

The Relationship between Loneliness and Self-esteem for Adolescents

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## **Abstract**

The purpose of this study was to investigate patterns in the relationship between loneliness and self-esteem among young adults. Previous research found that both boys and girls are lonely, males slightly more, but overall, romantic loneliness may be the most prominent. We hypothesized that loneliness differed by gender, loneliness type, and the interaction between gender and loneliness. We also hypothesized a negative relationship between total loneliness and self-esteem for all, and for men and women separately. Sixty-three students were assessed using the Differential Loneliness Scale (DLS) and the Rosenberg Self-Esteem Scale (RSE) to obtain scores on multiple types of loneliness and self-esteem. Although we found no correlation between loneliness and self-esteem, we found that boys are lonelier than girls. Yet both genders struggled most with romantic loneliness across all categories. Our data suggest that parents should create a safe space for conversations about romanticism more often, rather than shying away from it or disregarding its importance. Also, special attention should be paid to males, who generally have high levels of loneliness.

## **Adolescent Loneliness: Differences in Gender and Type**

Loneliness is a global issue that everyone faces at some point, but its impact may differ between men and women (1, 2, 3). A 2024 survey found that 20% of males reported feeling lonely all the time in the past 30 days. This represents a significant proportion of men, and a lack of awareness of this reality may affect self-esteem, self-efficacy, and other factors that predict a man's psychological and physical well-being (1, 4, 5, 3). The relevance of this study lies in the fact that people, especially men, often experience insecurities in their relationships, which can lead to a lack of companionship or dependence on romantic partners. In our study, we administered a survey to TNA boys and girls regarding different types of loneliness and evaluated their self-esteem. To better understand these patterns, it's important to break down research on loneliness into its different sections.

The types of loneliness may have differing impacts on a person's personal well-being. Mehrdad et al. examined the correlation among different loneliness domains and their effects on students' psychological well-being (1). One hundred and eighty-two university students aged 19 to 30 were evaluated using the Differential Loneliness Scale (DLS). They found that students aged between 19 and 26 years old were suffering from loneliness in romantic/sexual relationships more than in other types of their relationships. In addition, the results suggest that family loneliness is well-connected to overall personal well-being. Among the other forms of loneliness, the sense of loneliness among university students was mostly attributed to romantic relationships. This indicates that adolescents are more likely to seek romantic relationships as a major purpose in their lives. These findings are important to our current study because they suggest that romantic loneliness may be an important concept that could be different for males and females. Though this study did not compare genders, we will. Although loneliness affects various aspects of a person's life, a closely related factor is self-esteem.

Self-esteem is a developed sense of how one thinks and feels about oneself. One can have high or low self-esteem, and it is generally good to have high self-esteem, as it suggests confidence in one's abilities and value (6). This is linked to positive outcomes like good relationships, better academic achievement, high self-efficacy, and overall well-being. However, it's important to distinguish between egoism, a misguided sense of self, and positive self-appreciation, an internal belief in self-worth. According to the Rosenberg Self-Esteem Scale (RSE) (7), we can measure self-esteem by assessing how much someone agrees or disagrees with statements such as, "I feel that I'm a person of worth." In addition, research suggests people's self-esteem may vary due to the four subcategories of loneliness. Those are romantic/sexual relationships, friendships, family relationships, and relationships with the community. A participant being evaluated on the types of loneliness would answer true or false to statements from the Differential Loneliness scale (DLS) (8): For example, "I find it difficult to invite a friend to do something with me." In our study, we are interested in whether self-esteem is correlated with the four different types of loneliness among male and female adolescents. To further understand loneliness, we examine its impact on academic performance.

A consequence of loneliness may be how it shows up in academic performance. Ercegovic et al. examined the relationship between self-esteem, self-efficacy, family and life satisfaction, loneliness, and academic achievement during adolescence (5). The questionnaire was used to collect data from 483 students (ages ranged from 10 to 17). As a result of the interconnectedness of the variables in the study, higher academic and lower emotional self-efficacy are significant predictors of academic achievement. So developing firm self-efficacy beliefs (particularly in academics) is important for academic success. The researchers also investigated the relationships between loneliness and the other factors in the study. They found significant negative relationships between loneliness and life satisfaction, family satisfaction, self-esteem, academic self-efficacy, emotional self-efficacy, and social self-efficacy, but not academic performance. Our study aims to raise awareness among teenagers that loneliness is linked to lower self-esteem, reduced self-efficacy, family issues, and dissatisfaction with life, which may or may not impact a student's grades. Successful students may or may not be lonely.

Both men and women experience loneliness; contrary to popular belief, romantic relationships may not help or can even hinder this problem. Soni et al. examined the correlation between loneliness and romantic relationships among individuals who were in a relationship during the study, those who had been in a relationship at least once in their lives, and those who had never been in a romantic relationship (2). They found no differences in the scores of loneliness among people who were in a relationship during the study, had been in a relationship at least once in their life, and those who had never been in a romantic relationship. This suggests that romantic relationships don't have to be the only way for people to have companionship or address their loneliness.

Other research on romantic loneliness also suggests that relationships may not be the answer. Pereira et al. examined whether insecure attachment in romantic relationships, poor communication, and lower relationship satisfaction would be moderated by loneliness (4). They found that loneliness mediated the relationship between attachment and physical/psychological symptoms, showing that attachment and relationship satisfaction can contribute to physical and mental distress through loneliness. Being in the relationship did not reduce loneliness for the participants; instead, it hindered elements necessary for healthy relationships. These findings are important to our current study because they suggest that romantic relationships influence physical and psychological symptoms and may not improve a person's loneliness, and therefore might not impact their self-esteem when in a relationship.

Loneliness and isolation may be different for men and women depending on class, gender, and feelings of disconnection. Various data charts from The American Institute for Boys and Men portray the differences and similarities in the amount of close friends, time spent alone, and social and emotional support men and women experience (3). They found that men are more likely to express feelings of disconnection. Also, men are less satisfied with the number of friends they have compared to women. Yet, men and women experience similar amounts of loneliness overall, but younger men report feeling more lonely (25% vs. 18%). In relation to self-esteem, 34% of men don't share their true selves in relationships compared to women's 29%. However, it is significant to consider that men and women socialize differently; women more with family and friends, men more in group activities. Also, men tend to rely more on romantic relationships for support and friendship. Because of this, single men are uniquely in a position to feel lonelier, due to the challenges of romantic relationships. Based on these results, there's a need for spaces and opportunities for meaningful connection for men and women. This is valuable for our study because it acknowledges that loneliness and isolation are common among both genders, but the way men go about socialization puts them at risk for social distress.

Overall, the research suggests that loneliness harms personal well-being, self-esteem, and self-efficacy (5, 1, 4). Also, men and women might experience loneliness differently in romantic relationships (3). This study contributes to the question of whether men are actually lonelier than women, as most people would claim, or, as some research says, the myth may not be true, and men and women experience loneliness differently. This study will seek to replicate the findings about self-esteem and different types of loneliness for male and female adolescents. However, our study is different because it'll evaluate teenage students at The Neighborhood Academy, a private college-preparatory school.

Researchers suggest that there is a negative relationship between loneliness and self-esteem. We expect this to be true for all participants, and for men and women separately. This is because of common correlations people make between loneliness and self-esteem (5). Second, we anticipate that men have a higher average loneliness than women across all types of loneliness, including romantic loneliness. This is because, by nature, men are usually pursuers, suggesting that the majority of men may be less valuable or desirable to women, with the belief that they're wanted by most men they come across. (3). We also hypothesize that there are differences in loneliness by gender, loneliness type, and the interaction of gender and loneliness. This is because the way men and women tend to form connections is drastically different in intimacy. (3)

## Materials and Methods

A total of 63 high school students completed the survey, with 26 in 10th grade, 25 in 11th grade, and 12 in 12th grade. All participants were African American, composed of males (46%) and females (54%) of the 35 who reported gender. Twenty-eight students inadvertently or mistakenly did not report their gender in the first hypothesis

The participants were given surveys known as the Differential Loneliness Scale (DLS) and the Rosenberg Self-Esteem Scale (RSE) to get their scores on the specifics of their loneliness and self-esteem. Three questions were altered to remove the concept of marriage and spelling to aid the young participants in responding more accurately. The DLS consisted of 20 statements in total, and each participant responded true or false to the statements. To determine if someone falls into the four different categories of loneliness: romantic/sexual relationships (R/S), friendships (Fr), relationships with family (Fam), and relationships with larger groups (Gr) (D). Following the scoring conventions of the DLS, items with no asterisk next to the item number, each marking of "T" (TRUE) is given one point. For items with an asterisk, each marking of "F" (FALSE) is given one point (D). For example, relationship/sexual statements such as "I have a lover or spouse (boyfriend, girlfriend, husband, or wife) with whom I can discuss my important problems and worries." This question was originally marked with an asterisk, so a response of "False" would earn 1 point. Each type of loneliness is scored on a scale of 1 to 5 points, with higher scores indicating greater loneliness. The total loneliness score is calculated by adding all four types together, resulting in a score of 20.

The Rosenberg Self-Esteem Scale consisted of 10 statements that participants responded to with numbers ranging from 1 to 4. If one strongly agreed with the statement, they would write the number 1, 2 for agree, 3 for disagree, and 4 for strongly disagree. To score the participants, Low self-esteem responses are "disagree" or "strongly disagree" on items 1, 3, 4, 7, 10, and "strongly agree" or "agree" on items 2, 5, 6, 8, 9. An example statement participants responded to is "I certainly feel useless at times." Which is question 6, so if the participant strongly agreed, that would indicate that their personal self-esteem is low or negative. The final scores range from 10 to 40, with higher numbers meaning more self-esteem.

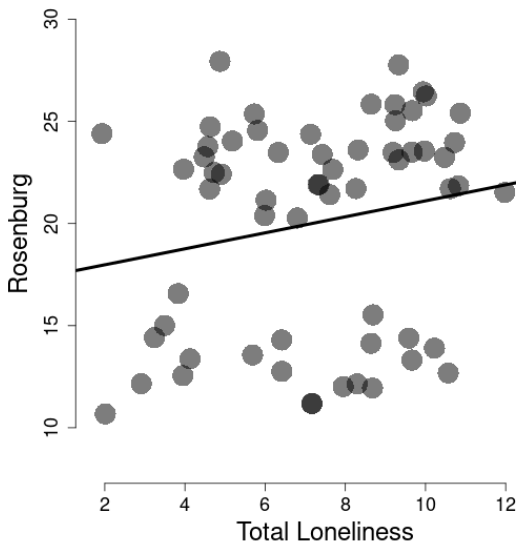
First, we emailed teachers and requested that they take 5 minutes at the beginning of their class time so their students could answer the survey questions. We explained to them and to the student participants that the surveys would assess their loneliness and self-esteem. Once completed, we scored each survey accurately based on its responses.

Relationships between self-esteem and loneliness were analyzed using a correlation coefficient r-test. Differences in loneliness type and gender were found using a two-way ANOVA test for correlated samples. Individual differences were identified using a Tukey HSD post hoc test. The abbreviations M and SD stand for mean and standard deviation, respectively. All tests were calculated using [vassarstats.net](http://vassarstats.net) with a 0.05 significance threshold.

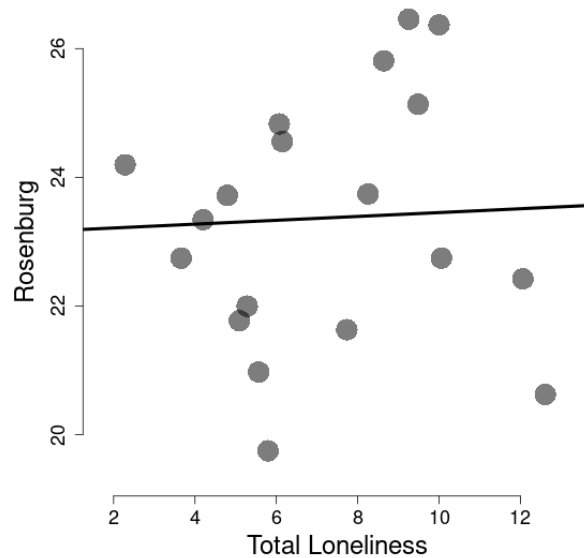
## Results

The purpose of our study was to investigate whether loneliness and self-esteem affect one another among teenagers. Also, we investigated the possibility of the different ways males and females experience loneliness. Sixty-three Neighborhood Academy students completed a survey measuring their total loneliness score, self-esteem, and individual scores for the four types of loneliness: romantic/sexual relationships (R/S), friendships (Fr), relationships with family (Fam), and relationships with larger groups (Gr).

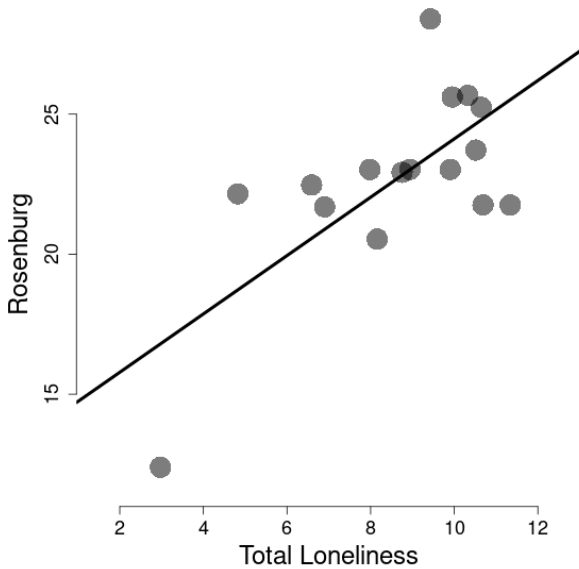
Our first hypothesis is that there is a negative relationship between total loneliness and self-esteem for all, and for men and women separately. For the self-esteem survey (RSE), students rated 10 statements on a scale from strongly agree to disagree strongly; total self-esteem scores ranged from 10 to 40 (higher scores indicate greater self-esteem). Amongst everyone in the study, a Pearson r-test found that there is no relationship between total loneliness and self-esteem ( $r = 0.19$ ,  $p = 0.06$ , Figure 1). The same is true for females only ( $r = 0.0474$ ,  $p = 0.42$ , Figure 1). For males only, the pattern continues: no significant relationship between loneliness and self-esteem ( $r = 0.36$ ,  $p = 0.08$ ; Figure 1). While the relationship for males was the strongest, it was not considered statistically significant.



**Figure 1. Relationship between Total Loneliness and Rosenberg Self-Esteem Score.**  
*No significant relationship ( $p=0.06$ ).*



**Figure 2. Relationship between Total Loneliness and Rosenberg Self-Esteem Score, Female Respondents Only.**  
*No significant relationship ( $p=0.42$ ).*

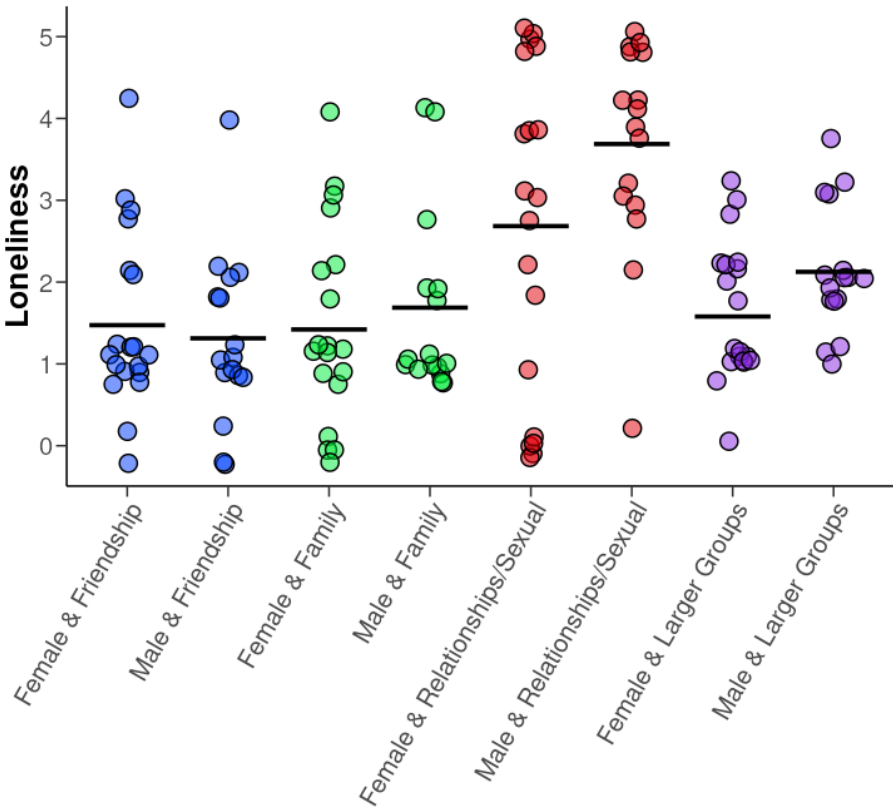


**Figure 3. Relationship between Total Loneliness and Rosenberg Self-Esteem Score, Male Respondents Only. No significant relationship ( $p=0.06$ ).**

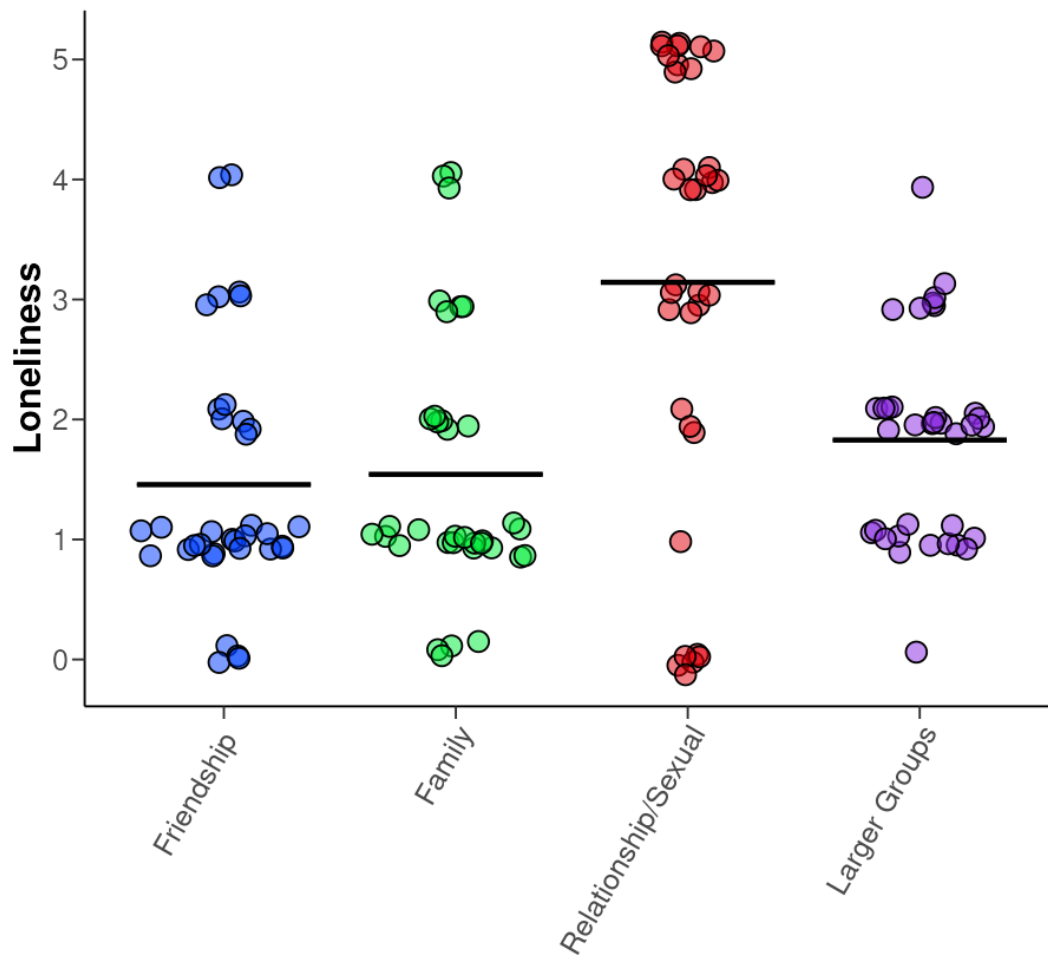
Our second hypothesis is that there are differences in loneliness by gender, loneliness type, and the interaction of gender and loneliness. Only 35 respondents reported their genders for this hypothesis, compared with 63 participants for the first hypothesis. A 2x4 analysis of variance for correlated samples was conducted on 19 females and 16 males who responded to the survey and provided their gender. There was a significant difference in total loneliness between males and females ( $F=4.5$ ,  $p=0.041$ , Table 1, marked with \*). In general, males report being lonelier more than females, regardless of type. For the loneliness type, regardless of gender, there was a significant difference ( $F=14.11$ ,  $p<0.0001$ ). A Tukey HSD post-hoc test found that romantic/sexual loneliness was higher than all of the other three types ( $p<0.05$ , Table 1, marked with ^). There was no interaction between loneliness type and gender ( $F=1.11$ ,  $p=0.35$ ). Among the eight subgroups of gender and loneliness, the differences between them were not significant.

	Friends	Family	Romantic/ Sexual	Larger Groups	Total	p-value
Females n=19	1.5 (1.1)	1.4 (1.2)	2.7 (2)	1.6 (0.8)	1.8 (1.4)*	0.049
Males n=16	1.4 (1.0)	1.7 (1.1)	3.7 (1.4)	2.1 (0.8)	2.2 (1.4)*	
Total	1.5 (1.0)	1.5 (1.1)	3.1 (1.8)^	1.8 (0.9)	2 (1.4)	
p-value	<0.0001					0.25

**Table 1. Average Loneliness by Gender and Type of Loneliness.**



**Figure 4. Differences in Gender and Loneliness Type.** There are differences in total loneliness for males and females ( $p=0.049$ ), loneliness type ( $p=p<0.0001$ ), but not the interaction between gender and type ( $p=0.25$ ).



**Figure 5. Differences in Loneliness Type.** *There are differences in total loneliness for males and females ( $p=0.049$ ), loneliness type ( $p<0.0001$ ), but not the interaction between gender and type ( $p=0.25$ ).*



## Discussion

Our first hypothesis is that there is a negative relationship between total loneliness and self-esteem for all, and for men and women separately. In this study, we determined that there is no relationship between loneliness and self-esteem. This was not supported because there was no relationship between total loneliness and self-esteem. In addition, there was no relationship between loneliness and self-esteem for males only and females only. (Figures 1, 2, and 3) Our second hypothesis examines differences in loneliness by gender, by type of loneliness, and by the interaction between gender and loneliness. We found a significant difference in total loneliness between males and females. This was supported by the finding that males reported being lonelier than females, regardless of type (Figure 6, Table 1). We also concluded that, regardless of gender, there was a significant difference in loneliness type. This was supported because romantic/sexual loneliness was higher than all of the other three types (Table 1, Figure 5). To complete the third leg of this hypothesis, we determined that there were no differences in the interaction between loneliness type and gender. This was supported because among the eight subgroups of gender and loneliness, the differences between them were not significant. (Figure 4, Table 1).

Our results are consistent with other studies by Bledsoe and Smith (F). They found that across men and women in general, loneliness is experienced similarly and is increasing among both genders. Particularly, young men are the loneliest. Also, young men often report more loneliness than young women. Our study is consistent regarding our results for young men and women; we found that TNA males are lonelier than females. These studies help strengthen the claim that, regardless of which type of loneliness, overall, males are lonelier than women. Additionally, the evolution of the majority of men and people in general must be taken into account. Most people go from school to the workforce, and as that transition happens, it's likely that they're surrounded by fewer people and fewer natural friendships form. So if there's a rise in loneliness amongst young people, it's reasonable to claim that loneliness is becoming even more of an issue, especially for men. It's worse for men because it is common for males to bond through organized programs, sports, and gaming. These are all things that fade away and become less accessible as men age; also, men are hit with more responsibilities as time goes on. The lack of deep connection with friends as a young man tends to be more prevalent in men's adulthood.

Our research is inconsistent with existing research on romantic loneliness. Soni et al. found that romantic relationships are harmless in relation to loneliness (2). Their results, when comparing people in a current relationship, people in a romantic relationship in the past, and people who have never been in a romantic relationship, were insignificant for young adults (2). However, we found that romantic relationships are the most prominent type of loneliness without asking the participants about their relationship statuses. Whether romantic loneliness happens because of a desire to be in a relationship, or feeling lonely while in a romantic poor relationship, our study suggests that romantic relationships are an important aspect of a teen's social well-being.

In our research on loneliness and self-esteem, we expect that higher loneliness correlates with lower self-esteem. This is because we assume that personal feelings and the perception of oneself will suffer when there's a lack of satisfaction with their social capital and relationships. Our study found unexpected results; there was no relationship between the two for males, females, or everyone combined. We suspect our results are due to a quirk in the way our participants understood the concept of self-esteem. There was a dramatic separation between the high and low ends of self-esteem on Figures 1-3, leaving a gap that makes finding a correlation difficult. Although we believe that there may be a correlation between the two concepts, in our study, people reported having only very high or very low self-esteem, making the measurement of the relationship difficult.

Our study experienced multiple limitations. Our main limitation was that not all gender options were reported by participants when completing their questionnaires. This limited our ability to include all of our participants in hypothesis two. Future researchers should look more into the romantic side of loneliness. Since romanticism seems to be a main priority in young adults' social lives, researchers should recruit participants who are in a romantic relationship, have never been in one, or have experienced a breakup. In addition, researchers can have participants rank the five main love languages to understand what young adults lack and appreciate in romantic relationships that may lead to loneliness. This more specific approach will influence the range of results for romantic loneliness. Also, identifying differences in results will bring to light potential reasons why romanticism is so important for young adults.

According to our research, men are lonelier than women, but both genders experience loneliness. Although men aren't lonelier than women in a specific category, romantic loneliness is the area of the most loneliness for both. We also found that total loneliness and self-esteem may not be as clear to young adults as most people think, but we still believe there is a correlation. We believe that parents should talk more often with their children about romanticism rather than shying away from it, and that young people should be encouraged to find value and excitement in something that can bring a similar passion to their lives as romantic relationships.

## Work Cited

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