

Instagram and its Relationship Between Self-Esteem and Depression Amongst Young Adults.

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Abstract

Instagram is suggested to be the most damaging form of social media particularly within young adults. Thus, the current study seeks to investigate the possible negative consequences that Instagram may have on young adults aged between eighteen to twenty-five. A total of one-hundred and twenty-nine participants took part in a survey that was created in Google docs. The survey contained questions that measured participant's levels of self-esteem, loneliness and depression amongst Instagram intensity. Participants were informed of the nature of the study, confidentiality and their right to withdraw at any time. The research was particularly interested in the correlations between the level of usage, gender differences, amount of likes and the number of followers with the respecting variables. Results from the data analyses suggested that there was no statistical significance. It was also hypothesized that there would be a relationship between the number of hours spent online and loneliness, results highlighted that there was in-fact a statistical significance.

1. – Instagram and its Negative Consequences Amongst Young Adults Mental Health.

1.1 Overview

As the prevalence of social media is at its height, it is essential for researchers to explore the uses of social networking sites (SNS) and the possible negative effects it may have on their users. SNS's have become extremely popular in recent years, particularly amongst young adults (Greenwood, 2016). Social media is highly addictive and has been described to be even more addictive than cigarettes and alcohol (Cramer, 2017). In particular, Instagram has an estimated 1000,000,000 unique monthly visitors, with the superiority of these users being adolescents (Lup et al 2015). According to a recent survey conducted on 1,520 Americans aged between 18-29, it was found that 6 in 10 adults used Instagram daily (Greenwood, 2016). In Ireland, Research indicates that 28% of the Irish population has Instagram accounts, with 56% of those accounts being used daily, making it the second most used social networking site, after Facebook, in Ireland (Ipsos, 2017). Although social media sites are convenient for staying in touch with old friends, family and connecting with new people, for some, these sites (particularly Instagram) can be “detrimental to one’s mental health” (Hayes & Maughan, 2016), impacting not only their self-esteem, but also greatly influencing one’s levels of loneliness and depression (Lup et al, 2015). In this day and age, advances in technology gives rise to the accessibility of social media apps. These apps can be accessed anywhere and anytime. For many, Instagram has become a problematic space, particularly in females (Holowka, 2018. P-183). In today’s online world whereby “Influencers” & “bloggers” promote their seemingly perfect lives, users can very often develop a sense of the “ideal self” which can impact the user’s self-esteem massively (Aiken, 2016) as influencers have a direct impact with their followers (Einarsdotir, 2017). Festinger (1954) highlights that people have a natural drive to want to compare

attributes and abilities of themselves to those of others. Furthermore, upon reviewing past literature surrounding this area, there seems to be a lack of research particularly in Ireland regarding Instagram and its potential negative effects that it may have on its users. Thus, the current study proposes to fill this gap by surveying approximately 130 full time college students that will vary in both age (18-25) and gender. In particular, the study will seek to identify whether Instagram is a direct predictor of self-esteem, loneliness and levels of depression in young adult users.

1.2 Instagram and self-esteem

Rosenberg (1965) suggests that self-esteem in young people is greatly associated with their peer relationships, particularly those who link their self-worth with the approval of others. According to past research in this area, it has become evident that active Instagram users are constantly seeking validation from not only their friends, but from complete strangers (Holowka, 2018. P-183). As humans, we crave social acceptance, it is a fundamental aspect to life (Dewall, 2011). However, the pressure to be socially accepted can prove too much for some, which in turn, can lead to low self-esteem (Flaxington, 2016). The looking glass self-theory (Cooley, 1902) describes the development of one's self and identity through one's interpersonal interactions within the context of society. In other words, we base our self-worth on not what we think of ourselves, but rather, how other people see us. As Instagram's main feature is photo sharing, the type of feedback (e.g. the number of likes) from the shared photos can be a huge determining factor in one's confidence (Lup et al, 2015). Active Instagram users are often, and sometimes unconsciously, seeking approval when they upload a photo or video to their profile. Consequently, as a result of how the cyber world perceives us, it is easy to develop what's called "imaginative audience behavior" (Valkenburg et al, 2005). Whereby people tend to overestimate the extent to which others are watching

and evaluating, leading people to be extremely preoccupied with how they appear in the eyes of others rather than how they actually feel (Valkenburg, 2006). Past research indicates that young people who spend more than two hours a day on social networking sites are more likely to report psychological distress (Macmillan, 2017). Further research in this area suggests that the more time spent on social networking sites, the more likely they are to report negative symptoms such as depression or low self-esteem (Pantic, 2014). Although past research seems to emphasize the issue surrounding self-esteem amongst female social media users. Conflicting research suggests that male users are just as vulnerable to reporting low self-esteem. A study conducted by Barlett et al (2008) found that males reported higher levels of dissatisfaction with their appearance when they were exposed to images of muscular male models. In addition to these findings, Barker (2009) indicates there were no major differences in the relationship to gender and levels of usage of social networking sites (Barker, 2009).

Self-esteem is a crucial factor in developing and maintaining health and the overall quality of life (Pantic, 2014). Thus, the constant exposure to unrealistic and photo-shopped images on social networking sites such as Instagram can have a massive effect on one's confidence. As a result of these negative conations mentioned above, there seems to be quite a negative stigma surrounding social media. Previous Literature indicates that social networking platforms whereby self-presentation is the main activity, can cause or at least promote narcissistic behavior (Pantic, 2014). A report by Mehdizadeh (2010) indicated that individuals with lower self-esteem are more active online in terms of having more self-promotional content on their social networking profiles, in the case of Instagram, this would refer to posting more photos, in particular "selfies". Interestingly, other research suggests that low self-esteem can be characterized by passive use, for example, browsing through other people's photos on Instagram could cause one to compare themselves, which in turn can lead to feelings of

inadequacy, leading to lower self-esteem (Lup et al 2015). Although it is assumed that people who post selfies are thought to be confident and satisfied with their life, conflicting research suggests that the constant posting of “selfies” on Instagram can in fact, be a clear representation of one’s “sadness” (Holowka, 2018). A recent survey found that ‘selfies’ are very rarely natural and untouched photos. More often than not, people who post selfies are either extremely hesitant that they will be ridiculed by their friends or followers, or confident enough to post them but will use numerous tools such as filters and retouching apps in order to make them look better. Although using these filters and retouching photos has become the norm for many people these days, it is not something that should be promoted as it; 1. Gives a false perception of the person and 2. Can result in the person feeling even more insecure about themselves as they feel reliant on using these filters in order to look better and to portray the ‘ideal self’.

The association between self-esteem and females is an area that is surrounded by an abundance of research and literature. However, the current research is also interested in whether male Instagram users are as vulnerable to these negative connotations to the extent of females.

The first hypothesis of the current study is based upon the premise that the social networking site, Instagram, will have a direct impact on the participant’s levels of self-esteem. It is also hypothesized that the type of feedback, such as the amount of likes and the number of followers one receives will have an association amongst one’s self-esteem. Although there is an abundance of conflicting research surrounding gender differences, the current research hypothesized that female users will report lower levels of self-esteem as opposed to males. In order to analyze these hypothesis, firstly, the level of usage will be measured by the ‘Facebook Intensity Scale (Steinfeld & Lampe, 2007). However, it will be adapted to measure the intensity of Instagram users. The

participants level of self-esteem will be measured using the Rosenberg self-esteem scale (Rosenberg, 1965).

1.3 Instagram and Depression

According to a recent survey conducted by the world health organization (2017), Depression, is described to be a common illness affecting over 300 million people worldwide. In addition, the survey also indicated that, in fact, women are more likely to be affected as opposed to males. With reference to “Aware Ireland” (2017), a national campaign that is implemented to help the public gain knowledge on this condition, depression is thought to affect more than 450000 (1 in 10) people at any one time in Ireland. These rates are particularly high in young adults. Correspondingly, further research in this area suggests that Irish young adults are suggested to have higher rates of mental disorders than similarly aged young people in other countries (Cannon et al, 2013). Of course, there are many determining factors that lead to one developing depression, this will be discussed as a limitation in the discussion section of this research. However, the current study aims to investigate depression in young adults with reference to Instagram usage.

Gilchrist (2017) suggests that Instagram is the most “damaging social media platform” when it comes to young adult’s mental health. Additional research conducted by the Royal Society of Public Health (2017) indicated that in the past 25 years, the rates of anxiety and depression caused by social media platforms have increased by over 70%. The results of a recent survey conducted by the Royal Society of Public Health (2017) found that nearly 1,500 participants between the ages of 14 to 24, associated Instagram with negative connotations such as anxiety and depression. Bhat (2017) conducted a study to investigate social networking sites and how it effects mental health, the results of the study indicated that Instagram and social media addiction were

both predictors of depression. Because Instagram is an app, it is accessible at any time, therefore, the likelihood of the over use and the chance of addiction, is a strong possibility (Donnelly & Kuss, 2016). Consequently, it is assumed that the more time one spends engaging in the cyber world, the less time is spent engaging in the real world. Pantic (2014) suggested that there is an association between the more time ones spends on social media and the decline in communication with family members as well as one's social circles, which in turn can lead to one feel socially isolated, leading to many mental health issues, such as depression.

However, it is not enough to say that “addiction” alone of SNS's causes depression. Rather, it is important to investigate the activities the user is engaging in during their time spent on Instagram. Past research highlights that SNS usage can be divided into 3 activities; passive, active and interactive (Yang, 2016). Similar research in this area also suggests the harmful impact of Social media use generally occurs amongst young girls who engage in passive usage and young boys who engage in active usage (Frison & Eggermont, 2016). Passive interaction can be characterized by browsing through other people's profiles. Although this does sound harmless, research has found that this particular type of usage is likely to decrease an individual's well-being (Frison & Eggermont, 2016). Instagram provides rich opportunities for social comparison as its main feature is photo sharing. By users being exposed to other people's profiles, in which there are photos that could be photo-shopped, holiday pictures, pictures of a happy family etc. It could elicit negative feelings such as jealousy and even depression (Lup et al, 2015) as the user is comparing their lives to those of others (Frison & Eggermont, 2016). In addition, active usage such as posting photos, liking and commenting on others posted items, can also be said to be a determining factor of lower well-being (Yang, 2016).

In addition to past literature, results indicate that females, particularly young adults, are more susceptible to feeling depressed and having low opinions about themselves as they are much more emotionally invested in social networking as opposed to males (Lup et al, 2015). With reference to hypothesis 1, the current study hypothesized that there will be a correlation between the level of usage of Instagram and levels of depression. Hypothesis 2 also aims to explore the correlation between the amount of ‘likes’ one receives on a picture and its possible relationship with one’s levels of depression. Because the current study is only interested in the participant’s level of depression, the depression subscale of the DASS (Lovibond & Lovibond) will be used along with the Facebook intensity scale, (Steinfeld & Lambe, 2007) which will be adapted for Instagram use.

1.4 Instagram and Loneliness

Pantic (2014) describes loneliness as an extremely unpleasant emotion that can be determined by one’s social relationships (or lack of social relationships). Bargh and Mckenna (2004) highlighted that those who feel lonely, are said to lack close ties within the real world. Socializing (in the real world) is an extremely important aspect in maintaining good mental health. However, in this day and age, with the popularity of social media growing, loneliness is becoming more prominent in its users (Bhat, 2017). A recent article claims that the current generation, may be the loneliest ever as a consequence of the prevalence of social media (Pittman & Reich, 2015). According to a recent study, 35% of adults who have an online profile and are said to spend as much as 3 hours a day on these sites (Raacke & Bonds-Raacke, 2008). Too much time spent on social media can result in people missing out on social interactions in the real world which can have many negative effects on its users (Yang, 2016). Further research also highlights that many people can become consumed with the cyber world which can

promote adverse feeling's such as loneliness (Correa, Hinsley & Zuniga, 2009). Socializing through SNS's can be extremely isolating for the individual, obscuring mental health challenges even more than usual. (Green, 2017). For example, the research of Burke et al. (2010) indicated that the consumption of Facebook content positively predicted feelings of loneliness. These findings could also be assumed for the content of Instagram and its users. Its worrying that the younger generation feel more comfortable interacting online rather than in real life. Although the level of usage is suggested to be a determining factor of one's level of loneliness (Yang, 2016), conversely, bidirectional research has shown that in fact, social network users, particularly women, are drawn to the internet to reduce their feelings of loneliness (Amichai- Hamburger & Ben –Artzi, 2003).

Upon exploring the association between Instagram and loneliness, interestingly, Yang (2016) reported that people with certain personality traits are more susceptible to experiencing the more negative effects of Instagram, in particular, loneliness. Furthermore, Yang (2016) also highlighted that out of a total of 208 undergraduate students, 78% of females indicated that Instagram interaction and Instagram browsing were both related to lower levels of loneliness, whereas Instagram broadcasting was associated with higher levels of loneliness. Although the above literature surrounding this topic does explore some interesting information, the current research seeks to investigate Instagram and loneliness in more detail. With reference to Hypothesis 1,2 and 5, it is hypothesized that Instagram usage, number of likes and the number of hours spent actively engaging on Instagram, will be associated with level of loneliness. The UCLA Loneliness scale (revised) will be used to measure the participant's levels of loneliness as well as the Facebook Intensity Scale (adapted) being used to measure Instagram usage. Demographic questions will also be asked in order to determine the average number of likes one would receive and the average time spent using Instagram.

1.5 Conclusion

The current study is based upon five main hypotheses. It is hypothesized that; 1. the level of usage on Instagram will be associated with self-esteem, depression and loneliness, 2. The amount of 'likes' one receives on a picture will have a correlation to self-esteem, depression and loneliness, 3. Female Instagram users are more likely to have lower self-esteem as opposed to male users, 4. There will be correlation between the number of followers one has and self-esteem, finally, 5. The number of hours spent using Instagram correlates with loneliness. The current research not only aims to expand on past literature, but to develop some possible solutions that can be put forward in order to decrease the number of young adults suffering from mental illness as a direct result of social media, particularly Instagram.

2. – Methods

2.1 Method

Firstly, prior to undergoing this research, approval from the ethics committee needed to be obtained. Once approval was given, the questionnaire was prepared on google docs and the link was then posted to the researchers Instagram and Facebook page. Once the the researcher was happy with the sample size, the data was then exported from google docs to Microsoft excel whereby the data was coded. After the coding on excel was complete, the data was then imported onto SPSS in which the data was coded again and prepared for analyses.

2.2 Participants

The current study used descriptive statistics in order to gather information surrounding the sample. A total of 129 participants took part in the current study. The sample contained 58% females ($n = 75$), 40% of males, ($n = 52$) and 1.6% whom identified as “other” ($n = 2$). The sample ranged in age from 18 – 25. (Mean = 21.68), (Mode = 22) and (Std. Deviation = 1.850). The participants were draw from a random sample of the population of Facebook and Instagram users. The researcher clearly stated that all participation is completely voluntary and in order to participate in the study, all participants must be full time college students aged between 18-25. Participants were made aware of this information within the Facebook and Instagram status and again on the cover page of the survey.

2.3 Design

The current study used a correlational design in order to test the relationship of hypothesis 1,2,4 and 5. Measuring the strength and direction of the linear relationships between the predictor variable (PV) Instagram and its criterion variables (CV)

loneliness, self-esteem and depression. With reference to hypothesis 3, a differential design was used in order to test the differences between male and female Instagram users (IV) in relation to levels of self-esteem (DV) in hypothesis 3. Demographic questions such as age and gender were used in order to compare the differences in the predictor and criterion variables.

Hypothesis 1 and 2, both correlational, aimed to investigate whether the level of usage on Instagram and the number of likes one would receive on Instagram (PV's) are predictors of ones' self-esteem, loneliness and depression (CV's).

Hypotheses 3, a differential design, was used to assess whether there was a statistically significant difference in male and female Instagram users (IV) with regard to their levels of self-esteem (DV).

Hypothesis 4 was based around the premise that the number of followers one has on Instagram (PV) would correlate to one's self-esteem (CV). Thus, a correlational design was used in order to analyze the data.

Finally, a non-parametric test, was used to measure the the strength of association between the number of hours spent on Instagram (PV) and the participant's levels of loneliness (CV).

2.4 Materials

The following measures were all used in an online survey produced by google docs;

2.4.1 – Rosenberg's Self-Esteem Scale, (Rosenberg, M., 1965)

The Rosenberg Self-Esteem Scale is a 10 item scale that measures global self-worth and self-acceptance through assessing both positive and negative feelings about oneself, e.g. "I feel that I am a person of worth, at least on an equal plane of others". The scale is described as 'Uni-dimensional'. All items are answered using a 4-point Likert scale, with the scores ranging from 'strongly disagree' = 1 point, to 'strongly

agree' = 4 points. However, it is important to note that items 3,5,8,9 and 10 are reverse scored. The Rosenberg Self-Esteem Scale is used widely within research as it has presented high ratings in both reliability (0.90) and validity (Rosenberg, 1965). The total ranges from 0-30, with all scores being kept on a continuous scale. Scores within 15-25 are normal range, anything higher suggests high levels of self-esteem and scores below 15 suggest low self-esteem.

2.4.2 – Facebook Intensity Scale (Ellison, N. B., Steinfield, C., & Lampe, C. 2007)

Because there is no (reliable) measure to assess the intensity of Instagram amongst its users, the current research adapted the Facebook intensity scale by replacing the word 'Facebook' with 'Instagram'. This 8 item measure includes two self-reported assessments of Instagram behavior, designed to measure the extent to which the participant is actively engaged in Instagram activities (e.g. "Instagram is part of my everyday activity") and the participant's emotional connectedness to Instagram (e.g. "I would be sorry if Instagram shut down"). The measure contains 6 items whereby responses are measured on a Likert scale of 1 = strongly disagree to 5 = strongly agree. The measure also contains 3 open ended questions (one of which was added in by the researcher in order to measure the average amount of likes one would receive on a picture). The first question aims to assess how much time the participant spends on Instagram; with the responses ranging from 0 = less than 10 minutes to 5 = more than 3 hours. The second open ended question is concerned with approximately how many followers the participant has. Finally, the last open ended question was concerned with the average likes one would receive on a photo. The score was then measured by calculating the means of all the items contained within the measure. The reliability and validity of this measure proved to be high with a Cronbach's alpha of 0.89. (Warner, 2009).

2.4.4 DASS21 (*Depression Anxiety Stress Scale*) (Lovibond, S.H & Lovibond, P.F 1995)

The DASS contains a set of three self-reported scales that are used to measure the negative emotional states of depression, anxiety and stress. In total, the DASS contains 21 items. Each of the three sub-scales mentioned above, contains 7 items. Because the current study is only interested in the depression aspect of this measurement, all questions that were not concerned with depression were disregarded, leaving only 7 items in the questionnaire. The depression subscale of this measurement assesses many symptoms that are concerned with depression such as, dysphoria, hopelessness, devaluation of life, self-deprecation, Apathy, anhedonia and inertia (e.g. “I felt that life was meaningless”, “I felt down-hearted and blue”). Responses range from 0 = did not apply to me at all to 3 = applied to me very much, or most of the time. In order to calculate the scores of the participant’s levels of depression, the scores must be added up and multiplied by 2. The levels of depression are as follows; Normal; 0-9, mild; 10-13, moderate; 14-20, severe; 21-27 and extremely severe 28+. DASS21 was used in the current research as it has proven to be psychometrically sound as the reliability of the depression subscale measured at .88 (Henry & Crawford, 2005).

2.4.4 The revised UCLA Loneliness Scale (Russell, D., Peplau, L.A., & Cutrona, C.E. 1980)

The UCLA loneliness scale is a 20-item scale designed to measure one’s subjective feelings of loneliness (e.g. “There is no one I can turn too”) as well as feelings of social isolation (e.g. “People are around me but not with me”). The current study aims to investigate the participant’s levels of loneliness with regard to the social media app ‘Instagram’. Participants were asked to answer the questions with either; O = I often feel this way, S = I sometimes feel this way, R = I rarely feel this way and N = I never feel this way. The revised version of this scale involves 10 of the 20 original

items to be reversed scored (items 1, 5, 6, 9, 10, 15, 16, 19, 20). In order to score the scale, make all O's = 3, all S's = 2, all R's = 1 and all N's = 0. Items

1,5,6,9,10,15,16,19,20 are all reverse scored. Recent research indicates particularly high measures of reliability of 0.73 (Russell, 2010)

2.4.5 Data Analysis

The current study used SPSS Statistics version 24 to analyze the data gathered from the survey (Via Google Docs). The Responses from the survey were downloaded and transferred onto Microsoft Excel, coded, then analyzed and recoded through SPSS.

2.5 Procedure

Once the approval was granted by the Dublin Business School Ethics Committee, the researcher began preparing the questionnaire. In order to gain the sample for the current study, the researcher posted a link to the google doc survey on their Facebook and Instagram profile. Along with the link, there was a brief message from the researcher explaining that the purpose of the study was to investigate Instagram and the effects that it had on students' self-esteem, loneliness and levels of depression. The message also emphasized that in order to take part, all participants must be between the ages of 18-25 years old and full time college students. Once clicking into the link, the participants were then taken to the cover page of the survey whereby the participants were debriefed in more detail (See appendices 6.5). The debrief sheet made it very clear to the participants that all surveys were completely anonymous, therefore, no one survey could be attributed to any one person in particular and that by completing the survey meant that they were providing their consent. The participants were provided with clear instructions on how to answer each measurement within the questionnaire (See appendices 6.1 – 6.4). In total, the whole survey took about 10 minutes to complete. Because the current survey did involve some material that could

have potentially raised some negative feelings for the participant, contact details for support services were attached on the last page (see appendices 6.6)

3. – Results

3.1 Descriptive Statistics

As mentioned earlier in the participant section, descriptive statistics were used within the analyse in order to identify certain variables of the current sample such as gender and age. In the output presented below, the summarised statistics indicate that 75 females (58%) and 52 males (40%) participated in the survey. Giving a total of 129 respondents.

Table 1: *Descriptive Statistics: Age*

	N	Statistic	Minimum	Maximum	Mean	Std.
			statistic	Statistic	Statistic	Deviation
						Statistic
Age	129		18	25	21.68	1.85
Valid N	129					
(Listwise)						

Statistics from the above table indicates that the sample ranged in age from 18 – 25 with the mean age being 21.7.

Descriptive's were also carried to get a better understanding of the categorical variables concerned within the current study, in particular, the mean, standard deviation, minimums, maximum and the reliability of each measure used was analysed (*see table2*).

Table 2: *Descriptive frequencies and reliability of UCLA loneliness scale, Rosenberg Self-esteem Scale, DASS and Instagram Intensity scale.*

	Mean	Std. Deviation	Minimum	Maximum	Reliability
Loneliness	28.36	14.94	3.00	56.00	.87
Depression	13.05	11.48	.00	42.00	.94
Self-esteem	23.53	2.70	10.00	32.00	.05
Instagram Intensity	3.58	1.03	1.00	5.00	.11

With reference to table 2, the UCLA Loneliness scale resulted in a mean score of 28.36, Std. deviation of 14.94 and a Cronbach's Alpha value of .874. Suggesting good reliability of the scale. The scale used to measure levels of depression in the participants resulted in mean score of 13.05, Std. deviation of 11.48 and measured .935 in reliability. As values above .8 are preferable, the depression scale within this sample suggests very good internal reliability. The Rosenberg self-esteem scale indicated a mean result of 23.54, Std. deviation of 2.70 and a reliability of .053. Because Cronbach's Alpha value accepts .7 and above to be a scale of good reliability. The self-esteem scale used within the current study suggests low reliability. Finally, the current study adapted the Facebook Intensity scale in order to measure Instagram intensity (M = 3.58, Std. Deviation 1.03, and a reliability result of .114). suggesting low reliability.

3.2 Inferential Statistics:

The analysis regarding the current study was based around the premise of 5 hypotheses. The current study used Pearson's R correlation, spearman's rho and an independent sample t-test.

3.2.1 Hypothesis 1:

The first hypothesis seeks to investigate if there was an association between Instagram and (a) Self-esteem, (b) Loneliness and (c) Depression. Thus, the analyses of this hypothesis is broken down into three separate tests. A Pearson's correlation was used to test whether these variables had any association with the level of usage on Instagram. Descriptive statistics were used in order to first assess the average level of usage (*refer to table 3*). The results indicate that; 12.4% spent less than 10 minutes using Instagram, 23.3% spending 10-30 minutes, 19.4% spending 31-60 minutes, 22.5% spending 1-2 hours, 16.3% spending 2-3 hours and 6.2% of participants admitted to spending more than 3 hours per day actively engaging in Instagram.

Table 3: *Frequencies: "in the past week, on average, approximately how much time per day have you spent actively using Instagram"*

	Frequency	Valid Percent
Less than 10 minutes	16	12.4
10-30 minutes	30	23.3
31-60 minutes	25	19.4
1-2 hours	29	22.5
2-3 hours	21	16.3
More than 3 hours	8	6.2
Total	129	100.0

In relation to hypothesis 1 part a, a Pearson's correlation coefficient found that there was no significance between the level of Instagram ($M = 3.58$, $SD = 1.0$) usage and

self-esteem ($M = 23.5$, $SD = 2.7$) ($r(126) = .12$, $p = .17$). Therefore, accepting the null hypothesis

With reference to part b, a Pearson's correlation coefficient found that there was no significant relationship between Level of usage on Instagram ($M = 3.58$, $SD = 1.0$) and Loneliness ($M = 28.36$, $SD = 14.938$) ($R(122) = .06$, $p = .50$). Accepting the null hypothesis.

The final Part of the first hypothesis intended on investigating the association between level of Instagram usage and levels of depression. However, a Pearson's correlation coefficient found that there was no significant relationship between level of Instagram usage ($M = 3.58$, $SD = 1.0$) and depression ($M = 13.05$, $SD = 11.48$) ($r(126) = .15$, $p = .08$). Although the null hypothesis is accepted here, the significance value does highlight a trend in these two variables.

3.2.2 Hypothesis 2:

The second hypothesis of the current study aimed to explore whether there was a correlation between the amount of "likes" one receives on a photo on (a) self-esteem, (b) depression and (c) loneliness. A Pearson's correlation was used to test the significance of these particular variables. Results from data analyses indicate that there was no significance between the number of likes ($M = 131.56$, $SD = 102.392$) and one's self-esteem ($M = 23.53$, $SD = 2.7$) ($R(127) = .13$, $p = .15$), accepting the null hypothesis.

Part b of hypothesis 2 was aimed to investigate whether the amount of likes one would receive would be a predictor of an Instagram users level of depression. However, there was no significance found between the number of likes ($M = 131.56$, $SD = 102.39$) and depression ($M = 13.05$, $SD, 11.478$). ($R(127) = .11$, $p = .23$). Thus, accepting the null hypothesis.

Lastly, an A Pearson's correlation was used in order to investigate if there was an association between the number of likes and loneliness (*See table 10*). However, there seemed to be no relationship between the number of likes ($M = 131.56$, $SD = 102.39$) and loneliness ($M = 28.36$, $SD = 14.938$). ($R(124) = .07$, $p = .44$).

3.2.3 Hypothesis 3:

An independent sample T-test was carried out in order to compare gender differences in relation to self-esteem. In particular, the current study hypothesized that there would be a statistically significant difference between female Instagram user's levels of self-esteem as opposed to males. The results indicate that the significance level for Levene's test is .06 which assumes that the assumption of equal variance has not been violated. Concluding that there was no significant difference in scores between females ($M = 23.75$, $SD = 2.23$) and males ($M = 23.25$, $SD = 23.25$) in the level of self-esteem. ($t(125) = 1.0$, $P = 0.31$, $CI(95\% \text{ } -.48 \rightarrow 1.5)$). Therefore, the null is accepted.

3.2.4 Hypothesis 4:

A Pearson's correlation was used to test if there was an association between the number of followers and self-esteem. Results indicated that there in fact was statistical significance between the number of followers ($M = 901.1$, $SD = 1120.9$) and levels of self-esteem ($M = 23.53$). ($r(124) = .21$, $P = .02$). Although results highlight a positive weak correlation, the null hypothesis is therefore rejected.

3.2.5 Hypothesis 5:

Finally, a non-parametric test, was used to test if the number of hours spent using Instagram correlated with one's level of loneliness. A spearman's rho correlation

found that there was a significant association between loneliness and the number of Instagram users ($r_s(125) = .2, p = .030$). Thus, rejecting the null hypothesis.

4. – Discussion

4.1 Overview

The aim of the current study was to investigate the social networking site, Instagram and the possible negative connotations that may arise within its users. The population of interest within the current study was young adults, ranging in age from 18-25. The researcher was particularly interested in the possible correlations between the level of usage, amount of likes and the number of followers amongst levels of self-esteem, Loneliness and depression amongst its user's. However, results indicate that there was no statistical significance between any of the variables mentioned above. It was also hypothesized that there would be a difference in gender with relation to levels of self-esteem but the results highlighted that there was no statistical difference between males and females. Thus, the null hypotheses were accepted. There did however, seem to be a statistically significant correlation between the number of followers and number of hours spent on Instagram with self-esteem and levels of loneliness. Meaning the null hypothesis was rejected. The current study aimed to fill in the gaps and add to previous research.

4.2 Self-esteem

Although past research has produced a mass amount of contradicting results surrounding the area of Instagram and its influence on one's self-esteem, the current study hypothesized that there would be an association between these variables. Supporting the research put forward by Pantic, 2014, Macmillan, 2017 & Mehizadeh, 2010. Of course, social media platforms, particularly Instagram, has its benefits. Instagram can be useful in promoting business, advertising and staying connected with friend's etc. However, a mounting body of research suggests that Instagram can have numerous negative consequences on its users such as decreased levels of self-esteem, in

particular, evidence from past research suggests that young adults are more subjected to these negative feelings as opposed to older users (Frison & Eggermont, 2016, Lup et al, 2015). In support of these findings, there is an abundance of research that suggests the level of usage of social networking sites, particularly those who spend more than 2 hours a day actively engaging on social media, are more likely to report psychological distress, in particular, lower of self-esteem (Pantic, 2014 & Macmillan, 2017, Mehizadeh, 2010). However, contrary to this research, the findings from the current study suggested that there was no statistical significance between the level of usage of Instagram and self-esteem. Although the null hypothesis was accepted here, the results do support the findings of previous literature. Suggesting that the less time one spends on Instagram, the less likely they the user is to report low levels of self-esteem. The insignificance of these results could be attributed to the fact that the majority of the sample (n=30) reported to spend only 10-30 minutes a day actively engaging on Instagram.

Rosenberg (1965) suggested that self-esteem in young people is greatly associated with their peer relationships. Instagram's main feature is posting photos or videos to one's profile and in return, the user would receive a like, or more followers. However, it can be argued that if users don't receive the feedback that they were intending, it can impact one's levels of self-esteem. This assumption is in line with those of Lup et al (2015). The findings of Valkenburg et al (2005) suggests that Social media users can become too preoccupied with how they appear in the eyes of others. The current study supported these findings of past literature. Although there was a lot of research to suggest the type feedback on Instagram can influence self-esteem, the current study was specifically interested in the correlation between the average number of likes one would receive and the average number of followers on Instagram amongst self-esteem. Because there was a gap in previous literature regarding these variables, the

current study proposed to contribute to this particular area, filling the gap in past research. Hypothesis 2 was interested in the association between the amount of likes and self-esteem whilst hypothesis 4 predicted that there would be a correlation between the number of followers one has on Instagram and self-esteem. Although there was no correlation between the number of likes and self-esteem, a Pearson's correlation found an association between the number of followers and self-esteem, suggesting that the more followers one has, the less likely they are to report low self-esteem. Thus, Supporting the findings of previous research.

Hypothesis 3 aimed to compare the differences between males and females with regards to self-esteem. Gender differences is a very controversial topic with regards to social media. Holowka (2018) highlights that the constant exposure of unrealistic images on social media can have a huge impact on one's confidence, particularly, young women. However, further research in this area found that the exposure of muscular male models on social media can lead male users to report higher levels of dissatisfaction (Barlett et al, 2008). Suggesting that in this day and age, negative connotations of social media is not only common amongst females but also males. In support of these findings, the results of the current study revealed that there was in fact no statistical significance between gender and levels of self-esteem. Supporting the research of Barker (2009). Because Instagram is particularly popular amongst young adults, the results of the current findings suggests that males are just as vulnerable to having low self-esteem as females, supporting the research of Barlett.

The current study did have some limitations that may have implicated the results of these hypothesis. As mentioned above, research suggests that spending more than 2 hours a day on social media can lead to negative consequences. However, the results of the study may have been skewed as the the sample reported to spending short amounts of time actively engaging on Instagram. In addition, the internal reliability of the

Rosenberg self-esteem scale suggested to be low as it measured at .05. Thus, these implications may have been factors that lead to hypothesis 1,2, 3 to be statistically insignificant. Recommendations for future research would be to adopt a larger sample size in order to give a greater variation in range of usage.

4.3 Depression

Past research suggests there to be a positive, significant correlation between the level of usage on social media and mental illness', in particular, depression and anxiety (Bhat, 2014 & Pantic, 2014 & Frison et al, 2016). In relation to mental health amongst young adults, previous studies indicate that Instagram is suggested to be the most damaging form of social media (Gilchrist, 2017). In support of these findings, Bhat (2017), also highlighted that the over use of social networking sites were direct predictors of depression. Additional research conducted by Lup et al (2015) suggested that because Instagram is a photo sharing app, it can cause the user to compare their lives to those of others, eliciting negative feelings such as jealousy and depression. With reference to hypothesis 1 and 2 of the current study, it was suggested that there would be an association between Instagram usage and the number of likes on one's levels of depression. However, in contradiction of past research, the results of the present study indicate that there was no statistical significance between these variables. Thus, accepting the null hypothesis. Although the results of these hypothesis were non-significant, the internal reliability of the depression variable of the DASS proved to be reliable as it measured a Cronbach's alpha of .94. Again the sample size of the current research may have been not have been sufficient in order to get a good variation of these variables, thus further research with a larger sample is encouraged.

4.4 Loneliness

As the popularity of social media is at its height, Pittman & Reich (2015) suggested that this generation is thought to be the loneliest ever. Socializing is crucial in order to maintain good mental health. Because Instagram is readily available as an app, it could potentially give rise to the excessive use, which in turn can have many negative consequences on its users, loneliness being one of them (Yang, 2016). A study by Raacke & Bonds-Raacke (2008) indicated that 35% of people who had a social media account, admitted to spending more than 3 hours a day. In addition to this research, Bargh and McKenna (2004) also highlighted that the individuals who feel lonely are said to lack relationships in the real world. However, bidirectional research suggests that people who experience loneliness, turn to social media in the hopes of elevating feelings of being lonely (Amichai – Hamburger & Ben – Artzi, 2003). Although there is a great deal of research from both perspectives, hypothesis 1 and 2 of the current study suggested that the level of usage and number of likes would correlate to one's levels of loneliness. Despite the fact that the findings highlighted a trend in Instagram usage and loneliness ($P = .08$), the results indicated that there was no significant relationship for both hypotheses. Rejecting the findings of past research. Hypothesis 5, specifically aimed to find a significant correlation between the number of hours spent actively engaging on Instagram and levels of loneliness. In support of past research, the current study found that to be a positive correlation between these variables. Suggesting, that if one were to spend less time engaging on Instagram and more time socializing in the real world, they are less likely to feel lonely. The UCLA loneliness scale of the current study highlighted the strength of the reliability as it measured a Cronbach's Alpha of .87.

4.5 Conclusion

Although the results from hypothesis 1,2, and 3 were insignificant, the analyses suggest some interesting trends. Suggesting that future research surrounding this area should be considered. Hypothesis 4 and 5 highlighted the significance between loneliness and the number of hours one spends on Instagram and the number of followers on self-esteem. supporting previous research. However, although there was a significance, analyses of the data suggest that there was only a positive weak correlation.

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6.0 Appendix**6.1 – Facebook (Instagram) Intensity Scale**

		Strongly disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree
1	Facebook is part of my everyday activity					
2	I am proud to tell people I'm on Facebook					
3	Facebook has become part of my daily routine					
4	I feel out of touch when I haven't logged onto Facebook for a while					
5	I feel I am part of the Facebook community					
6	I would be sorry if Facebook shut down					

Approximately how many TOTAL Facebook friends do you have? _____

In the past week, on average, approximately how much time PER DAY have you spent actively using Facebook? _____

6.2 Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement

“Scoring:

Items 2,5,6,8,9 are reverse scored. Give “Strongly Disagree” 1 point, “Disagree” 2 points, “Agree” 3 points and “Strongly Agree” 4 points. Sum scored for all ten items. Keep scores on a continuous scale. Higher scored indicate higher self-esteem.”

Statement		Strongly Agree	Agree	Disagree	Strongly Disagree
1	I feel that I am a person of worth, at least on an equal plane of others				
2	I feel that I have a number of good qualities				
3	All in all, I am inclined to feel that I am a failure				
4	I am able to do things as well as most other people.				
5	I feel I do not have much to be proud of.				
6	I take a positive attitude towards myself.				
7	On the whole, I am satisfied with myself				
8	I wish I could have more respect for myself.				
9	I certainly feel useless at times.				
10	At times I think I am no good at all.				

6.3 Depression Anxiety Stress Scale "DASS"

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

1	I find it hard to wind down.				
2	I was aware of dryness of my mouth.				
3	I couldn't seem to experience any positive feelings at all.				
4	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).				
5	I found it difficult to work up the initiative to do things.				
6	I tended to over-react to situations.				
7	I experienced trembling (e.g., in the hands).				
8	I felt that I was using a lot of nervous energy.				
9	I was worried about situations in which I might panic and make a fool of myself.				
10	I felt that I had nothing to look forward to.				
11	I found myself getting agitated.				
12	I found it difficult to relax.				
13	I felt down-hearted and blue.				
14	I was intolerant of anything that kept me from getting on with what I was doing.				
15	I felt I was close to panic.				
16	I was unable to become enthusiastic about anything.				
17	I felt I wasn't worth much as a person.				
18	I felt that I was rather touchy.				
19	I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).				
20	I felt scared without any good reason.				
21	I felt that life was meaningless.				

6.4 UCLA Loneliness Scale

Statement	Never	Rarely	Sometim es	Often
1. I feel in tune with the people around me	1	2	3	4
2. I lack companionship	1	2	3	4
3. There is no one I can turn to	1	2	3	4
4. I do not feel alone	1	2	3	4
5. I feel part of a group of friends	1	2	3	4
6. I have a lot in common with the people around me	1	2	3	4
7. I am no longer close to anyone	1	2	3	4
8. My interests and ideas are not shared by those around me	1	2	3	4
9. I am an outgoing person	1	2	3	4
10. There are people I feel close to	1	2	3	4
11. I feel left out	1	2	3	4
12. My social relationships are superficial	1	2	3	4
13. No one really knows me well	1	2	3	4
14. I feel isolated from others	1	2	3	4
15. I can find companionship when I want it	1	2	3	4
16. There are people who really understand me	1	2	3	4
17. I am unhappy being so withdrawn	1	2	3	4
18. People are around me but not with me	1	2	3	4
19. There are people I can talk to	1	2	3	4
20. There are people I can turn to	1	2	3	4

6.5 Debrief Sheet of Questionnaire

Instagram and its Relationship Between Self-esteem and Depression Amongst Young Adults.

My name is Cheyanne El Khouly and I am conducting research in the department of psychology that will be investigating whether Instagram has a positive correlation with self-esteem and levels of depression amongst full time college students (18-25 years old). This research is being conducted as part of my undergraduate program and will be submitted for examination.

You are invited to take part in this study. Participation involves completing and submitting the anonymous survey. While the survey asks some questions that might cause some minor negative feelings, it has been used widely in research. If any of the questions do raise difficult feelings for you, there is information on support services on the final page of the survey.

In order to partake in this survey, all participants must be aged between 18-25 and a full time college student. Please note, that if you are not of age, your questionnaire will be disregarded and the questionnaire will be destroyed. Participation is completely voluntary.

Participation is anonymous and confidential. Thus responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from the survey after the questionnaire has been collected.

The questionnaires will be securely stored and data from the questionnaires will be transferred from the paper record to electronic format and stored on a password protected computer. After the examination process, all data will be destroyed.

It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.

Should you require any further information about the research, please contact:

Cheyenne El Khouly: [REDACTED].

Or

Supervisor – Pauline Hyland: [REDACTED].

Thank you for taking the time to complete this survey.

6.6 Information sheet

Information Sheet

The purpose of this current research is to further understand the direct impact that the popular social media platform 'Instagram' has on young college students. In particular, the study will be investigating if Instagram as a positive correlation between self-esteem and levels of depression.

Within recent years it has become evident that social media platforms such as Instagram can contribute to negative emotions and are more likely to experience anxiety and depression.

If this questionnaire has brought up any negative feelings, please contact:

supportmail@awar4e.ie or contact them on 1800 80 48 48

Info@mentalhealthireland.ie or contact the on (01) 284 1166