An Investigation on the relationship between social media, social anxiety, self-esteem

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Abstract

Aims: This project sought to achieve greater knowledge of the relationship between self-esteem, social anxiety, and social media use. How an individual's social anxiety, social media use, and self-esteem could relate with one another were also examined. The study also examined how age and hours spent using social media each day could predict social media importance in an persons' life. **Method**: 68 participants completed questionnaires measuring social media use and importance, social anxiety, and self-esteem using the Liebowitz social anxiety scale (LSAS), the Rosenberg self-esteem scale, and the social media use integration scale (SMUIS). **Results:** Results from the tests determined that neither social anxiety nor self-esteem correlate with social media activity. High self-esteem did not relate with high social anxiety. Lower age correlated with greater activity on social media, and daily activity on social media was associated with use of social media. Time spent daily on social media predicted social media use to a level deemed statistically significant. **Conclusion:** Reults support the theory that lower self-esteem relates with high social anxiety. Interestingly, findings challenge the theory that excessive social media use increases social anxiety and lowers self-esteem. Findings have important implications regarding excessive social media use, and of how social media could become a necessity in a person's life.

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Introduction

Literature Review

Social anxiety disorder has been described as an intense and extreme level of fear of social interaction which increases the potential of causing an ever-growing number of difficulties in a person's life (Green, 2019). The disorder implies that people often feel a much higher degree of shyness and fear than what is defined as normal, and that it can have a long-lasting negative impact on a person's ability to socialise. This impact on the ability to socialise could lead to problems such as developing new friendships and involving themselves in new and unfamiliar situations (Butler, 2009; Greene, 2015). The inability to socialise refers to a person finding great difficulty in participating in social settings, and developing relationships with other people, with an almost equal effect found on both males and females (Greene, 2015). Research has found this statement to be consistent with findings, as an almost evenly gender split participant sample both displayed similar persistent feelings of fear and social anxiety following engagement in social settings (Bank et al., 2020; Barnett et al., 2021). Individuals living with social anxiety often unfavourably compare themselves to other people, believing that they are less valued or smaller compared to others, resulting in the lowering of their self-value or self-esteem (Alden, Biesanz, & Parsons, 2021). As engagement on social media platforms continues to grow globally, and become an increasing presence in modern civilization, the level of effect that social media could have on social anxiety and self-esteem is important to understand. Research has found that social media has increased an individual's vulnerability to socially anxious emotions and unstable control of their self-esteem (Alden, Biesanz, & Parsons, 2021; Goodman et al., 2021). Attention has been primarily given by studies on the effect social media can have on the mantal state of adolescents and younger adults, perhaps because of their position as the group with the

highest activity scores on social media, and the hours young adults spend on it each day (Rosie, Swirsky, & Xie, 2021; Crosby, Spitzer, & Witte, 2023). However, there is growing belief that older adults may also be at risk of developing negative health problems such as decreased self-esteem and social anxiety due to ageism and prejudice from adolescent and child social media users (Meisner, 2021). For these reasons, research is appropriate to look at the association between developing socially anxious emotions and lower self-esteem by using social networking sites, with a specific focus on adults. This review will examine social media, social anxiety, and self-esteem, with interest in adults, and how time spent on social websites each day could impact the aforementioned factors.

While there tends to be a difference between young adults and older adults regardless of nature, age differences have been studied extensively in previous research examining social anxiety. A past study examined the theory that social anxiety and loneliness is greater and more present in older people compared to younger individuals (Bergman et al., 2021). Measuring both participants levels of loneliness and social anxiety using separate, respective scales of measurement, the study found no differences in intimate loneliness regardless of age. However, the study did discover a difference in responses to the social anxiety scale, with adults reporting less social anxiety than their younger counterparts. This is consistent with previous findings, where emerging young adults and teenagers have scored higher social anxiety levels, perhaps as onset of the disorder regularly occurring during adolescence (Baum et al., 2012). However, research has also discovered social anxiety to be present in adults as well, with a notable connection between social anxiety and loneliness present in adults in comparison to younger individuals (Bergman et al., 2021; Bennett et al., 2022). This shows that despite the popular belief that social anxiety begins in adolescence and increases in young adulthood, the disorder can begin at any stage in an individual's life and can negatively impact any part of their life.

A change in self-esteem levels shares a similar unpredictable nature with that of social anxiety. Self-esteem tends to be a factor of resilience in adolescents, while having a much smaller effect on adults (Chui & Diehl, 2016). Past studies have found that self-esteem has had varying degrees of impact on a variety of abilities such as cognitive and physical ability (Chui & Diehl, 2016; Pinard, Taconnat, & Vanneste, 2021). Self-esteem does not influence adults' cognitive ability, specifically older adults, while young adults and adolescents' cognitive ability improves because of high self-esteem levels (Pinard, Taconnat, & Vanneste, 2021). Research has also found self-esteem to have no significant impact on older adults' resilience against daily physical symptoms such as headaches, while self-esteem had a much more positive impact on younger adults' resilience against the same symptoms (Chui & Diehl, 2016). In contrast, Akerlund et al. (2021) found that older adults' self-esteem can significantly improve their resilience when facing mental health challenges, compared to young adults who reported poor self-esteem and difficulty facing the same challenges. A possible reason to explain the contrast in findings on older adults between the two studies could be the increased need for older adults to be resilient during the Covid-19 pandemic. Research has found that mature adults, more than any other age category, reported higher levels of resilience and will to avoid consumption by the mental challenges they faced during the pandemic (Cunningham et al., 2021; Fabricius, Klausen, & Mau, 2022). However, as resilience was not a factor involved in these studies, it is important to understand if self-esteem alone shares an existing significant relationship with adults of any age.

Research has determined that decreased self-esteem to relate to higher social anxiety (Boulton & Macaulay, 2022). Particularly in young individuals, specifically adolescents and emerging adults, several factors such as a lack of strong parenting in childhood, or emotional abuse suffered in childhood and early adolescence that could carry over into later adolescence and early adulthood could significantly increase the correlation between social anxiety and

self-esteem (Chen & Qin, 2020; Boulton & Macaulay, 2022). As much of a humans'

development occurs in their youth, the involvement of a parental figure to provide guidance,

support, and responsibility to the child is essential. A parental figures' failure to engage with

the child when the child is facing challenges in their youth could result in the child failing to

adjust and learn crucial elements of life that could potentially have long lasting negative

effects (Boulton & Macauley, 2022). However, childhood neglect or abuse in youth is not the

only predictor of low self-esteem and social anxiety. Research has determined high social

anxiety to be predicted by low self-esteem (Abdollahi & Talib, 2016). This study found that a

negative self-concept of oneself could result in fear of negative assessment from peers. This

fear of mocking from peers could result in the individual avoiding social activities and

interaction, which presents the possibility of an increase of social anxiety (Abdollahi & Talib,

2016). Despite much of the studies conducted on the connection between the two factors self-

esteem and social anxiety including children and early adolescents as their sample, studies

have also identified a strong relationship between the factors amongst adults. Research has

found that adults who suffer from low self-esteem are at risk of showing signs of social

anxiety and frequent self-criticism (Goldin et al., 2011; Bodner, Lancu, & Zion, 2015).

Adults have been found to show signs of decreased self-regard and high social anxiety due to

childhood abuse or exposure to traumatic experiences (Goldin et al., 2011). As a result of

this, they could avoid any social activity, which could impact their employment status and

mental wellbeing. Therapies and treatment exist to help with both social anxiety and self-

esteem, however as those suffering from social anxiety fear social interaction, achieving the

will to ask for help may seem too daunting of a task. However, research carried out focusing

on social anxiety and self-esteem in adults, specifically more mature adults aged above 30

years old, is scarce in comparison to similar research carried out on young adults and

adolescents. One reason for this could be the conclusion from a majority of past studies that

both factors tend to be triggered by childhood experiences. However, research has shown that older adults suffer from both low self-esteem and high social anxiety (Bergman et al., 2021), which makes it alarming that a majority of studies looking at both factors together tend to neglect older adults and instead only study young adults and adolescents. Perhaps future research should study adults in general to examine if as a collective group they share the same levels of social anxiety and self-esteem.

Research examining the role of social networking websites on self-esteem levels and social anxiety has been inconclusive and inconsistent (Erliksson, Lindner, & Mortberg, 2020). As social media continues to become a more important part of modern society, the focus by studies examining the impact it could have on a disorder such as social anxiety increases annually (Erliksson, Lindner, & Mortberg, 2020; Alden, Biesanz, & Parsons, 2021). The increase in focus on the potential difficulties that could occur from frequent social media use could be explained by the creation of new, almost immediately popular social media platforms each year. The time people spend using social media, and how this can lead to unnecessary and unrealistic online comparison, has been a particular factor singled out by studies to share a significant correlation with social anxiety (Brito et al., 2018; Foroughi et al., 2021). Research has determined that those who use social media significantly more than the average person, sometimes regarded as an addiction, are at risk of comparing themselves with other users in an unrealistic manner (Foroughi et al., 2021; Alden, Biesanz, & Parsons, 2021). Often referred to as upward comparison, this unrealistic comparison could result in social anxiety as users believe themselves to not be as popular, significant, or important as those they deem to be superior. This belief can affect the individual's self-confidence and they could become anxious of any social interaction as they might find themselves beneath their peers. Instagram is perhaps the most studied social media platform for identifying social anxiety amongst users. Possibly because of the purpose of the platform, which is to share

images of oneself, people often compare themselves to other active Instagram users. Research supports this claim, with results from studies concluding that an obsession with fame and popularity, and subsequent feelings of inferiority while using Instagram positively correlate with increased use of the platform and increased levels of social anxiety (Alden, Biesanz, & Parsons, 2021, Emirtekin et al., 2021). Interestingly, other studies examining a connection between social media and social anxiety have concluded that social anxiety predicts more frequency in activity on social sites (Baltaci, 2019; Griffiths & Stânculescu, 2022). The studies found that individuals who suffer from social phobia, who have difficulty when communicating with others in a physical, social environment or fear negative evaluation from their peers, instead use social media as a method of contact. Using social media as an alternative could potentially result in greater problems, like social media addiction, and the increasingly damaging social skills of frequent users (Dobrean & Pâsârelu, 2016).

There is a striking similarity amongst research carried out on using social websites and social phobia and self-value. The topic of comparison is a popular factor used within studies identifying a link between the two variables and social media. Both Bierhoff & Ozimek (2020) and Gould et al. (2021) found that unrealistic comparisons on social media can make an individual feel less of themselves, decreasing their self-worth in the process. Both studies placed a high level of significance on increased frequent social networking activity as a direct predictor of upward comparison, resulting in low self-esteem. What these discoveries highlight is that individuals who waste an increasing amount of time on social media react negatively to positive posts created by others, as they themselves do not possess the same level of fame or popularity as these social media users despite having a significant desire to be just like them, resulting in them feeling worse about themselves. On a similar note, studies have also identified social media feedback as a possible predictor of self-esteem levels. Research has found that people, specifically unhappy people who use social media

much more frequently than what is a normal amount, tend to rely on positive social media feedback to determine their self-value, and not receiving such feedback can negatively impact their self-worth and self-esteem (Falat, Magagnos, & Sabik, 2020; Anders & Diefenbach, 2022). Interestingly, Baum et al. (2021) conducted a study researching past studies carried out on online feedback and self-esteem, with findings suggesting that even constructive feedback on social media could be a long-term negative. Despite frequent users longing for positive feedback, whether it be in the form of likes or positive responses, the study highlighted how failure to experience reoccurring positive feedback could result in the user feeling self-doubt, decreasing their self-esteem in the process. This implies that regardless of what sort of feedback a user receives on social media, it is more about how much they depend on the feedback to shape their self-value that matters most.

Social media importance in a person's life is often associated with time spent on it (Abir et al., 2022). Arslan et al. (2015) conducted a study investigating social media addiction amongst a group of young school students from Turkey. The research found that the frequent addition of more social media platforms on the internet have resulted in individuals finding it almost impossible to not use social media. It also found that younger individuals use social media as a method of escaping the real world, and often begin to depend on social media for satisfaction. Findings suggested that those who use social media more than the amount considered normal often become dependent or addicted to the platforms. An individual's reliance and dependency of social media, as well as spending an excess number of hours on the platform, could result in an increase in poor social functioning and isolation (Arslan et al., 2015; Colditz et al., 2017). This implies that as somebody spends greater time on social media, they begin to share a connection or a bond with it, depending on it to fill their satisfaction, ignoring and neglecting reality as a result.

Overview of Findings

Previous research has focused on correlations between social network activity, self-regard, and social anxiety by incorporating other factors such as loneliness, resistance, and body-image. This study is necessary to investigate the three factors compared to one another without including any outside variable, so that an accurate conclusion on the relationship between the three variables can be drawn. Furthermore, adults, particularly those aged 30 years and above, have been underrepresented in studies investigating each variable. Particularly social media use, past research has predominantly used adolescents and young adults as their sample size when investigating online social platform activity and its negative outcomes. For this reason, there is a necessity for research to be conducted with a specific focus on adults of any age. There is a gap in the literature when investigating predictors of social network activity and reliance. Research carried out on the topic has identified an abnormal frequency in use of the platform to share a relationship with it, yet the quantity of time spent each day on it has not been investigated thoroughly as a possible predictor of its use and importance.

Current Study

The aim is to identify the connection regarding online social network use and importance, self-regard, and social anxiety, while incorporating the factors of daily activity on the sites, and age. The study will also examine whether age and daily social networking activity could predict levels of importance of social media in an individual's life. Adults of any age will be used as the sample for this study, as much of the research has only placed interest on investigating children and young adults. This is despite adults reporting lower self-esteem levels, higher social anxiety, and similar numbers in regards to online social platform

activity by a small amount of research exclusively examining adults. The importance of this study is that it will aid in identifying whether a connection exists between social anxiety, self-value and regard, and use of online social networking sites amongst adults, and if their reliance on social media could be predicted by their age, or by the daily activity on online social platforms. The reliance and importance of online media networking sites has been linked with the damaging of social relationships and an increase in isolation, so exploring possible predictors of this social media importance in a person's life is important. The research questions are (1) Does a relationship exist between online social networking use, social anxiety, and self-esteem? (2) Does age and activity on social media share a relationship with online platform reliance? and (3) Could age and daily activity on social networking sites predict if a user views social media as a necessity in their life? After examining past studies, the hypotheses for this study are: (1) Higher social anxiety will not positively correlate with high self-regard, self-regard will correlate with social network activity, social media use will correlate with social anxiety, (2) Age and daily activity on social sites will positively correlate with reliance and importance of the social platforms, (3) The predictor variables age (PVs) and daily activity on social networking websites (PVs) will uniquely predict the criterion variable the importance of social media use on a person's life (CV).

Methods

Participants

68 participants took part in the current research study. The minimum participant sample necessary was decided using Tabachnick and Fidell (2013) (N > 50 + 8m), where N = the number of participants and M = number of PVs. Following this method of calculation, my minimum number of participants required was N = 66. Participants for the tests were recruited through snowball sampling using a social media account. This was used to ensure that all participants were actively using social media, meaning there would be greater consistency among responses. In accordance with the ethical considerations, all participants had to be at least 18 years of age to participate. Consent was also required to be given by each participant before participating in the study. An online form of consent was attached to each questionnaire (See Appendix 2), where each participant was required to tick the box providing their full consent for the study. A small amount of demographic information was collected both to ensure each participant was an active user of social media, and to support hypothesis 2 and 3.

Materials

The current study used a questionnaire which consisted of a small number of demographic questions, followed by consecutive tests all inside a google form. All of the demographic questions were necessary in confirming that each individual participant had an active participation on social media at the time of the study, and to support hypothesis 2 and 3.

Liebowitz Social Anxiety Scale (LSAS)

Developed by Liebowitz (1987), this test was used to record participants social anxiety levels. The scale consisted of 24 statements related to scenarios where an individual's social anxiety levels may increase, and using a 4-point Likert scale, participants would

answer with responses ranging from 0 (None) to 3 (Severe). Total scoring was achieved by combining individual scores from each answer, with low scores indicating a lack of suffering from social anxiety, while much higher scores indicate severe suffering of social anxiety (See Appendix 4). Recent research has used this scale to identify the impact social media could have on social anxiety, empathy etc (Berryman, Ferguson, & Negy, 2018), where the scale was shown to have excellent reliability ($\alpha = .90$). The present study supports these results, with the Liebowitz social anxiety scale ($\alpha = .90$) having excellent reliability.

Rosenberg Self-Esteem Scale

The Rosenberg self-esteem scale (Rosenberg, 1965) is used to examine and record an individual's levels of self-esteem. Measuring an individual's view and opinion of themselves with an even positive and negative statement ratio of 5:5, some of the statements on the Rosenberg self-esteem scale include "I certainly feel useless at times" and "On the whole, I am satisfied with myself". The scale is a 10-item Likert scale with answers for each statement on a four-point scale ranging from 0 ("Strongly disagree") to 3 ("Strongly Agree"). As half of the statements used in the scale were positive, the scores for these statements were reversed. (See Appendix 5). While there was no exact cut off scoring point for determining self-esteem levels, the scale is used continuously, meaning that the higher score an individual received from completing the test, the higher their self-esteem level was. Past research has found the Rosenberg self-esteem scale to show high consistency ($\alpha = .88$)(Huang et al., 2016), while more recent research that has split the scale has found the two statements to show acceptable consistency (Positive $\alpha = .66$, Negative $\alpha = .79$)(Kielkiewicz, Mathúna, & McLaughlin, 2020). The Rosenberg self-esteem scale ($\alpha = .76$) used for the present study had acceptable reliability.

Social Media Use Integration Scale

The social media use integration scale (SMUIS) (Guarnieri, Johnson, & Wright, 2013) measures the importance of social media in an individual's life. The SMUIS is a 10-item Likert scale, with answers to each statement scored using a four-point scale ranging from 0 ("Strongly Disagree") to 3 ("Strongly Agree"). Examples of some of the statements from the scale include "I would be disappointed if I could not use social media at all" and "I enjoy checking my social media accounts". Only one score from the results of this questionnaire had to be reversed (See Appendix 6), with higher scores indicating just how impactful and important social media is in an individual's life. Generally, research has found the SMUIS to have acceptable reliability ($\alpha > .70$)(Maree, 2017). The social media use integration scale ($\alpha = .70$). had acceptable reliability within the current study.

Design

The study is cross-sectional, with data collected at one stage, while employing a quantitative approach. Pearson's correlations were conducted to check hypothesis 1 and 2. This assessed the relationship between (1) social network importance and social phobia, social media importance and self-regard, self-esteem and social anxiety (2) age and social media importance, daily activity on social platforms and its importance. A standard multiple regression test was conducted to assess hypothesis 3. The predictor variables (PVs) for the test were age and daily activity on social networking sites. The criterion variable (CV) was the importance of social media in an individual's life (Smuis).

Procedure

Participants were collected on Instagram using snowball sampling. The questionnaire used for the study was uploaded to Instagram, and everyone who completed the questionnaire was then asked to share it with their friends and family. The questionnaire itself was anonymous, and this was made clear to everyone on the questionnaire before proceeding with

the study. Any individual who decided to click the link uploaded on Instagram was brought to an information form that described the study in detail, indicating the potential risks and benefits of participation, and the overall process of participation in the study (See Appendix 1). The participants were informed of their choice to leave the study, and that they must be at least 18 years of age before proceeding. A consent form followed the information page, where each participant who wanted to continue with the study would have to provide their full consent (See Appendix 2). Participants then completed the various scales and questionnaires placed before them on the form, all of which combined was roughly estimated to last a duration of between 10-20 minutes. The first questionnaire consisted of a small number of demographic questions that were integral for confirming that each participant was 18 years old or older, and that they were actively involved on social media. The next section involved participants completing a social anxiety examination (Liebowitz, 1987). This was used to judge participants level of social anxiety. Following on from the LSAS was a self-esteem test (Rosenberg, 1965), which was utilised to rate participants self-value and regard. The final section of the questionnaire was completion of the social media use exam (Guarnieri, Johnson, & Wright, 2013). This was integrated in order to assess the importance of social networking sites in each participants life. Following completion, participants were then sent to a debriefing page that included my personal contact information and contact information provided by my supervisor for further queries about the study, and relevant contact information who participants who struggled with the study can contact for help.

Ethical Considerations

All data collected from participants was done in accordance with the ethical guidelines set. Each participant who was willing to participate in the study provided their full consent, and each participant provided their age and was informed of the minimum age

requirement of 18 years. The potential risks and benefits involved with participation were explained, and that the study may be published in the NCI library, that the results from the study will be used as part of an oral presentation, and of the intent of dissemination of the results in a final year psychology thesis, and of the possibility of the study being included in a psychology journal or presented at a conference.

Results

Descriptive Statistics

Data was extracted from 68 participants. Descriptive statistics were carried out for the continuous variables shown in the table below. The median, mean, standard deviation (SD), and range scores were acquired, as well as tests for normality. Preliminary analysis was performed on the data and the results indicated that the variables listed above followed the

assumptions of normality. Table 1 below presents the results from the continuous variables, and histograms were also used and determined that all the data was normally distributed.

Table 1: *Descriptive statistics for continuous variables, N = 68*

Variable	*Mean* [95% CI]	Median	*SD*	Range
Age	33.06 (35.84-30.28)	29.50	11.50	43
Time spent on social media	3.07 (3.48-2.67)	2	1.69	6
Self-Esteem Scale	16.94 (17.99-15.89)	17	4.35	23
Social Anxiety Scale	29.26 (32.02-26.51)	28	11.40	56
Social Media Use and Importance Scale	12.49 (13.52-11.45)	12	4.28	20

Inferential Statistics

Preliminary analysis was conducted to ensure that there was no violation of the assumptions of normality. A Pearson's correlation coefficient was performed to investigate the relationship between social anxiety and social media use. There was a non-significant, weak, positive correlation between the two variables ($r = .23$, n = 68, $p > .05$). These results indicate that social anxiety does not share a relationship with social media use.

A Pearson's correlation coefficient was also carried out to explore the relationship between social media use and self-esteem.. There was a weak, non-significant, negative correlation between the two variables ($r = -.08$, n = 68, $p = .54$). The results from this test indicate that social media use does not share a relationship with self-esteem.

A Pearson's correlation coefficient was performed to examine any existing relationship between self-esteem and social anxiety. There was a significant, moderate, negative relationship between the variables ($r = -.39$, n = 68, $p < .001$). These results mean that the variables share 15.21% variance, and that lower self-esteem results in higher social anxiety.

A Pearson's correlation coefficient was done to examine the relationship between age and social media use. The results found that there was a significant, weak, negative correlation between age and social media use ($r = -.29$, n = 68, $p = .02$). The results indicate that age and social media use share 8.41% variance, and that lower age is associated with greater use of social media in an individual's life.

A Pearson's correlation coefficient was carried out to test the relationship between social media use and daily time spent on social media. Results found a significant, moderate, positive relationship between the two variables ($r = .41$, n = 68, $p < .001$). The variables share a variance of 16.81%, meaning that the daily time spent by an individual on social media is associated with greater importance of social media in their life.

Table 2: *Pearson's Correlations between Continuous Variables, N = 68*

Variables	1.	2.	3.	4.	5.

1. Social Media Use	1				
2. Social Anxiety	.23	1			
3. Self-Esteem	-.08	-.39*	1		
4. Time Spent on social media	.41**	.08	-.11	1	
5. Age	-.29*	-.17	.07	-.35*	1

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

A standard multiple regression analysis was carried outto examine if the importance of social networking sited could be explained by the predictors variables age and daily activity on the sites. As no *a priori* hypothesis had been made to determine the order of entry of the predictor variables, a direct method was used for analysis. Preliminary analysis found no violation of normality, linearity, and homoscedasticity, and the correlations between all variables were examined. The correlation between the predictor variables was significant, and the correlations between each predictor variable and the criterion variable were also found to be significant (See Table 2). Tests run for multicollinearity indicated that the Tolerance and Vif levels were in an acceptable range, which means there was no violation of the assumptions, and that the data was suitable for a multiple regression analysis.

The predictor variables used in the model both explained 19% of variance in social media use levels ($F_{(67, 65)} = 7.65$, $p = .001$). The predictor variable daily time spent on social media was found to uniquely predict social media use to a statistically significant level ($\beta = -.35$, $p < .005$)(See Table 3 below for more details).

Table 3: *Multiple Regression for predicting Social Media Use*

Variable	R^2	B	SE	β	t	p
Model	.19					.001**
Age		-.06	.04	-.17	-1.42	.161
Daily time spent on social media		.88	.30	.35	2.91	.005**

Note: R^2 = R-squared, B = unstandardized beta value, SE = Standard error for unstandardized beta, β = standardized beta value, t = t-value, p = p-value, N = 68, ** = p <.01

Summary

To summarise, self-esteem and social a anxiety were found to negatively correlate, meaning as one variable increases, the other goes in the opposite direction. Neither variable was found to correlate with social media use, meaning neither shares a relationship with it. Social media use was found to negatively correlate with age, while it positively correlates with daily activity on social networking sites. Daily time spent on social media was also found to uniquely predict activity on the sites, meaning the amount of time spent can inform us on how much a user requires it.

Discussion

This study sought to explore a connection between social networking activity and importance, social phobia, and self-regard. It also aimed to examine how daily activity on the sites and age could share a relationship with these three variables, as well as if they could predict the importance of social media in a person's life. Studies have identified potential factors that could increase the link between social phobia and self-regard, including prior traumatic experiences, poor parental support and guidance, poor self-value and worth, and a fear of negative evaluation from peers (Bodner, Lancu, & Zion, 2015; Abodllahi & Talib, 2016; Chen & Qin, 2020). Past research has found people show increased rates of social anxiety and decreased self-esteem the more they use social media. Users who actively participate on a social media platform tend to compare themselves negatively to both peers and celebrities, which can both impact their opinion of themselves, and in turn increase their fear of social rejection, judgement, and humiliation (Dobrean & Pâsârelu, 2016; Gould et al., 2021). Past research has found that adults of any age could be affected by the negative consequences of increased social networking activity, regardless of the reasoning behind these effects (Colditz et al., 2017). While younger adults and adolescents are more likely to find a negative impact on their self-esteem and social anxiety using social media due to comparison between themselves and others, research has discovered that older individuals who witnessed traumatic childhood experiences or abuse are increasingly likely to show low self-regard, higher social anxiety, and an increase in engagement on social media. Regarding daily social platform activity, anybody who spends an amount of time on a platform thought to be abnormal or excessive each day are far more likely to view social media as a necessity,

rather than just a hobby or past time in their daily lives (Arslan et al., 2015). From this research, several hypotheses were drawn to evaluate the aims of the study.

The first hypothesis can be partially supported, as results showed that social anxiety had a significant, moderate, negative relationship with self-esteem. This result indicates that individuals who suffer from social anxiety reported lower self-esteem levels. However, neither variable shared a significant relationship with social media use, indicating that a connection between social media use and either self-esteem levels or social anxiety does not exist. The second hypothesis can also be partially supported. While daily social networking activity shared a significant, moderate, positive relationship with social media use, meaning that activity on social media relates to the level of importance it has on their lives, age shared a negative, weak relationship with social media use. This indicates that the younger people are, the increasingly likely they are to view social media as a necessity in their life. Neither variable shared a relationship with either self-esteem or social anxiety, which contrasts with the hypothesis. The third hypothesis was supported, as daily activity on social websites was found to uniquely predict use and importance. However, age was not found to predict social media use, meaning the hypothesis cannot be entirely confirmed. As each hypothesis could only be partially supported, each hypothesis could also be partially rejected.

A Pearsons correlation analysis was used to test the first hypothesis (H1). Results relate to past research that has found that higher social anxiety levels relate to lower self-esteem (Jong, 2002; Murad, 2020). The impact that low self-esteem could have on an individual's life is quite significant. Those who suffer from low self-esteem often find difficulty in maintaining relationships, keeping up to date with and presenting a suitable standard of work, and actively keeping themselves involved with other people (Brown et al., 2010; Brown et al., 2021). A possible explanation for the relationship between low self-

esteem and high social anxiety could be that individuals who deal with low self-esteem may feel worse about themselves, and they could begin to feel rejected by society and feel that their peers, whom they find superior, will mock and humiliate them, which could impact their social anxiety (Chen and Qin, 2020). Interestingly, neither social anxiety nor self-esteem were found to share a relationship with social media use. This is in direct contrast to previous studies, where an individual's level of either social anxiety or self-esteem often related to the level of importance they placed on social media in their lives (Ahmad, Jan, & Soomro, 2017; Jiang and Ngien, 2020). A possible explanation for this finding could be that participants involved in the study were recruited on a social media platform, meaning their answers may not accurately reflect their actual self-esteem and social anxiety, but rather be what they want the rest of the world to believe. However, this explanation cannot be determined as the actual reason, as there is no way to determine if participants were entirely honest with their answers.

Hypothesis 2 (H2) was also tested using a Pearsons correlation analysis. Results from the test are consistent with past studies, as the daily amount of time spent on social media shared a moderate, positive relationship with social media use (Medrano and Rosales, 2018). What this means is that the more time an individual spends on social media each day, the more likely they are to view social media as an important part of their life. A possible reason for this finding is that as a person continues to increase the amount of time they spend on a social media platform each day, the more likely they are to seek comfort on social media, base their self-worth on how much positive feedback they receive on the platform, and use social media as the main source of communication with other users, resulting in a person viewing social media as an importance and a necessity in their life. The finding that age shares a negative, weak relationship with social media use does not support the hypothesis, yet it is supported by past research, where it has been found that children and adolescents report either a social media addiction or at the very least, an excessive amount of time spent

on social media compared to adults (Arslan et al., 2015). This finding is particularly interesting, as it means that the younger an individual is, the more they value social media. A possible explanation for this finding is that research and statistics have indicated that children and adolescents are amongst the age category who use social media more than anyone else (Grealish, Keles, & McCrae, 2019), and as younger individuals grow up in the age of social media, they are more likely to view it as the main source of communication with one another, compared to a regular text message or phone call. This could result in younger individuals finding social media to be an increasingly important asset to their lives. Interestingly, neither age nor the daily amount of time spent on social media shared any relationship with self-esteem or social anxiety. This is in contrast to past studies, where an increase in social media use has negatively impacted both social anxiety and self-esteem (Erliksson, Lindner, & Mörtberg, 2020; Miljeteig and Soest, 2022).

Hypothesis 3 (H3) was supported, as the amount of time spent on social media uniquely predicted social media use. Conducting a multiple regression analysis, the amount of time aa person spends on a social media platform was found to predict the importance of social media in that person's life. This finding is consistent with past studies, where individuals who spent greater amounts of time spent on social media were more likely to report higher levels of importance placed on at least one platform (Medrano & Rosales, 2018). A possible explanation for this finding could be that as a person increases the amount of time they spend on social media, the more likely they are to hold relationships and friendships on the platform, base their self-worth on how well they are received on it, and consume the news reports and headlines posted on the various platforms. As a result, they become dependent on social media, and consider it to be an important part of their daily living.

Implications

Much can be drawn from the findings of this study. The study shows the importance of studying social anxiety and self-esteem collectively, rather than as individual factors in a person's life. Further research could expand upon the factors that could play a role in the strengthening of the relationship between the two variables, such as upward comparison, unrealistic goals and expectations of oneself, and bullying. Research has found that individuals who place unrealistic expectations upon themselves are at risk of feeling worse of themselves once they realise they cannot reach their goals (Herman and Polivy, 2002). In turn, this could lead to the individual fearing humiliation or mocking over their failure to achieve their goals, resulting in them fearing any sort of social contact and increasing their social anxiety.

Findings have important implications for social networking use. Removing the like function from platforms could reduce activity, and it could promote a more positive social setting. This could result in users not becoming reliant on positive feedback by their peers, less popularity comparison with peers, and in turn reducing the damage to a user's self-esteem and social anxiety (Aruguete et al., 2022). Instagram became the first social media platform to allow users to hide likes, as a method of preventing social comparisons and supporting a balanced, positive online environment for all users. Users should use this function and view it as a benefit to both their and other users' mental wellbeing, which could allow for more platforms to implement a similar function in the future.

Strengths and Limitations

There were several strengths and limitations identified from this study. Collecting participants' data using a self-report measure was a particular limitation of this study. There is a possibility that participants may have been feeling ashamed, embarrassed, or nervous

while completing the questionnaires despite anonymity. This could have resulted in inaccurate answers from participants that do not represent their true self. There also exists the possibility that participants feelings on the variables did not represent their overall feelings, but rather how they were feeling at the time they were completing the questionnaires. This could signal that the results do not accurately represent participants self-esteem, social anxiety, and opinion of social media. A controlled, in-person setting, perhaps inside a laboratory, may be more suitable for this study as participants may provide more accurate and true responses in the presence of the researcher. A longitudinal study may be more appropriate for this study rather than providing all responses at one time, as it would allow for data to be collected on participants over a longer period, which could result in more accurate responses to the questionnaire. As people are more at risk of experiencing the negative mental health effects of social media the longer they use it (Mitra and Rangaswamy, 2019), a longitudinal study may be more appropriate to examine participants over a long period.

Another limitation identified from the current study is the low sample size. The sample size consisted of 68 participants, which was above the minimum number of participants required. However, the size was still low in comparison to other studies carried out on similar topics. Also, the study looked to identify a connection between social networking use, self-esteem, and social phobia on the general adult population, however much of the participants from the study were aged 35 and younger. Much of the past research discussed throughout this paper used adults at any age as their sample, yet this study did not have much of a balance in age groups. This means that the results gathered from the study do not accurately represent adults in general. Perhaps having a more balanced sample in terms of age would provide results with greater accuracy on the general adult population.

One strength found is the utilization of the snowball sampling method to recruit participants. Participants included in this study were asked to participate on social media. These participants were asked to contact family and peers to also participate in this study, and if they used social media, it would have allowed for more social media users to participate. This would provide the study with a more accurate representation of the feelings and emotions of active social media users.

Another strength of this study is the use of the social media use integration scale (SMUIS). While many past studies have used scales measuring social media use and engagement, this scale identifies the level of importance social media has in an individual's life. This helps in understanding how the different variables could relate to social media use and importance, and how social media importance could be predicted.

Conclusion

By examining an existing relationship between the two variables, this study supports the current belief regarding low self-esteem levels and high social anxiety. Findings do not compare favourably with previous studies regarding the relationship between social networking activity and the two variables. Despite much of the research discovering that social media use relates to adults of any age, this study found that younger adults relate to social media use and importance. Consistent with the research carried out on the same topic, daily activity on social platforms can predict the level of importance they have on a person's day to day life. While the aim of this study was to confirm past theories and attempt to expand upon them, future research may benefit from including more participants in their study to account for adults at any age, as much of the participants involved in the current study fell under the young to middle aged bracket. Future research may also benefit from in

person questionnaires, rather than self-report, as this would allow for more accurate and

honest responses to the questions.

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Appendices

Appendix I

You have been invited to participate in an ongoing research study. The following information is essential to read, as it will provide you with an overview of the study, the reason for its existence, and your contribution should you wish to participate.

The Study
My name is Cian Larkin Blay, and I am currently a final year student enrolled in BA Psychology at the National College of Ireland. As part of our degree, an independent research project must be carried out by each student. This current project will look to investigate an existing relationship between social anxiety, social media, and self-esteem. The supervisor of this study is Dr. Michelle Kelly.

Requirements to Participate
Any person over the age of 18 can take part in the study, however as the topic of social anxiety is a major factor discussed throughout the duration of this study, please consider the risks that may come with it.

What Possible Risks and Benefits are involved in this study?
While there are no physical risks from this study, there remains a possibility that you could experience feelings of distress due to the nature of the study. As such, there will be relevant contact information included at the end of the study, and you also have every right to close this page and stop completing the questionnaires. While there are no direct benefits from participation in this study, the information collected could help in understanding the relationship between social media, social anxiety, and self-esteem.

What will taking part involve?
There will be a consent box attached on the next page which you will be asked to tick if you agree to participate in the study. If ticked, you will then be asked to complete four online questionnaires. The first will ask general questions about yourself. Next, there will be a Liebowitz social anxiety scale (LSAS), followed by the Rosenberg Self Esteem Scale, and then the social media use integration scale (SMUIS). Following on from this will be a debriefing page. In total, the questionnaires should take approximately 10 to 15 minutes of your time to complete, should you decide to participate.

Do I have to Participate?
You have the right to decide whether you want to participate in this study. The study is voluntary, and you will not be forced to complete it. If you decide to participate but your mind changes during the process of completing the questionnaires, you have the right to withdraw from the study at any stage without questioning. Please keep in mind that once you submit your answers at the end of the study, you will not be able to withdraw your data, as the study is anonymous, meaning no response can be identified.

Confidentiality and Participants' data
As the questionnaires are anonymous, no participant will be able to be identified. All data collected will be strictly confidential, with access granted only for me and my supervisor. All

data will be stored securely on a password protected file on my computer. All data will be stored and managed in accordance with the NCI data retention policy. Data may also be stored on an online data repository and might be used for secondary data analysis. This secondary analysis would occur in the National College of Ireland data collection archives.

What is done with the results from the study?
Results from this study will be presented in my final dissertation and oral presentation which will be submitted to the National College of Ireland. They may also be presented at conferences and/or submitted to an academic journal for publication.

Further Information?
If there are any further questions that require answering, feel free to contact myself or my supervisor.

-Cian Larkin Blay: x20326076@student.ncirl.ie

-Dr. Michelle Kelly: Michelle.Kelly@Ncirl.ie

It is now that I would like to personally express my gratitude for you taking the time to read through this page.

Appendix II

Participant Consent Form

<u>By agreeing to participate in this research I understand the following:</u>

- The method proposed for this research project has been approved in principle by the Departmental Ethics Committee, which means that the Committee does not have concerns about the procedure itself as detailed by the student. It is, however, Cian Larkin Blays' responsibility to adhere to ethical guidelines in his dealings with participants and the collection and handling of data
- If I have any concerns about participation, I understand that I may refuse to participate or withdraw at any stage by exiting my browser.
- I understand that once my participation has ended, that I cannot withdraw my data as it will be fully anonymised.
- I have been informed as to the general nature of the study and agree voluntarily to participate.
- All data from the study will be treated confidentially. The data from all participants will be compiled, analysed, and submitted in a report to the Psychology Department in the School of Business.
- I understand that my data will be retained and managed in accordance with the NCI data retention policy, and that my anonymised data may be archived on an online data repository and may be used for secondary data analysis. No participants data will be identifiable at any point.
- At the conclusion of my participation, any questions or concerns I have will be fully addressed.
- I confirm that I am aged 18 or over

☐ By ticking the box, you are indicating that you have read, understood, and agree with all above information, and that you are providing informed consent to participate in this study

Appendix III

General Information Questions

The following questionnaire is appropriate to determine the participants eligibility in this study. All information gathered from this questionnaire is necessary in providing the researcher with required details relating to participants.

Age?

_____

Social Media Platform most used? (Facebook/Twitter/Instagram etc.)

_____

Average daily time spent on social media?

- o   Less than 1 hour
- o   1-2 hours
- o   3-4 hours
- o   5-6 hours
- o   7+ hours

Appendix IV

Liebowitz Social Anxiety Scale

Below are scenarios that have been identified as potential causes of high social anxiety levels. Please read each scenario and provide your level of fear to each scenario using the following scoring:

None = 0
Mild = 1
Moderate = 2
Severe = 3

1. Using a telephone in public*

0 (None)
1
2
3 (Severe)

2. Participating in a small group activity*

0 (None)
1
2
3 (Severe)

3. Eating in public*

0 (None)
1
2
3 (Severe)

4. Drinking with other people *

0 (None)
1
2
3 (Severe)

5. Talking to someone in authority*

0 (None)
1
2
3 (Severe)

6. Acting, performing, or speaking in front of an audience*

0 (None)

1
2
3 (Severe)

7. Going to a party*

0 (None)
1
2
3 (Severe)

8. Working while being observed*

0 (None)
1
2
3 (Severe)

9. Writing while being observed*

0 (None)
1
2
3 (Severe)

10. Calling somebody you don't know very well*

0 (None)
1
2
3 (Severe)

11. Talking face to face with someone you don't know very well*

0 (None)
1
2
3 (Severe)

12. Meeting strangers*

0 (None)
1
2
3 (Severe)

13. Urinating in a public bathroom*

0 (None)
1
2
3 (Severe)

14. Entering a room when others are already seated*

0 (None)
1
2
3 (Severe)

15. Being the center of attention*

0 (None)
1
2
3 (Severe)

16. Speaking up at a meeting*

0 (None)
1
2
3 (Severe)

17. Taking a test of your ability, skill, or knowledge*

0 (None)
1
2
3 (Severe)

18. Expressing disagreement or disapproval to someone you don't know very well*

0 (None)
1
2
3 (Severe)

19. Looking someone you don't know very well straight in the eyes*

0 (None)
1
2
3 (Severe)

20. Giving a prepared oral talk to a group*

0 (None)
1
2
3 (Severe)

21. Trying to make someone's acquaintance for the purpose of a romantic/sexual relationship*

0 (None)

1
2
3 (Severe)

22. Returning goods to a store for a refund*

0 (None)
1
2
3 (Severe)

23. Throwing a party*

0 (None)
1
2
3 (Severe)

24. Resisting a high-pressure salesperson*

0 (None)
1
2
3 (Severe)

Appendix V

Rosenberg self-esteem scale

Below are statements that indicate a person's view of themselves. Please read each statement carefully and answer on how much you agree with them.

Strongly Agree = 3
Agree = 2
Disagree = 1
Strongly Disagree = 0

1. On the whole, I am satisfied with myself*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

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

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

3. I feel that I have a number of good qualities*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

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

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

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

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

6. I certainly feel useless at times*

0 (Strongly Disagree)
1

2
3 (Strongly Agree)

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

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

8. I wish I could have more respect for myself*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

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

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

10. I take a positive attitude towards myself*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

Appendix VI

Social Media Use Integration Scale (SMUIS)

Below are statements relating to the role social media can play in a person's life. Please read each statement carefully and answer each based on your level of agreement.

Strongly Agree = 3
Agree = 2
Disagree = 1
Strongly Disagree = 0

1. I feel disconnected from friends when I have not logged into social media*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

2. I would like it if everyone used social media to communicate*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

3. I would be disappointed if I could not use social media at all*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

4. I get upset when I can't log on to social media*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

5. I prefer to communicate with others mainly through social media*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

6. Social media plays an important role in my social relationships*

0 (Strongly Disagree)
1

2
3 (Strongly Agree)

7. I enjoy checking my social media accounts*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

8. I don't like to use social media*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

9. Using social media is part of my everyday routine*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

10. I respond to content that others share using social media*

0 (Strongly Disagree)
1
2
3 (Strongly Agree)

Appendix VII

Debriefing Sheet

It is at this time that I must once again express my full gratitude for your participation in this study. The results from this study will be dissemination in an oral presentation, and in a final year thesis. Furthermore, the results may also be presented in a conference, or in a psychology journal. If you would like to know any details of the findings from this study, feel free to contact me.

If you have felt any distress or discomfort throughout the duration of this study, here are the contact details of relevant support groups:

The Samaritans:
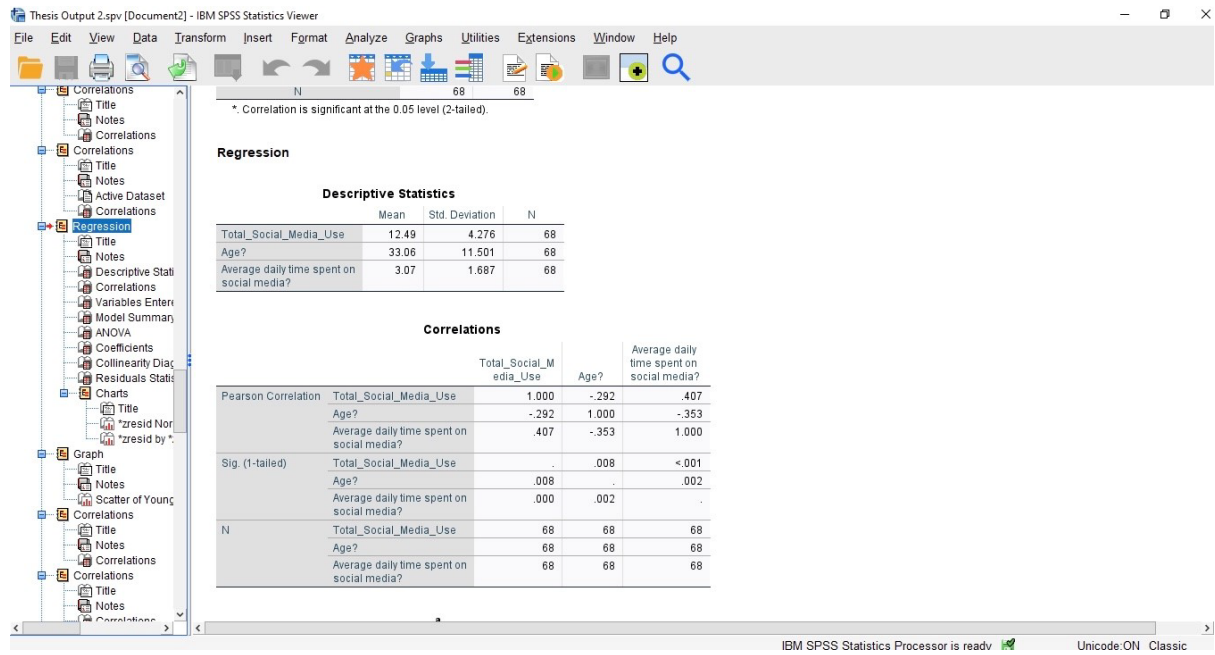
Phone: (01) 116 123

Email: jo@samaritans.ie

Link: https://www.samaritans.org

Social Anxiety Ireland:

Phone: 085-1856582

Email: info@socialanxietyireland.com

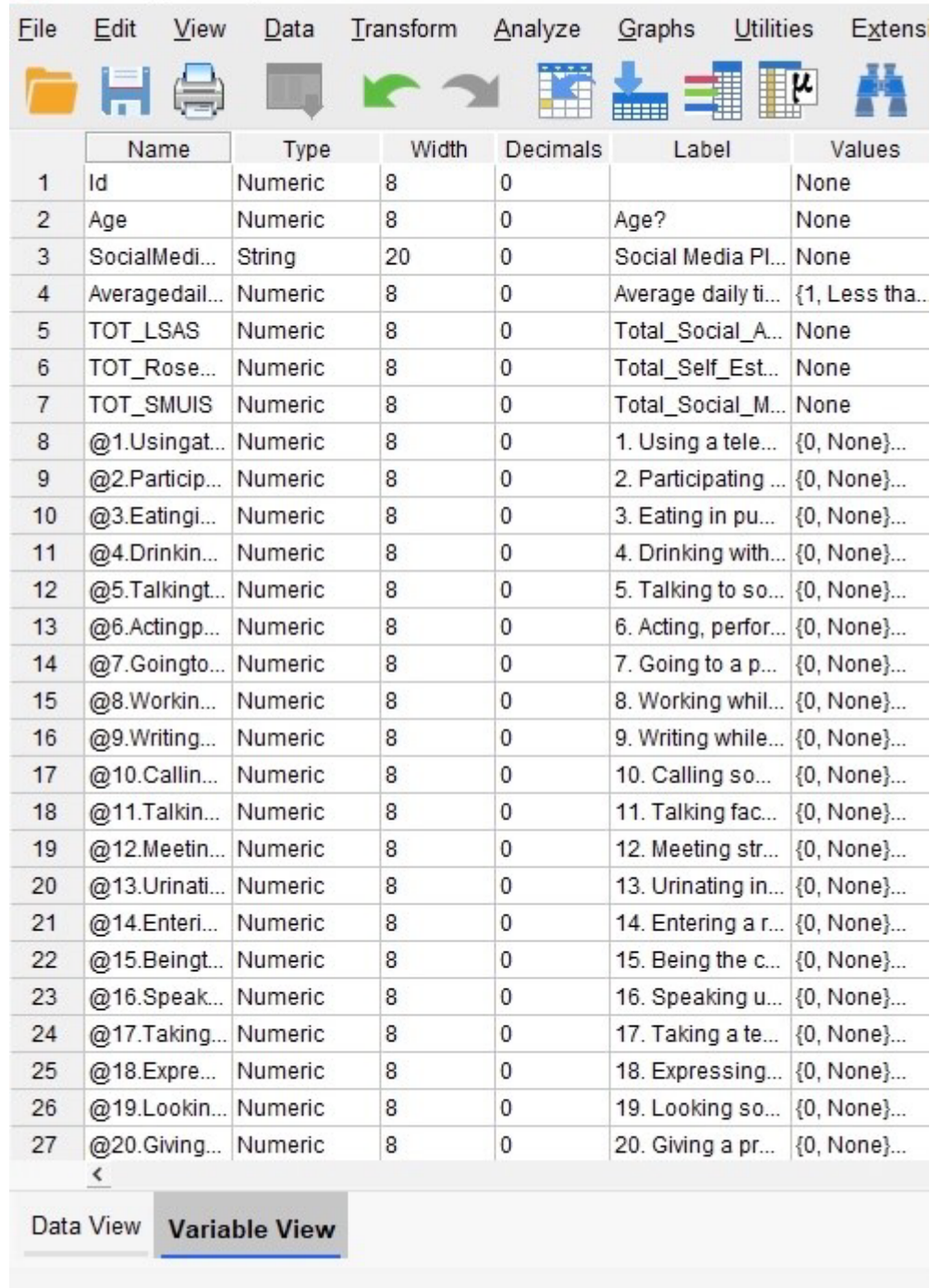Link: Social Anxiety Ireland | Social Phobias & Social Anxiety Disorder.

Appendix VIII (Proof of Analysis)

*Untitled4 [DataSet2] - IBM SPSS Statistics Data Editor

File   Edit   View   Data   Transform   Analyze   Graphs   Utilities   Extens

	Name	Type	Width	Decimals	Label	Values
1	Id	Numeric	8	0		None
2	Age	Numeric	8	0	Age?	None
3	SocialMedi...	String	20	0	Social Media Pl...	None
4	Averagedail...	Numeric	8	0	Average daily ti...	{1, Less tha..
5	TOT_LSAS	Numeric	8	0	Total_Social_A...	None
6	TOT_Rose...	Numeric	8	0	Total_Self_Est...	None
7	TOT_SMUIS	Numeric	8	0	Total_Social_M...	None
8	@1.Usingat...	Numeric	8	0	1. Using a tele...	{0, None}...
9	@2.Particip...	Numeric	8	0	2. Participating ...	{0, None}...
10	@3.Eatingi...	Numeric	8	0	3. Eating in pu...	{0, None}...
11	@4.Drinkin...	Numeric	8	0	4. Drinking with...	{0, None}...
12	@5.Talkingt...	Numeric	8	0	5. Talking to so...	{0, None}...
13	@6.Actingp...	Numeric	8	0	6. Acting, perfor...	{0, None}...
14	@7.Goingto...	Numeric	8	0	7. Going to a p...	{0, None}...
15	@8.Workin...	Numeric	8	0	8. Working whil...	{0, None}...
16	@9.Writing...	Numeric	8	0	9. Writing while...	{0, None}...
17	@10.Callin...	Numeric	8	0	10. Calling so...	{0, None}...
18	@11.Talkin...	Numeric	8	0	11. Talking fac...	{0, None}...
19	@12.Meetin...	Numeric	8	0	12. Meeting str...	{0, None}...
20	@13.Urinati...	Numeric	8	0	13. Urinating in...	{0, None}...
21	@14.Enteri...	Numeric	8	0	14. Entering a r...	{0, None}...
22	@15.Beingt...	Numeric	8	0	15. Being the c...	{0, None}...
23	@16.Speak...	Numeric	8	0	16. Speaking u...	{0, None}...
24	@17.Taking...	Numeric	8	0	17. Taking a te...	{0, None}...
25	@18.Expre...	Numeric	8	0	18. Expressing...	{0, None}...
26	@19.Lookin...	Numeric	8	0	19. Looking so...	{0, None}...
27	@20.Giving...	Numeric	8	0	20. Giving a pr...	{0, None}...

Data View   Variable View