset of a clinical eating disorder. It is important, as well, that future research experiment identify moderators of the relationship between connectedness and pathological eating thoughts and behaviors. Being able to identify potential moderators may provide other insights into the development of eating pathologies, such as what factors help or hurt the relationship between social connectedness and the display of eating disorder symptoms and give way to knowledge that may assist in treatments moving forward.

There are limitations to this study. One of the first and major limitations is that this study is correlational in nature. That is, no causality can truly be assigned, which means that we cannot make the claim that high levels of social connectedness lead to or cause fewer eating disorder symptoms. Another limitation is the fact that this study is based exclusively on self-report. Many
issues exist with self-report. To provide some examples of potential issues, individuals may have more or less figured out what the study was about and answered accordingly, or they may have answered differently due to some desire to look good in the eyes of the experimenters despite the anonymity of the data. As researchers, we have limited insight into the validity of participant responses. Additionally, due to limited resources, this study relied on the Eating Disorder Examination Questionnaire and while this measure is valid and widely used in eating disorder research, a potentially more effective way of determining eating disorder range and severity may have been through the conduction of clinical interviews by a trained psychologist. This study was unable to look forward or backward longitudinally in order to determine whether or not the discovered relationship between connectedness and eating disorder symptomatology is maintained over time. The findings of this study indicate that social connectedness may have potential to be a protective factor against the development of eating disorder pathology. This is important as it gives way for another potential preventative method against eating disorders.
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