#Likes: Positive Instagram Feedback, Purpose in Life and Self-Esteem

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1. Declaration

‘I declare that this thesis that I have submitted to Dublin Business School for the award of BA (Hons) Psychology is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.’

Signed: ZHANNA KALININA

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3. Abstract

Instagram is the fastest growing social network site globally, yet, lamented as the most damaging form of self-presentation online. One hundred and twenty three 18-45 year olds completed an online survey formerly created on Google Forms. The study employed both a between subjects and a cross-sectional correlational design. Psychologically validated self-report questionnaires were utilised to elicit frequency of Instagram use, participant’s levels of self-esteem and overall sense of purpose in life. The principal objective of current study was to explore whether Instagram usage, total number of followers and Likes received are predictors of one’s self-esteem. Further gender differences were investigated to supplement previous literature. Results demonstrated that female users scored significantly lower on self-esteem in contrast to males. The extent to which self-esteem is sensitive to positive feedback was found contingent upon individuals’ sense of purpose. This study uncovers purpose as a moderator of the self-esteem contingencies that primarily attenuates reactivity to positive stimuli.
4. Introduction

4.1 Instagram Overview

In the past decade, the world has evolved into a technologically savvy and dependent society with the Internet practically available at the fingertips. Consequently, the pervasive use of social media has sparked global concerns regarding the effect these websites have on users’ mental health (Greenwood, Perrin & Duggan, 2016; Pantic, 2014). Interestingly, social media usage has been described as more addictive than cigarettes and alcohol (Cramer, 2017). For this reason, the use of social media has risen exponentially to the extent of engaging almost one third of the world’s population, increasing by 13% year-on-year (WeAreSocial, 2018).

Among many, Instagram has acquired an unprecedented popularity since its launch in 2010, at present viewed as one of the fastest growing social media platforms with highest engagement levels (Phua, Jin & Kim, 2017; DeMers, 2017; Duggan, 2015). A defining feature of Instagram is what the name itself conveys, a portmanteau of ‘instant camera’ and a ‘telegram’, therefore creating new content requires posting a photo or video (Lang, 2018). Users can choose from in-built ‘filters’ or editing tools to enrich or ‘beautify’ photos before ‘sharing’ them with the public. Instagram also enables its users to comment upon and ‘like’ others’ photos (or their own) by tapping the available heart icon, albeit, there is no option to ‘dislike’, unlike on Facebook (Einarsdóttir, 2017). Nonetheless, scholars consistently assert that this image driven nature of Instagram thereby encourages presentation of exclusively positive and well-polished ‘labels’ of one’s life (Winter, 2013). For this reason, it is still relatively common for people to maintain public Instagram profiles, enabling other users to ‘follow’ without subsequent affirmation and therefore view, like and comment on photos/videos of people.
they do not know personally, although this is not always reciprocal (Frommer, 2010). Following and/or being followed by strangers is further promoted by ‘hashtags’ or explicit labels used to ‘caption’ photos/videos, therefore enabling all photos/videos affixed with specific hashtag to be more searchable, regardless of the users privacy setting (Donovan, 2014).

Although, often ill-famed as the most damaging self-presentation platform, the prevalence of Instagram is continually expanding with an estimated five-hundred million active daily users (Gilchrist, 2017; Green, 2017). Respectively, in 2017 there were ninety million photos uploaded per day, an increase of fifteen million from 2016 and most pertinent to the present concerns are findings that 68% of Instagram users are female (Aslam, 2018). Furthermore, contemporary research indicates that 32% of the Irish population has an Instagram account, 51% of whom access it daily, making it the second most used social networking site (SNS) after Facebook, in Ireland (Ipsos, 2018).

While there is a mounting body of research on Facebook and its effect on users’ emotional wellbeing (Vandenbosch & Eggermont, 2016; Meier & Gray, 2014), Instagram is still a relatively new area of research with limited psychological theory devoted, although, this is continually on the increase, given the growing popularity of the site (Khouly, 2018; Newcom, 2016). As noted in previous research, there are both positives and negatives associated with the use of SNS (O’Keeffe & Clarke-Pearson, 2011), yet, results rendered are often mixed thus require future more extensive research in the area (Asamoah, 2019). Although, SNS can undoubtedly be a convenient vehicle for self-expression, online activism and above all aid social connectedness (Allen, Gray, McInerney & Waters, 2014), it is however, found largely restrictive of personal liberty and subsequently leads to negative effects on self-report (Vries & Kühne, 2015; Vogel, Rose, Okdie, Eckles & Franz, 2015), social rejection as well as upward social comparison (Vogel, Rose, Roberts & Eckles, 2014).
In today’s online warped world whereby Influencers and Bloggers promote consuming images of their seemingly ‘perfect lives’, users can very often develop a misleading sense of the ‘ideal self’, that if not accomplished, results in increased feelings of envy diminishing one’s sense of purpose and ultimately self-esteem (Einarsdotir, 2017; Cretti, 2015). Consequently, the attribution theory highlights that individual’s tendency to attribute to others’ behaviour for dispositional rather than situational factors (Jones, 1979) would suggest that browsing through flawless photos of celebrities and/or other strangers on Instagram, provides a biased idealized images that may appear to user of being indicative of a lavish lifestyle. Such unjustified conclusions however, make users more vulnerable to judging themselves in relation to the assumed, often unrealistic lives of others, which in turn can trigger feelings of distress (Chou & Edge, 2012). The non-reciprocal and public nature of sharing embellished photos may also represent a combination of features that are likely to trigger negative feelings about the self, in particular for users that follow mostly Influencers and celebrities (Lup, Trub & Rosenthal, 2015).

Now that social media has developed into a more accessible online platform, intimate self-expression not only has become central aspect of many people’s everyday lives, but raised major research concerns. It is questioned whether such deliberate self-expression, thereby seeking validation online, has any negative effects on users’ overall sense of purpose and/or self-concept. Since, Instagram is a newer social media platform that blossomed more recently, there seems to be a lack of research particularly in Ireland regarding Instagram and its potential negative implications on its subsequent users mental health. Therefore, the current study proposes to fill in this gap by surveying approximately 130 participants that will vary both in age (18-55+) and gender with the intention of contributing some novel research findings in the area.
Self-esteem relates to an overall evaluation of an individual’s personal worthiness or value that is a product of perceived competency in domains of personal importance. The concept of the looking-glass self (Cooley, 1902) expresses the tendency for one to understand oneself through the perception which others may hold of them. Essentially, how one views oneself and acts within the context of society heavily depends on what the individual believes others think of them. Therefore identity, or self, is the result of learning to apprehend oneself through what perceived to be perceptions of others (Smith, Mackie & Claypool, 2014). Arguably, SNS very much reflects the mechanisms of the looking-glass self, as ostensibly provide various ‘mirrors’ in which users present themselves and thus perceive judgements of others based on overall Likes and follows. With the exponential rise of social media a new concept has emerged within psychology domain, known as the ‘cyber self’, a version one wishes to portray online and exclusively to the cyber community, wherein users value is based on virtual feedback. Consequently, Aiken (2016) further explains, that ‘selfies’ posted predominantly “ask a question of their audience: Like me like this?” Unlike the ‘real’ social self, different forms of media allow judgements to be clearly posted, albeit, are not always positive, hence often carry negative connotations on the receiver.

As humans inevitably crave social acceptance, it is undoubtedly a fundamental aspect to life. However, the inexhaustible pressure to be socially accepted or ‘liked’ can adversely affect the self-esteem of many, as SNS relentlessly rate its users (Flaxington, 2016; Dewall, 2011). As communication on Instagram is visually decontextualized, its emphasis on idealized airbrushed self-images can be a determining factor in one’s confidence and subsequently self-esteem (Lup et al., 2015; Pittman & Reich, 2016). Therefore, active Instagram users are often, yet unconsciously, seek approval and thus validation via interpersonal feedback, which predominantly are Likes obtained on intrinsically intimate personal photos or videos. Primari-
ly, quality of feedback plays a crucial role to one’s ‘cyber self’, with positive feedback enhancing self-esteem and well-being (Dion, 2016) and negative feedback producing the opposite result (Rosen et al., 2013). However, excessively seeking validation online can result in what has been referred to as “imaginative audience behaviour” (Valkenburg, Peter & Schouten, 2006), whereby users exaggerate the extent to which others are viewing and evaluating their appearance leading to increased preoccupation with how one appears in the eyes of the others.

The instant surge of self-esteem that comes with the ubiquitous ‘thumbs-up’ has cultivated an epidemic need for social affirmation, as Instagram and other SNS offer more ways for friends to endorse photos and/or videos. The simplicity of liking posted material has made doing so extraordinarily popular, with almost 4.3 billion Likes generated daily and half of all Instagram users liking at least one post they view every day (Aslam, 2018). As the prevalence of media sharing online is at its height, many questions remain regarding the antecedent conditions for this behaviour (Stefanone, Lackaff & Rosen, 2011). However, what effect does this proliferation of Likes have on the receiver? Accumulating evidence suggests a positive influence. On one hand, receiving virtual affirmation corresponds positively with self-esteem and subjective well-being, albeit negatively with loneliness (Bazarova, Choi, Schwanda Sošik, Cosley & Whitlock, 2015; Oh, Ozkaya & LaRose, 2014, Burke, Marlow & Lento, 2010, Valkenburg, Peter & Schouten, 2006). On the other hand, conflicting evidence asserts that relying on affirmation from others in order to feel good about oneself nurtures contingent self-worth that can undermine well-being over time (Burrow & Rainone, 2017). In line with these assertions, previous research indicates that seeking self-affirmation in acknowledgement from others is reported as primary drive of social media use (Sung, Lee, Kim & Choi, 2016; Toma & Hancock, 2013; Stefanone et al., 2011). Nevertheless, when exactly do we self-verify and when self-enhance? The primary concern of this research is to examine the
extent to which virtual Likes influence one’s relational value. Central to the present concerns are findings that self-esteem is calibrated to cues of inclusion or rejection within the social environment (Zell & Moeller, 2018; Sherman, Payton, Hernandez, Greenfield & Dapretto, 2016; Greitemeyer, Mugge & Bollermann, 2014). Notably, receiving positive feedback on SNS can signal acceptance within social environment and thus, enhance one’s self-esteem (Burrow & Rainone, 2017). As predicted by sociometer theory (Leary & Baumeister, 2000; Leary & Downs, 1995) self-esteem is elevated when individuals are or assume being included, accepted or deemed popular by others (Zell & Moeller, 2018; Reitz, Motti-Stefanidi & Asendorpf, 2016). Consistent with these assertions, previous research confirms that perceiving that many people are viewing one’s status updates (Manago, Taylor & Greenfield, 2012) and the number of responses received to one’s last three status updates (Greitemeyer et al., 2014) have been linked with higher self-esteem. On the contrary, being assigned to receive no response to one’s status updates (Tobin, Vanman, Verreyne & Saeri, 2015) or to view another user’s profile that has received many responses (Vogel, Rose, Robert & Eckles, 2014) threatens the need to belong, thus reducing one’s self-esteem and meaningful existence.

Research, to date that have examined an association between self-esteem and the use of SNS consistently report that individuals with low self-esteem present higher engagement with social media in order to enhance their self-image (Blanchio, Przepiorka & Rudnicka, 2016; Hawi & Samaha, 2016; Gonzales & Hancock, 2011). Conversely, a bidirectional research has shown that the more time spent on SNS, the more likely users report negative associative symptoms such as depression or low self-esteem (Pantic, 2014). Thus, active usage such as posting photos, liking and commenting on others posted items, can also be said to be a determining factor of lower wellbeing (Yang, 2016). On the contrary, passive use (i.e., lurking) characterised as browsing others’ profiles without posting one’s own new content, was found more detrimental among the two types of SNS use (Escobar-Viera et al., 2018). Alt-
hough this activity appears harmless, research has found that this particular type of usage is likely to decrease an individual’s overall wellbeing (Frison & Eggermont, 2016). Consequently, passively browsing others’ profiles displaying photos of vacations or social events to which one was not invited often triggers immense feelings of resentment, envy and loneliness (Krasnova et al., 2013).

Moreover, gender differences play significant role with Instagram use, therefore reported as the dominant predictor of platform overuse (Sheldon & Bryant, 2016). Respectively, a large-scale study consisting of 23,592 social media users namely, Facebook, Instagram and Twitter, confirmed that addictive social media use is linked to being female, high in narcissism and low in trait self-esteem (Andreassen, Pallesen & Griffiths, 2016; Hawi & Samaha, 2017). In, addition, Rosen, Stefanone and Lackaff (2010) found that women share considerably more photos on SNS and spend almost three hours more per week on social platforms than their male counterparts with an average of 8.9 hours across seven-day period. Similar research in the area also suggests that females are found to report passive use while males respectively, engage in more active social media use (Frison & Eggermont, 2016). As noted, past work has primarily showcased that passive SNS use is detrimental to one’s psychological wellbeing (Escobar-Viera et al., 2018) for this reason it can be argued that female users’ report on lower trait self-esteem is a consequence of their passive activity online.

Another objective of this study is to determine any potential gender differences regarding Instagram use and more precisely its effect on users’ emotional wellbeing. Although past research consistently reveals that females are more vulnerable online users (Sherlock & Wagstaff, 2018; Holowka, 2018; Guðmundsdóttir, 2017) present study aims to advance understanding in this area. By this reasoning, there is growing empirical evidence to suggest that male users are just as vulnerable to reporting low self-esteem. Consequently, recent study conducted by Barlett and colleagues (2008) has found that males reported significantly higher
levels of dissatisfaction with their appearance when exposed to images of muscular male models. Further research in this area has revealed conflicting results indicating no major differences between gender and levels of SNS use (Barker, 2009).

4.3 Self-Esteem and Purpose in Life

Research on self-esteem has had a long, prolific history in the field of psychology. Notwithstanding, several reasons could be cited for the topic’s popularity, yet, predominantly self-esteem has been shown to have a pervasive and compelling impact on human cognition and more precisely motivation. Consequently, self-esteem is critical to the development and maintenance of mental health as well as overall quality of life (Pantic, 2014). SNS, primarily Instagram provides rich opportunities for social comparison of one’s presumptuous lavish life, as its main feature is photo sharing. However, as previously noted, the constant exposure to unrealistic and airbrushed images can have a massive effect on one’s confidence, thus destructive to personal liberty and self-esteem.

It should be noted, however, the extent to which self-esteem depend upon perceptions of one’s relational value can be confined by other external factors (Guay, Delisle & Fernet, 2008). Consequently, past research highlights that social inclusion is a much weaker predictor of self-esteem among individuals driven by strong personal motivation and prosocial goals (Burrow & Rainone, 2017; McKnight & Kashdan, 2009), that is individuals with marked sense of purpose in life. According to McKnight and Kashdan (2009) purpose refers to a “self-organizing life aim that organizes and stimulates goals, manages behaviours” (p. 242) and most importantly provides a sense of meaning or existence. Respectively, purpose directs daily decisions and subsequent life goals by guiding the use of finite personal resources. Consequently, living in accord with one’s purpose, nevertheless, offers that individual a self-
sustaining source of meaning through goal pursuit and goal attainment (Deci & Ryan, 2000). Moreover, it is assumed that purpose is woven into one’s identity and behaviour as a central, predominant theme (Sheldon, Ryan & Deci, 2004). Although, initial theories of purpose frequently describe it as a self-focused pursuit, contemporary research mandate that purpose must involve an intention to contribute to the world that is beyond the self (Burrow & Spreng, 2016). The presence of a purpose, therefore acts as a means of adapting to threatening conditions (Damon, Menon, & Cotton-Bronk, 2003) rather than a motivator of good deeds and/or galvanizer of character growth.

Damon and colleagues (2003) assert that individuals scoring higher on purpose should exhibit less sensitivity to positive social media feedback as they are already guided by a sense of connection with and service to others. Nevertheless, this hypothesis has been further supported by previous studies to report that individuals with strong civic and prosocial orientations were found to use Facebook explicitly for informational reasons rather than status enhancement or socialization (Park, Kee & Valenzuela, 2009). Similar research in this area also suggests that emotional consequences of social media use are found most pronounced when people lack a sense of meaning or existence (Sagioglou & Greitemeyer, 2014). Thereby, evoking one’s sense of personal motivation and prosocial goals may in turn decouple self-esteem from social feedback (Damon et al., 2003). While previous research has consistently rendered that purposeful individuals present substantially higher self-esteem than non-purposeful (Scheier et al., 2006) a conceptual distinction should be drawn between the two defiant constructs. Consequently, whereas self-esteem refers to one’s appraisals of his or her value (Leary & Baumeister, 2000), purpose conversely, represent a prospective life aim that is already valued (Burrow & Rainone, 2017).

Recent research has found that adolescents who viewed photographs posted on Instagram that have elicited the most number of Likes demonstrated greater activation of neural
regions involved in reward processing. Consequently, photos presented with more Likes were more frequently liked by participants compared with photos with fewer Likes (Sherman, Payton, Hernandez, Greenfield & Dapretto, 2016). Nonetheless, if receiving or observing positive social media feedback (i.e., Likes) activates reward processing regions, then lessening responsiveness, on the other hand, requires prohibiting reactions to them as social endorsements. Interestingly, contemporary research suggests that purpose in life inhibits impulsivity to reward seeking (Burrow & Spreng, 2016). Consequently, greater inhibition may facilitate a mechanism by which purpose contours the impact of social appraisals on self-esteem. Nevertheless, a bidirectional study, “How many Likes did I get” showcased that high sense of purpose limits reactivity to positive feedback on social media hence acts as a mediator between Likes received and self-esteem (Burrow & Rainone, 2017). Although, receiving greater number of Likes on SNS elevated one’s self-esteem, fewer Likes was found as a causal factor of significant decline. Notwithstanding, for individuals who identified a strong personal sense of purpose, this relationship has diminished. That is, individuals who reported a sense of personal meaning and value in life were not as malleable to the number of Likes received, therefore were found less contingent upon social approval.

Consequently, the objective of current research is to determine whether sense of purpose in life would moderate the effects of positive social media feedback (i.e., number of Likes received) on self-esteem. Precisely, this effect should manifest primarily for individuals who are lacking purpose. On this basis, it is hypothesized that self-esteem of purposeful individuals should be less contingent on social approval hence should score higher on self-report. Therefore, confirmation that purpose attenuates reactivity to positive stimuli, in this case receiving virtual Likes, would therefore broaden future understanding of the benefits of purpose as a source of psychological self-regulation and homeostasis.
4.4 Rationale and Research Aims

The current study aims to explore the relationship between self-esteem, total number of Likes, total followers and Instagram intensity. It also aims to situate sense of purpose in life as a moderator of the self-esteem contingencies and positive social media feedback (i.e., Likes). It also aims to investigate any potential gender differences regarding Instagram use and thereby to further analyse male and female users' on levels of self-esteem. The primary objective of this research is to determine if female Instagram users are more likely to exhibit lower self-esteem as opposed to male users that was consistently established by previous research. Consequently, exclusively Instagram users were sought for participation. As Instagram is still a relatively new social media platform, there is not yet a large body of literature available (Aslam, 2018) regarding its effects on subsequent users and society as a whole. Nonetheless, due to its escalating popularity, it is an area which greatly warrants further research. The current study aims to add to the existing literature and ultimately propose areas for further research.

4.5 Hypotheses

The research hypotheses for the current study are as follows. It is hypothesized that:-

**Hypothesis 1**

There will be a statistically significant difference in male and female Instagram user’s levels of self-esteem.

**Hypothesis 2**
Sense of purpose will mediate the relationship between self-esteem and the number of Likes one received.

**Hypothesis 3**

There will be a significant correlation between the number of followers one has and self-esteem.

**Hypothesis 4**

The number of hours spent using Instagram correlates with low self-esteem.
5. Methodology

5.1 Participants

Descriptive statistics were used to gather information surrounding the sample. A total of 123 participants took part in the current study. The sample contained 52% female (N = 64), 47.2% male (N = 58) and 0.8% (N = 1) identified as ‘other’. The sample ranged in age from 18-45+ with most participants found in the 18-24 age category (N = 80). The 55+ age category was omitted from the study as no respondents identified. The target population for this study was exclusively Instagram users over 18 years of age. Simple random sampling technique was employed to access the participants. The participants were accessed online with a self-report questionnaire being posted on Instagram and Facebook. The researcher clearly stated that all participation was completely anonymous and voluntary with no incentives being offered. Participants were also made aware of this information within the Instagram and Facebook status and again on the cover page of the survey.

5.2 Design

The current study employed a between subjects, cross-sectional, non-experimental correlational design that aimed to assess the relationship between the variables of hypotheses 2, 3 and 4. With reference to hypothesis 1, a differential design was used to investigate any potential gender differences among the sample. The demographic questions such as age and gender were used to compare and establish the differences, if any, in the predictor and criterion variables.

Hypothesis 1 employed a differential design aimed to assess whether there was a statistically significant difference between male and female Instagram users (IV) in relation to their levels of self-esteem (DV).
Hypothesis 2 used a correlational design, aimed to investigate an association between levels of self-esteem (PV) and the number of Likes one would receive on Instagram (PV) as predictors of one’s sense of purpose in life (CV).

Hypothesis 3, adapted a correlational design, which focused around the premise that the number of followers one has on Instagram (PV) would significantly correlate to one’s levels of self-esteem (CV). Therefore a non-parametric test, Spearman’s rho was used to measure this association.

Finally, hypothesis 4 also used a non-parametric test in order to measure the strength of association between the number of hours spent using Instagram (PV) and the participants’ levels of self-esteem (CV).

5.3 Materials

The materials used for this study consisted of a 42-item questionnaire created on Google Forms. The first page contained an introduction which informed participants of the inclusion criteria, right to withdraw, confidentiality and anonymity of responses. On this page, participants were asked to confirm that they were an Instagram user and over 18 before proceeding with the survey. Participants were also asked to tick “Yes” if agreed with the outlined terms and conditions, therefore to provide informed consent as to participation in current research (see Appendix A).

The demographic questions were asked to clarify participants’ age and gender (see Appendix B). There were additional questions to ascertain Instagram duration or frequency of use, number of Instagram followers, number of Likes received on average and whether they remove the post that does not receive the desired number of Likes.

The following standardised questionnaires were used to measure the variables earlier specified: the Rosenberg’s Self-Esteem Scale (Rosenberg, M., 1965) (see Appendix C) Face-
book Intensity Scale (Ellison, N. B., Steinfield, C., & Lampe, C. 2007) (see Appendix D) and the Purpose in Life Scale (Crumbaugh, J., & Maholick, L. 1964) (see Appendix E).

5.3.1 Measures

C) Rosenberg’s Self-Esteem Scale (Rosenberg, 1965)

The Rosenberg Self-Esteem Scale (RSES) is a 10 item scale that measures global self-worth and self-acceptance by evaluating both positive and negative feelings about oneself, e.g. “I feel that I am a person of worth, at least on an equal plane with others”. The scale has also been described as ‘uni-dimensional’. All items are answered using a 4-point Likert scale with the scores ranging from (1) strongly agree to (4) strongly disagree. However it is important to note that items 1, 2, 4, 6 and 7 are reverse scored. The original reliability of the scale is .92 and it has proven to be highly reliable and consistent as well as convergent and discriminant in validity (Rosenberg, 1965). The total ranges from 0-30 with all scores being kept on a continuous scale. Scores within 15-25 are considered normal range; anything higher indicates high levels of self-esteem and scores below 15 suggest low self-esteem.

D) Facebook Intensity Scale (modified for use with Instagram) (Ellison et al., 2007)

The Facebook Intensity Scale (FIS) has been adapted for use with Instagram since there is no reliable measure established to date. The researcher modified the scale by replacing the word ‘Facebook’ with ‘Instagram’. The questionnaire consists of 8 items to examine Instagram use and feelings towards Instagram. The measure includes two self-reported assessments of Instagram behaviour designed to assess emotional connectedness to the site (e.g. “I feel out of touch when I haven’t logged onto Instagram for a while”) and how individuals have integrated Instagram into their daily activities (e.g. “Instagram has become part of my daily routine”). The responses are rated on a 5-point Likert scale ranging from (1) strongly
disagree to (5) strongly agree. The Instagram intensity score can be computed by calculating the mean of all of the items in the scale. The measure also contains a mixture of 4 open and closed-ended questions. The first question aimed to assess the duration or frequency of Instagram use per day with the responses ranging from (0) less than 2 hours/day to (5) more than 9 hours/day. The second question was concerned with approximately how many Instagram followers the participant has with the responses ranging from (0) less than 100 to (5) more than 400. The third question was asked as an open-ended question in order to measure the average number of Likes one would receive on a photo. Finally, the last question was concerned with whether the participant removes their photo if it does not receive the desired number of Likes. The reliability and validity of this measure has proven to be high with a Cronbach’s alpha of .89 (Warner, 2009).

E) Purpose in Life Scale (Crumbaugh & Maholick, 1964)

The Purpose in Life Scale (PIL) is a 20-item scale designed to measure an individual’s experience of meaning and purpose in life. This self-report measure aims to assess individual attitudes and beliefs that include statements such as, “I am usually”, with response options that range from (1) completely bored to (5) exuberant, enthusiastic, and “In life I have, (1) no goals or aims at all to (5) very clear goals and aims. The respondents are asked to rate each item on a 5-point Likert scale ranging from (1) low purpose to (5) high purpose. The total scale score is obtained by summing all item scores that ranges from 20-100. The raw scores of 73 and above are typically interpreted as high purpose, scores of 51-72 reflect moderate levels of purpose, and scores of 50 and below suggest a lack of life purpose or may be an indicator of significant existential concerns. The PIL scale has been used extensively in research presenting high ratings in both reliability and validity (Law, 2012; α = .88).
5.3.2 Data Analysis

The data was collected by means of self-report questionnaire created on Google Forms. The data retrieved via Google Forms was downloaded onto Microsoft Excel file, coded and imported onto the statistical software programme SPSS version 25. The SPSS Statistics 25 was used to further recode and prepare the data obtained for statistical analyses.

5.4 Procedure

Foremost, the research project received ethical approval from the Dublin Business School Ethics Committee. The questionnaire was then designed and created using Google Forms. In order to gain access to the target sample, the researcher posted a link to the Google Forms survey on their personal Instagram and Facebook profiles. Along with the link, there was a brief message that detailed the purpose of the research study and participation requirements. The message firmly emphasized that in order to take part all participants must be over 18 years of age and own an active Instagram account. Once clicking into the link, the participants were presented with an information page of the survey whereby the participants were debriefed in more detail (see Appendix A). The information page explained that all surveys were anonymous and strictly confidential therefore no one survey could be attributed to any one participant in particular. It was also made very clear that by completing and submitting the survey meant that they are consenting to participate in the study. For this reason, it was not possible to withdraw from participation once the survey has been collected. The participants were provided with clear and concise instructions on how to answer each measurement within the questionnaire (see Appendices C-E). In total, the entire survey took approximately 5-10 minutes to complete. Following completion and submission of the survey participants were thanked for their cooperation. In the unlikely event that the survey has raised any negative or upsetting feelings for the participants, contact details for support services such as
AWARE and Samaritans were attached on the final page. Contact details of the researcher and the study supervisor were also included should any concerns or questions arise for the participants regarding the study (see Appendix F). Following completion of the questionnaires by the required number of participants the link to the questionnaire was closed and the data was no longer collected. The responses from the survey were downloaded and transferred onto Microsoft Excel file, coded, then imported onto SPSS Statistics 25 for further recoding and analysis. The variables were then computed to appropriate measurement scale in order to run statistical tests required for analysis and interpretation of results obtained.

5.4.1 Ethics

First an approval from the DBS Ethics Committee was obtained. Research was conducted in compliance with DBS Ethical Guidelines for Research with Human Participants and also in accordance with general PSI Code of Professional Ethics. The participants were debriefed prior to participation in research study as no deception was employed. It was clearly stated that all participation is completely voluntary and strictly confidential, thus anonymity of responses was guaranteed. Storage and dissemination of data obtained was also discussed. Participants were asked to provide informed consent if agreed with terms and conditions of study. On completion, contact details of support services were included on final page of survey for any participant affected by elements of the study.
6. Results

6.1 Descriptive Statistics

As noted earlier in the participant section, descriptive statistics were used within the analysis to examine the variability and describe the distribution of demographic variables, namely age and gender. The summarised statistics indicated that 64 females (52%) and 58 males (47.2%) respectively, participated in the survey. Giving a total of 122 respondents as one individual whom identified as “other” was omitted from analysis in order to satisfy the criteria of research hypothesis that aimed to investigate any potential sex differences that are exclusively between male and female Instagram users.

![Gender breakdown as per age group category](image)

Figure 1: Gender breakdown as per age group category

The clustered bar chart above indicates that the sample ranged in age from 18-45+ with most participants found in the 18-24 age category ($N = 80$). It is also displayed that
there are marginally more female ($N = 64$) respondents than male ($N = 58$). Descriptive statistics were also used to delineate central tendencies of the categorical variables concerned within the current study, in particular, the mean, standard deviation and the reliability of each measure used was analysed (see Table 1).

Table 1: Descriptive frequencies and reliability of Rosenberg Self-Esteem Scale, Instagram Intensity Scale and Purpose in Life Scale

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td>28.78</td>
<td>6.21</td>
<td>.92</td>
</tr>
<tr>
<td>Instagram Intensity</td>
<td>24.50</td>
<td>7.97</td>
<td>.89</td>
</tr>
<tr>
<td>Purpose in Life</td>
<td>71.41</td>
<td>14.39</td>
<td>.93</td>
</tr>
</tbody>
</table>

With reference to Table 1, the Rosenberg Self-Esteem Scale indicated a mean result of 28.78, standard deviation of 6.21 and a Cronbach’s Alpha value of .92. This suggests high reliability and internal consistency of the scale. The current study adapted the Facebook Intensity Scale in order to measure Instagram Intensity which displayed a mean score of 24.50, standard deviation of 7.97 and a reliability of .89. As values above .8 are preferable, the Instagram Intensity Scale within this sample demonstrated a very good internal reliability. Finally, sense of purpose in life was measured using Purpose in Life Scale that resulted in a mean score of 71.41, standard deviation of 14.39 and a Cronbach’s Alpha value of .93 suggesting high reliability of the scale.
Table 2: “*In the past week, on average, approximately how much time per day have you spent actively using Instagram?*”

<table>
<thead>
<tr>
<th>Time/day</th>
<th>Frequency</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 hours</td>
<td>77</td>
<td>62.6</td>
</tr>
<tr>
<td>3-4 hours</td>
<td>26</td>
<td>21.1</td>
</tr>
<tr>
<td>5-6 hours</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>7-8 hours</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td>More than 9 hours</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>123</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Descriptive statistics were used in order to first assess the average level of usage on Instagram (*see Table 2*). The frequency results indicate that most respondents (*N* = 77; 62.6%) report spending on average, less than 2 hours per day using the site, respectively 21.1% spending 3-4 hours, 6.5% spending 5-6 hours, 5.7% spending 7-8 hours and 4.1% (*N* = 5) of participants admitted to spending more than 9 hours per day actively engaging in Instagram.
6.2 Inferential Statistics

The analysis regarding the current study was based around the premise of 4 central hypotheses. The current study used an Independent Samples T-test, Multiple Regression analysis and Spearman’s rho correlations to examine any potential differences, and/or associations between the variables earlier specified. An alpha value or significance level of .05 was utilised across all statistical tests.

Hypothesis 1

Independent samples t-test was carried out in order to compare gender differences in relation to one’s self-esteem. In particular, the current study hypothesized that there will be a statistically significant difference between female Instagram user’s levels of self-esteem as opposed to males. The assumption of homogeneity of variances was tested and satisfied via Levene’s test \( F(120) = .57, p = .452 \). The results indicated that males (M = 30.16, SD = 6.33) scored significantly higher on self-esteem than females (M = 27.55, SD = 5.93) with small mean differences identified (\( \bar{x} = -2.61 \); see Figure 2). The 95% confidence limits also show that the population mean difference of the variables lies between -4.80 and -.41. Overall, an independent samples t-test found that there was a statistically significant difference between self-esteem of males and females \( t(120) = -2.35, p = .020; n^2 = .43 \). Therefore, the null hypothesis can be rejected.
Hypothesis 2

A multiple regression analysis was conducted to investigate whether self-esteem and the number of Likes received could significantly predict participants’ overall sense of purpose in life. The results of the regression indicated that the model explained 58% of the variance and that the model was a significant predictor of purpose, ($R^2 = .58$, $F(2, 120) = 85.00$, $p < .001$). While it was found that self-esteem contributed significantly to the model ($\beta = .76$, $p < .001$, CI [95%] 1.50, 2.04), number of Likes received had no association ($\beta = .04$, $p = .499$, CI [95%] -.01, .01). As a result, among the two variables self-esteem was the stronger predictor of the model and thus moderate positive correlation was observed (see Figure 3). Therefore, null hypothesis was rejected.
Hypothesis 3

A Spearman’s rho correlation was used to test if there was an association between the number of Instagram followers and self-esteem. Specifically, the current study hypothesized that there will be a significant correlation between the number of followers one has and low self-esteem. Results indicated that there in fact was no statistical significance between the number of followers one has on Instagram and self-esteem ($r_s (123) = .06, p = .489$).

Hypothesis 4

A non-parametric test was also carried out to test if the number of hours spent using Instagram correlated with one’s level of self-esteem. In particular, the current study hypothesized that high Instagram usage correlates with low self-esteem. However, a spearman’s rho
correlation found that there was no significant relationship between level of Instagram usage and self-esteem ($r_s (123) = -.11, p = .223$). For this reason the null hypothesis is accepted.
6.3 Additional Analysis

Additional analysis was carried out to further investigate gender differences regarding Instagram use and subsequent effect it has on its users. Specifically, the current study aims to identify other potential factors that may contribute to lower self-esteem of female users that was previously established in hypothesis 1. Overall, the study seeks to examine why females are more affected by Instagram in comparison to male users on measures of self-esteem.

a) Gender and Sense of Purpose in Life

An additional independent samples t-test was performed to compare gender differences in relation to one’s sense of purpose in life. Specifically, the study hypothesized that female users’ sense of purpose will be significantly lower than that of males. As predicted, results from an independent samples t-test indicated that males (M = 74.38, SD = 14.83) scored significantly higher on sense of purpose in life than females (M = 68.94, SD = 13.58; see Figure 4) with mean difference of -5.44. Levene’s test for equality of variances was confirmed (F (120) = 1.43, p = .235). The 95% confidence limits also show that the population mean difference of the variables lies between -10.54 and -.35. An independent samples t-test found that there was a statistically significant difference between purpose in life of males and females (t (120) = -2.12, p = .036; $n^2 = .38$). Therefore, the null hypothesis is rejected.
b) Gender and Likes Received

Independent samples t-test was carried out to test whether number of Likes received on a photo would differ significantly among male and female Instagram users. Specifically, the study aimed to further investigate whether the number of Likes received would be a predictor of female users’ level of self-esteem. Although females (M = 119.16, SD = 168.02) presented higher mean scores on Likes received than males (M = 111.29, SD = 116.17; see Figure 5) overall, t-test results were found insignificant ($t (120) = .26, p = .796, CI [95%] - 52.13, 67.86$). Therefore, the null hypothesis is accepted.
c) Gender and Instagram Intensity

Finally, a non-parametric test was used in order to compare gender differences in relation to Instagram use. The Mann-Whitney U test revealed that there was no significant difference on number of hours spent using Instagram across gender ($z = -1.50, p = .134$). However, as shown in Table 2, females ($M = 65.15$) scored significantly higher than males ($M = 57.15$) on number of hours spent per day using Instagram. Although this may indicate that females present greater engagement with the site, overall results were found inconclusive. Thus the null hypothesis is accepted.

Figure 5: *Gender mean differences on number of Likes received*
Table 3: Descriptive frequencies and test ranks of male and female Instagram daily use

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total time/day using Instagram</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>65.15</td>
<td>4188.50</td>
</tr>
<tr>
<td>Male</td>
<td>58</td>
<td>57.15</td>
<td>3314.50</td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Discussion

7.1 Overview

The aim of the current study was to investigate to date, most prominent social media platform, Instagram and the possible negative connotations that may arise within its users. To achieve this goal the researcher adapted the Facebook Intensity Scale (FIS) and modified for explicit use with Instagram. Despite this modification, the Instagram Intensity Scale’s (IIS) reliability analysis showed that its internal consistency was very good and above the recommended value. The population interest within the current study was exclusively Instagram users ranging in age from 18 to 45+.

The principal objective of this study was to explore the relationship between self-esteem, number of Likes received and gender, and therefore to investigate whether high sense of purpose in life would act as a moderator in the relationship between the variables specified. In addition, the researcher was particularly interested in the possible correlations between the level of usage and the number of followers among users’ level of self-esteem. The study also aimed to show a potential difference between male and female users’ levels of self-esteem. As a result, an additional analysis was carried out to further investigate why females were more affected by SNS use. Therefore the current study aimed to build upon previous research findings that found social media use as a contributory factor of low self-esteem in females.

Overall, the present study rendered some significant findings that are not only in line with previous research but are novel for future application, which will be discussed in more detail below.
7.2 Interpretation of Results

Although a mounting body of research was devoted to Instagram and its influence on users’ self-esteem, results rendered were often mixed and highly controversial (Stefanone et al., 2011). Nonetheless, the current study hypothesized that there will be a strong association regarding Instagram use and one’s level of self-esteem. Notably, this effect will be dominated by other variables such as time spent engaging on Instagram, number of followers, Likes received, and predominantly gender as well as overall sense of purpose in one’s life.

While Instagram can be beneficial in terms of community engagement, online activism, identity development and social connectedness (Allen et al., 2014), the current study however, showcased the detrimental effects it has on its users psychological wellbeing. In line with previous assertions (Escobar-Viera et al., 2018; Hawi & Samaha, 2017) the results of study indicate that Instagram use was found to significantly decrease one’s levels of self-esteem. However, there is emerging accumulating evidence to suggest that young adults are more subjected to negative feelings associated with SNS use as opposed to older users (Frison & Eggermont, 2016; Lup et al., 2015). Therefore, since the majority of respondents were in the younger age category this may have obscured the overall result. It may also be assumed that young people have more quickly accustomed to being constantly ‘online’, and appear to adapt to new technologies faster than their older counterparts.

Notwithstanding, gender differences remain a contentious research topic with regards to social media and its effects on subsequent users. Therefore the current study proposed to contribute to this particular area and hence fill in the gap in previous literature. Accordingly, with reference to hypothesis 1, it was found that females scored significantly lower on self-esteem than male users, which is in congruence with other studies’ results (Sherlock & Wagstaff, 2018; Guðmundsdóttir, 2017; Andreassen et al., 2017). The constant exposure to unrealistic images of celebrities lavish life can inevitably threaten one’s confidence and overall
need to belong, albeit this effect primarily, is reported to be more prevalent among young female users (Holowka, 2018). Consistent with this line of thinking, past research highlights that female users’ report on lower trait self-esteem is a consequence of their passive engagement online (Escobar-Viera et al., 2018; Frison & Eggermont, 2016).

Several experiments and field studies confirm that the level of SNS usage, specifically individuals that spend more than 2 hours a day actively engaging on social media, are more likely to report psychological distress, in particular lower self-esteem (Macmillan, 2017; Mehizadeh, 2010; Pantic, 2014). Contrary to previous assertions, the findings from the current study argue that there was no statistical significance between the level of Instagram usage and self-esteem. However, the insignificance of these results could be attributed to the fact that the majority of the sample ($N = 77$) reported to spend less than 2 hours a day actively engaging on Instagram, that may also be based on social desirability bias of respondents. Although the null hypothesis was accepted, findings from additional analysis reveal that females ($M = 65.15$) spend considerably more time engaging on Instagram than male ($M = 57.15$) users. This result is in accordance with other studies that showed that addictive use of social media is more prevalent among females than males (Andreassen et al., 2017) and may also be indicative of that female users are more inclined to develop addictive behaviours towards activities involving social interaction (Hawi & Samaha, 2017; Andreassen et al., 2016; Rosen et al., 2010).

As previously noted, communication on Instagram is visually decontextualized, hence its main feature requires posting intrinsically personal photos or videos in an effort to promote other users to Like the content or follow one’s profile. The quality of feedback received is therefore crucial to one’s identity development online (i.e., cyber-self) with positive feedback enhancing self-esteem and wellbeing (Dion, 2016; Tobin & Chulpaiboon, 2016) and negative feedback producing the opposite result (Rosen et al., 2013). However, it can be ar-
gued, that if users don’t receive the feedback that they were intending, it can impact one’s self-esteem greatly (Zell & Moeller, 2017). The present study was specifically interested in the correlation between the average number of followers and number of Likes received on Instagram in relation to one’s level of self-esteem. Nonetheless, a Spearman’s Rho correlation found no association between the number of followers one has on Instagram and self-esteem, therefore supporting previous findings that the more followers one has, the less likely they are to report low self-esteem (Lup et al., 2015). Although there was no correlation established between the number of Likes and self-esteem likewise, additional analysis has shown that female (M = 119.16) users reported to receive more Likes on average than their male (M = 111.29) counterparts. Such reporting, however, is susceptible to bias due to social desirability or recall limitations, potentially leading to faulty estimates. Arguably, this may also be due to the fact that women, in general, are found to share considerably more photos on SNS when compared to males (Rosen et al., 2010; Mehdizadeh, 2010).

Respectively, it was also found that 13% of respondents remove their photo/video if the desired number of Likes is not received. In support of these findings, contemporary research asserts that curating one’s Instagram profile can be viewed as a source of self-affirmation (Toma & Hancock, 2013). Consistent with this view, past research suggests that social media users very often develop what is referred to as “imaginative audience behaviour” thereby, are too preoccupied with how they appear in the eyes of others (Valkenburg et al., 2005).

There is emerging empirical evidence to suggest that social inclusion is a much weaker predictor of self-esteem among individuals driven by strong sense of purpose in life (McKnight & Kashdan, 2009). That is purposeful individuals have higher self-esteem, thus show less sensitivity to positive social media feedback (Burrow & Spreng, 2016; Scheier et al., 2006; Damon et al., 2003). Consequently, the current study reveals that having a strong
sense of purpose disrupted the extent to which self-esteem was contingent on evidence of one’s social value. In short, purpose mediated the relation between self-esteem and the number of Likes one received on Instagram, which supported hypothesis 2. This assumption is in line with those of Burrow and Rainone (2017) that found at lower levels of purpose, the number of Likes individuals received on self-photographs were more strongly associated with low self-esteem.

Furthermore, additional analysis of current study indicated that male (M = 74.38) Instagram users presented significantly higher sense of purpose and meaning in one’s life when compared to female users (M = 68.94). This hypothesis is further supported by previous research suggesting that individuals with strong civic and prosocial orientations use SNS exclusively for informational reasons rather than status enhancement or socialization (Park et al., 2009). The present findings, nevertheless, may be indicative of that females lacking purpose use Instagram as a method of gaining personal meaning and thus value in life via interpersonal feedback received online.

7.3 Limitations and Strengths

In spite of rendered results, the study is not without its shortcomings. Foremost, the cross-sectional design places restrictions on drawing causal effects, hence the directionality of the relations may in fact be the other way around. Given that data collection was based on self-report measures, results obtained may be subjected to Hawthorne effect, as responses retrieved may often be exaggerated. Another possible limitation is the sample, as the respondents who chose to participate may not be representative of the entire population due to self-selection bias. As previously noted, the majority of respondents were in the 18-24 age category (N = 80) with much smaller numbers in their early and late 40’s (N = 2). Consequently, this clustering in age of respondents may have had an effect on the overall results of study.
Notwithstanding, the current study utilised psychologically validated research tools that presented high reliability and internal consistency within the sample. The designed survey was also easy to understand and answer, thus required little competency and time to complete. In addition, the researcher aimed to recruit exclusively users of Instagram by posting the survey link to open forums that could reach out to wider Instagram community. Accordingly, equal distribution of gender was achieved, with 64 female and 58 male respondents, thus increasing statistical power and representativeness of results. The full range of scores on all variables was represented in the current data, which strengthens the validity of estimated relationships between the constructs. Both hypothesis 1 and 2 indicated a statistically significant relationship between the variables specified. As previously stated, these results are at odds with previous research hence identifies a gap which warrants further research in the area.

Given these limitations, future research should combat the aforementioned shortcomings by utilising longitudinal designs with representative samples. Thereby should aim to adopt a much larger sample size in order to provide a greater variation both in age and range of usage. Conducting a longitudinal study will enable the researcher to address the directionality between the variables, and would therefore provide more robust findings than a pure correlational study.

7.4 Future Research and Conclusions

With the continuous growth of smartphone ownership, advancement of new technologies as well as substantial enhancement of applications, social media use will continue to be a major public concern. The current study details an exploratory account of underlying gender differences regarding self-esteem and Instagram use. Moreover, the present findings lend growing credence to purpose as a psychological self-regulation and homeostasis which ulti-
ately can safeguard the modern user against the negative consequences of feedback received online. Nevertheless, these findings may be of greatest benefit to youth populations given their known susceptibility to peer endorsement and increased frequency of Instagram use. Given the widespread exposure to Likes and other virtual expressions of affirmation that are today common on social media sites, purpose enhancement could be further studied and utilised to develop accessible strategies for promoting more adaptive outcomes among users.
References


Einarsdóttir, V. A. (2017). "From celebrities to the girl next door": Influencer marketing with a special focus on the social media platform, Instagram Doctoral dissertation.


Gilchrist, K. (2017). Instagram Most Likely to Cause Young People to Feel Depressed and Lonely Out of Major Social Apps. CNBC.


Appendices

Appendix A: Information Sheet

My name is Zhanna Kalinina and I am conducting research in the Dublin Business School Department of Psychology that explores positive social media feedback, purpose and self-esteem among Instagram users. This research is being conducted as part of my studies and will be submitted for examination and the results obtained may be presented at student congress.

You are invited to take part in this study, if you are over the age of 18.

Participation involves completing and submitting the attached anonymous survey. While the survey asks some questions that might cause some minor negative feelings, it has been used extensively in research. If any of the questions do raise difficult feelings for you, contact information for support services are included on the final page.

Participation is completely voluntary and so you are not obliged to take part. Participation is anonymous and strictly confidential. Thus responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from participation after the questionnaire has been collected.

The data from the questionnaires will be recorded in electronic format and stored on a USB and computer folder, both encrypted as well as password protected before being incinerated. 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 do not hesitate to contact me via email at xxxxxxxxx . My supervisor can be contacted at xxxxxxxxx.

Thank you for taking the time to complete this survey.
Appendix B: Demographic Information

Answer the following questions then proceed.

Please indicate your gender

- Male
- Female
- Prefer not say
- Other

Please indicate your age

- 18-24
- 25-34
- 35-44
- 45-54
- 55+
Appendix C: Rosenberg Self-Esteem Scale (RSE)

Below is a list of statements dealing with your general feelings about yourself. Please indicate the extent to which you agree or disagree with each of the following statements by using the scale below.

1. I feel that I’m a person of worth, at least on an equal plane with others
   - strongly agree
   - agree
   - disagree
   - strongly disagree

2. I feel I have a number of good qualities
   - strongly agree
   - agree
   - disagree
   - strongly disagree

3. All in all, I am inclined to feel that I am a failure
   - strongly agree
   - agree
   - disagree
   - strongly disagree

4. I am able to do things as well as most people
   - strongly agree
5. I feel I do not have much to be proud of
   - strongly agree
   - agree
   - disagree
   - strongly disagree

6. I take a positive attitude towards myself
   - strongly agree
   - agree
   - disagree
   - strongly disagree

7. On the whole, I am satisfied with myself
   - strongly agree
   - agree
   - disagree
   - strongly disagree

8. I wish I could have more respect for myself
9. I certainly feel useless at times
   - strongly agree
   - agree
   - disagree
   - strongly disagree

10. At times, I think I am no good at all
    - strongly agree
    - agree
    - disagree
    - strongly disagree
Appendix D: Instagram Intensity Scale (IIS)

Below is a list of statements about your Instagram use. Read each statement and select the appropriate answer that most describes you. If on phone, please scroll across for all the answers.

1. Instagram is part of my everyday activity
   - o strongly disagree
   - o disagree
   - o neither agree or disagree
   - o agree
   - o strongly agree

2. I am proud to tell people I’m on Instagram
   - o strongly disagree
   - o disagree
   - o neither agree or disagree
   - o agree
   - o strongly agree

3. Instagram has become part of my daily routine
   - o strongly disagree
   - o disagree
   - o neither agree or disagree
   - o agree
4. I feel out of touch when I haven’t logged onto Instagram for a while
   - strongly disagree
   - disagree
   - neither agree or disagree
   - agree
   - strongly agree

5. I feel I am part of the Instagram community
   - strongly disagree
   - disagree
   - neither agree or disagree
   - agree
   - strongly agree

6. I would be sorry if Instagram shut down
   - strongly disagree
   - disagree
   - neither agree or disagree
   - agree
   - strongly agree

7. Approximately how many TOTAL Instagram followers do you have?
8. In the past week, on average, approximately how much time PER DAY have you spent actively using Instagram?
   - 0-2 hours
   - 3-4 hours
   - 5-6 hours
   - 7-8 hours
   - 9 hours +

9. Approximately how many Likes on average does your photo/video receive?

10. If your photo/video does not receive desired number of Likes do you delete it?
   - Yes
   - No
Appendix E: Purpose in Life Scale (PIL)

Read each statement and rate each item that is most true for you right now using a scale below. If on phone, please rotate your device to landscape to view all the answers.

<table>
<thead>
<tr>
<th>Items</th>
<th>Rate each item from 1 to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am usually:</td>
<td>bored 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>2. Life seems to me:</td>
<td>completely routine 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>3. In life I have:</td>
<td>no goals or aims 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>4. My personal existence is:</td>
<td>utterly meaningless, without Purpose 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>5. Every day is:</td>
<td>exactly the same 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>6. If i could choose I would:</td>
<td>prefer to never have been born 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>7. After retiring, I would:</td>
<td>loaf completely the rest of my life 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>8. In achieving life goals I’ve:</td>
<td>made no progress whatever 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>9. My life is:</td>
<td>empty, filled only with despair 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>10. If I should die today I’d feel that my life has been:</td>
<td>completely worthless 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>11. In thinking of my life, I:</td>
<td>often wonder why I exist 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>12. For my life the world:</td>
<td>completely confuses me 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>13. I am a:</td>
<td>very irresponsible person 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>14. Concerning freedom to choose, I believe humans are:</td>
<td>completely bound by limitations of heredity and environment 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>15. With regard to death, I am:</td>
<td>unprepared and frightened 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>16. Regarding suicide, I have:</td>
<td>thought of it seriously as a way out 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>17. I regard my ability to find a purpose or mission in life as:</td>
<td>practically none 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>18. My life is:</td>
<td>out of my hands and controlled by external factors 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>19. Facing my daily tasks is:</td>
<td>a painful and boring experience 1---------2---------3---------4---------5</td>
</tr>
<tr>
<td>20. I have discovered:</td>
<td>no mission or purpose in life 1---------2---------3---------4---------5</td>
</tr>
</tbody>
</table>
Appendix F: Debrief Sheet

Thank you for taking the time to complete this survey. Your response has been successfully recorded.

If you have been affected by any of the topics addressed in this study, please get in touch with one of the support services listed below:

Samaritans: email- jo@samaritans.ie or call- 116 123

Aware: email- supportmail@aware.ie or call- 01 661 7211

Mental Health Ireland: email- info@mentalhealthireland.ie or call- 01 284 1166

Should you require any further information about the research, contact me at xxxxxxxxx or my supervisor at xxxxxxxx.

Thanks again for your participation!