

Running head: SOCIAL MEDIA SOCIAL COMPARISON AND SELF-ESTEEM

An exploratory analysis of social media social comparison and self-esteem within an Irish  
context

Sarah Cunningham

17519553

Supervisor: Dr. April Hargreaves

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### Abstract

**Aims:** The current study sought to provide a greater understanding of social media social comparison within an Irish context. This study examined how upward and downward social comparison on social media associate with levels of self-esteem. This study also examined how social comparison of ability and social comparison of opinion on social media associate with levels of self-esteem. **Method:** A questionnaire was administered to participants ( $n=120$ ) through social media which consisted of questions regarding upward and downward social comparisons on social media, an adapted version of The Iowa-Netherlands Comparison Orientation Scale (INCOM) and The Rosenberg Self-Esteem scale (RSES). **Results:** Results showed that upward social comparison and social comparison of ability were associated with lower levels of self-esteem. Downward social comparison and social comparison of opinion were not associated with self-esteem. Upward social comparison and social comparison of ability explained 25.9% of variance in self-esteem levels. Both variables were found to uniquely predict self-esteem levels to a statistically significantly level. **Conclusion:** Findings provide a greater understanding of the social comparison process among Irish social media users. Importantly, findings challenge the assumption that social comparison is detrimental and demonstrate the need to examine different forms of social comparison. On a practical level, findings have important implications regarding social media use.

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## Literature review

### Social comparison theory

Social Comparison Theory, which was first proposed by Festinger (1954), is based around the idea that people have a fundamental drive to evaluate themselves by comparing themselves with others. The theory suggests that people are motivated to compare themselves with others in order to enhance certain aspects of themselves or in order to evaluate certain aspects of themselves (Festinger, 1954; Suls, Martin & Wheeler, 2002). The theory distinguishes between two different forms of social comparisons that people make, social comparisons of ability and social comparisons of opinion (Festinger, 1954). Social comparisons of ability revolve around comparisons of achievements or performance, with focus on how well an individual is doing relative to others and as such this form of comparison is usually competitive in nature (Gibbons & Buunk, 1999; Festinger, 1954; Suls et al., 2002). Social comparisons of opinion revolve around the comparison of attitudes, thoughts and beliefs and unlike social comparison of ability, this type of comparison usually is not competitive in nature (Gibbons & Buunk, 1999; Festinger, 1954; Suls, Martin & Wheeler, 2000).

Ability based social comparisons are usually associated with self-enhancement or self-improvement motives (Buunk & Ybema, 2003; Gibbons & Buunk, 1999; Wills, 1981). For example, individuals who have a strong ability based social comparison orientation, may select individuals who they perceive as being superior to themselves and who they wish resemble for the purpose of self-enhancement. They may also select individuals who they perceive as being inferior to themselves and that they gain a sense of superiority from, for the purpose of self-enhancement. In this sense individuals who have a strong ability based social comparison orientation compare themselves with others in a judgemental and competitive manner. Opinion



based social comparisons are usually associated with self-evaluation motives rather than self-enhancement motives. People engage in opinion based social comparisons in order to evaluate whether their own opinions and beliefs are correct or to evaluate whether their opinions and beliefs are socially acceptable (Gibbons & Buunk, 1999; Festinger, 1954). They view their comparison target as somebody to learn from or as a role model (Gibbons & Buunk, 1999; Festinger, 1954). Because one opinion is not necessarily better than another, the competitive and judgemental aspects of comparison (commonly observed in social comparison of ability) are absent in social comparison of opinion (Festinger, 1954). In this sense, individuals with a strong opinion based social comparison orientation are more likely view their comparison target as somebody that they can communicate with rather than compete with.

Following the initial theory of social comparison (Festinger, 1954), which identifies two distinct forms of social comparison, research has primarily focused on social comparison of ability. Research has also defined social comparison as a single featured construct by not distinguishing which form of comparison is being examined, for example in the expansion of this theory, the theory of upward and downward social comparison (Wills, 1981; Wood, 1989). The theory of upward and downward social comparison (Wills, 1981; Wood, 1989) is focused primarily on the direction of social comparison, i.e. whether individuals compare themselves with people they perceive to be 'better' than them in some way (upward comparison) or with people they perceive to be 'worse' than them (downward comparison). Social comparison can have a wide range of effects depending on the direction of the social comparison. Upward comparison may be beneficial when it motivates individuals to become more similar to their comparison targets (Lockwood & Kunda, 1997). However, it most often leads to individuals having poorer self-evaluations and feeling inadequate (Marsh & Parker, 1984; Morse & Gergen,

1970). Downward social comparison may result in people feeling negative as it illustrates how things could be worse (Aspinwall, 1997). However, it most often leads to improvements in affect and self-evaluation (Wills, 1981). Recent research that has examined social comparison, has mainly focused on theory of upward and downward social comparison.

### **Social comparison in the context of social media**

One place that social comparison is likely to take place regularly is on social media. Social media sites have been described as web-based services, which allow individuals to create public or semi-public profiles, generate and view content and interact with others (Boyd & Ellison, 2007). Social media use has become increasingly prevalent in society over the last decade (Andreassen, Pallesen, & Griffiths, 2017), with near one third of the global population engaging in social media use (Hawi & Samaha, 2017). Social media use is also becoming increasingly prevalent within Irish society. As of 2019, 43% of the Irish population have an active Instagram account. Of those who have accounts 64% use the social media site daily. 66% of the Irish population have an active Facebook account, of those with accounts 64% use the social media site daily (Porter, 2019).

People use social media for a variety of different social functions for example, social media allows users to share details about experiences that happen in their lives, maintain existing relationships, form new relationships, and observe others (Boyd & Ellison, 2007; Ivcevic & Ambady, 2012). Social media also promotes feelings of belongingness (Nadkarni & Hofmann, 2012) and provides individuals with a sense of social support (Manago, Taylor & Greenfield, 2012; Nabi, Preston & So, 2013). As research has indicated that social media is relevant to various different social functions, such as those mentioned above, perhaps people also use social media (consciously or unconsciously; Haferkamp & Krämer, 2011) for the purpose of social

comparative functions, such as self-evaluation (Festinger, 1954) or self-enhancement (Gruder, 1971; Wills, 1981).

Social media has greatly changed the dynamic of the social comparison process. Social media regularly provides users with large amounts of content, that they may use to socially compare themselves with. This may facilitate the social comparison process. Individuals socially compare themselves with others when they are presented with the information of others (Mussweiler, Rutter & Epstude, 2006). Viewing, browsing and searching for other profiles is common amongst users of social media (Joinson, 2008; Pempek, Yermolayeva & Calvert, 2009; Wise, Alhabash & Park, 2010). Therefore, social media may facilitate or encourage social comparison making social media particularly relevant for the examination of this process (Appel, Gerlach & Crusius, 2016; Feinstein et al., 2013; Gonzales & Hancock, 2010). Furthermore, people have indicated that they use social media to socially compare themselves with others and are more likely to do so when presented with information about others, such as being presented with a photo or a post (Lee, 2014).

How users decide to present themselves to others is another aspect regarding social media that has changed the dynamic of the social comparison process (Walther, 2007). The type of information that is shared on social media, which may be used in the social comparison process, differs to information which is obtained during face-to-face communication, making social media a relevant and unique context for the examination of social comparison (Walther, 2007). Before computer-based communication became so widely used, people did not have the same amount of control over the way that they were able to present themselves to others. The majority of people who use social media carefully select the material which they believe to be most socially appealing through selective self-presentation (Gardner & Davis 2013; Yang & Brown,

2016). This means that individuals are able to present themselves in ways that best represents their ideal selves on social media (Ellison, Heino & Gibbs, 2006; Rosenberg & Egbert, 2011).

Users of computer-based communication use various techniques to improve their online self-presentation, such as selecting photographs which highlight their positive features (Ellison et al., 2006), having a deeper self-disclosure (Tidwell, & Walther, 2002) and managing the style of the language that they use (Walther, 2007). Using such techniques, individuals that engage in computer-based communication are able to manage others impression of them. As “in person” social comparisons in “offline” settings are based around face-to-face interactions with others, in person interactions often provide opportunities for an individual to engage in both forms of social comparison (upward social comparison and downward social comparison). However, as computer-based communication has allowed individuals to decide how others will perceive them, the social comparative information on social media leans in a positive (upward comparison) direction (Vogel, Rose, Roberts, & Eckles, 2014). This exposure to primarily positive information about others may have an effect on how individuals using computer-based communication perceive one another. For example, Chou and Edge (2012) found that an increased amount of time using Facebook was associated with having the perception that other people have better lives and are happier.

### **Social media social comparison and self-esteem**

It is clear that individuals may use social media for the purpose of socially comparing with others and that social media social comparisons differ from those in offline contexts. Research has suggested that this engagement in social media social comparison may have negative effects, particularly in relation to self-esteem. Self-esteem refers an individual’s evaluation of themselves and is expressed in the opinion or attitude that an individual holds

about themselves (Coppersmith, 1967; Heatherton, Wyland & Lopez, 2003). As social comparison is a process which is used in order to evaluate oneself (Festinger, 1954), it is not surprising this process has been found to have an effect on self-esteem. Research has suggested that individuals who regularly socially compare themselves with others online, have poorer self-perceptions, lower levels of self-esteem and more negative feelings (Stapleton, Luiz, & Chatwin, 2017; Vogel, Rose, Okdie, Eckles & Franz, 2015).

The negative effect that social media social comparison has in relation to self-esteem is not surprising, considering the fact that the majority of information that is shared on social media leans in a positive (upward comparison) direction. Research has suggested that this overexposure to upward comparative content on social media may result in people feeling that they are not as good as other individuals that they perceive to be better than them. For example, De Vries & Kühne (2015), found that Facebook use was associated with an increased amount of upward social comparison, which in turn was associated with lower self-perceived social competence and physical attractiveness. Vogel et al., (2014) examined the association between Facebook use and self-esteem and found that more frequent Facebook use was associated with lower levels of self-esteem. The extent of upward social comparisons made with others on Facebook was found to be greater than the extent of downward social comparisons, and this extent of upward social comparison (not downward) mediated the relationship between Facebook use and self-esteem.

Although research has suggested that social comparison has negative effects in relation to self-esteem, previous research has generally operationalized social media social comparison as comparisons of competence, popularity or who is doing better or worse in general (Stapleton et al., 2017; Vogel et al, 2015). While research rarely distinguishes between social comparison of

ability and social comparison of opinion, it is clear from this operationalization that most studies have focused on the more judgemental form of social comparison, social comparison of ability. Therefore, it is no surprise that it has most often been found that social comparison has negative effects. There has been very little research that has also examined social media social comparison of opinion. Research has started to examine both forms of social comparison that may occur in an online context and has found that both forms of social comparison have different psychological implications. Yang, Holden & Carter., (2018) found that college students who engaged in social comparison of ability on social media, had lower self-esteem and identity clarity. In contrast, social comparison of opinion on social media did not influence global self-esteem or identity clarity. Yang & Robinson., (2018) found that social comparison of ability was related to poorer college social adjustment, however social comparison of opinion was related to better social adjustment. Other studies have found that individuals who reported a strong ability social comparison orientation on their Facebook, experienced more upward contrastive emotions such as depression and envy, whereas those with a higher opinion based social comparison orientation reported less negative emotion and higher life satisfaction (Park & Baek, 2018). It appears that social comparison of opinion is not considered to be as concerning as social comparison of opinion and may even be harmless. Therefore, it is important to investigate both forms of social media social comparison separately.

### **The current study**

Previous research has either focused on the direction of social comparisons (i.e. upward or downward social comparison) or has treated social comparison as a single featured construct, focusing primarily on the judgemental form of social comparison, social comparison of ability. Social comparison theory (Festinger, 1954) however, suggests that social comparison is a two

featured construct including two distinct forms of social comparison, social comparison of ability and opinion. As previous research has mainly focused on the judgemental form of social comparison, this often leads to the assumption that social media social comparison is detrimental for ones self-esteem. However, this may only be the case for social comparison of ability and not social comparison of opinion, as emerging research has started to demonstrate. Furthermore, despite the popularity of social media use within Irish society, there has been little research that has examined both upward and downward social comparison within an Irish context. Research has not yet examined different forms of social media social comparison (ability and opinion) within an Irish context.

Therefore, the aim of the current study is to provide a greater understanding of online social comparison amongst Irish social media users, through exploratory analysis. This study aims to examine how upward and downward social comparison on social media associate with levels of self-esteem. This study also aims examine how social comparison of ability and social comparison of opinion on social media associate with levels of self-esteem. These aims produce the following research questions and hypothesis:

Research question 1: How does upward social comparison on social media associate with levels of self-esteem? Hypothesis for research question 1: Higher upward social comparison on social media will be associated with lower levels of self-esteem. Essentially, the more often people compare themselves to others they perceive to be more able, the lower their self-esteem.

Research question 2: How does downward social comparison on social media associate with levels of self-esteem? Hypothesis for research question 2: In line with previous research, there will be no association between downward social comparison on social media and self-esteem.

Research question 3: How does social media social comparison of ability associate with levels of self-esteem? Hypothesis for research question 3: Higher social media social comparison of ability will be associated with lower levels of self-esteem. Essentially, the more often people compare their abilities with others on social media the lower their self-esteem.

Research question 4: How does social media social comparison of opinion associate with levels of self-esteem? Hypothesis of research question 4: In line with previous research, there will be no association between social media social comparison of opinion and self-esteem.

Research question 5: To what extent do upward social comparison and social comparison of ability on social media predict lower levels of self-esteem? Hypothesis for research question 3: Upward social comparison, and social comparison of ability, will significantly predict lower levels of self-esteem.



## **Methods**

### **Participants**

The research sample within the current study consisted of 120 participants. Participants were recruited through convenience sampling using the researcher's social media account (Facebook). This ensured the sample consisted of participants who were active on social media and therefore could provide more valid responses to the research question. In line with ethical considerations, participants were required to be at least 18 years of age to participate. They were also required to provide informed consent before completing the questionnaire. Demographic information was not collected from participants. This was not required within the current study, which was an exploratory analysis, which sought to examine social media social comparison occurring within an Irish context.

### **Measures**

#### **Upward and downward social comparison on social media**

The following questions were asked in order to assess upward and downward social comparisons on social media "When comparing yourself with others on social media, how much do you concentrate on individuals who are better off than you?" and "When comparing yourself with people on social media, to what extent do you focus on those who are worse than you?". Items were measured on a 5-point Likert scale ranging from 1 "not at all" to 5 "a lot". These questions have been used in order to assess upward and downward social comparisons within the previous literature (Vogel, Rose, Roberts & Eckles, 2014). See Appendix I for further detail.

### **Social media social comparison of ability and opinion**

An adaptation of the Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons and Buunk 1999) was used in order to assess social media social comparisons of ability and opinion. Previous research has adapted this scale to measure social comparison on social media (Yang et al., 2018). This adaptation was used in the current study. The adaptation involves adding “when using social media” or “on social media” to each item and rewording of the item “I’m not the type of person who compares often with others” to avoid the focus on social comparison as a personality trait. This is a 9 item Likert scale with items measured on a five-point scale ranging from 1 “strongly disagree” to 5 “strongly agree”. The scale contains a section which assesses ability based social comparisons and also contains a section which assesses opinion-based comparisons. The ability based social comparison orientation section of the questionnaire contains five statements and the opinion based social comparison orientation section of the scale contains four statements. Higher mean scores reflect a higher level of engagement in the given form of social media social comparison. Previous research has indicated that that both the social media social comparison of Ability ( $\alpha = .80$ ) and social media social comparison of Opinion ( $\alpha = .87$ ) scales have good reliability (Yang & Robinson, 2018). Both the social comparison of ability ( $\alpha = .81$ ) and social comparison of opinion ( $\alpha = .87$ ) scales had good reliability within the current study. See appendix II for further detail.

### **Self-esteem**

The Rosenberg Self-Esteem scale (RSES; Rosenberg, 1965) was used in order to assess participants levels of self-esteem. Sample items include “On the whole, I am satisfied with myself” and “I take a positive attitude toward myself.” The Rosenberg Self-Esteem scale is a 10 item Likert scale with items answered on a four-point scale ranging from 1 “strongly agree” to 4

“strongly disagree”. Rosenberg (1965) did not establish a cut-off score and the scale is used as a continuous measure, in which higher scores indicate higher levels of self-esteem. The measure has been found to have good reliability; the original reliability of this scale is 0.72 (Krämer, & Winter, 2008). Cronbach's alpha for various samples are generally in the range of .77 to .88 (see Blascovich and Tomaka, 1991 for further detail). This scale had good reliability within the current study ( $\alpha = .89$ ). The scale demonstrates concurrent, predictive and construct validity (Rosenberg, 1979). See appendix III for further detail.

### **Design and analyses**

The research design of the present study is a cross-sectional research design as all data was collected at a specific point in time. The study was also quantitative in nature, employing survey research to collect data. Pearson's correlations were conducted to assess the first, second, third and fourth hypothesis. This examined the associations between 1) upward social comparison and self esteem 2) downward social comparison and self-esteem 3) social media social comparison of ability and self-esteem, and 4) social media social comparison of opinion and self-esteem. A multiple regression analyses was conducted in order to test the fourth hypothesis. This contained two predictor variables (PV's), namely, upward social comparison and social media social comparison of ability. The criterion variable (CV) was self-esteem.

### **Procedure**

Data was collected through an online questionnaire. The questionnaire used within the current study was an anonymous, self-report questionnaire, which was shared on the researcher's social media account (Facebook) through a link. When participants decided to participate in the current study and open the link shared through Facebook, they were provided with an information sheet containing information about everything that was involved in participation as

well as any risks or benefits of participation (see appendix IV). Participants were also provided with a consent form and were required to provide their informed consent to participate in this research before continuing with the questionnaire (see appendix V). The questionnaire was completed by participants in their own time and took an estimated 10-15 minutes to complete.

The questionnaire consisted of three sections. The first section of the questionnaire included two questions which were used in order to assess upward and downward social comparisons on social media, these questions were based on previous literature (Vogel, Rose, Roberts & Eckles, 2014). The second section of the questionnaire was The Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons and Buunk 1999) which was adapted within previous research to measure social comparison on social media (Yang et al., 2018). This adaptation was used within the current study in order to assess both opinion based, and ability based social comparisons on social media. The third section of the questionnaire was The Rosenberg Self-Esteem scale (RSES; Rosenberg, 1965) and this was used in order to assess participants levels of self-esteem. Once participants completed this questionnaire they were provided with a debriefing form, see appendix VI.

## Results

### Descriptive statistics

Descriptive statistics were performed for all variables including upward social comparison, downward social comparison, social comparison of ability, social comparison of opinion and self-esteem. Means (M), Standard Deviations (SD), Medians (MD), and Range were obtained, along with tests of normality. Preliminary analysis was performed on the data set and this indicated that all continuous variables followed the assumptions of normality. The results for all continuous variables are presented below in table 1. Histograms were also obtained and indicated that the data was normally distributed. Histograms for all continuous variables are presented in Appendix VII.

**Table 1:** *Descriptive statistics for all continuous variables, N=120*

	Mean (95% Confidence Intervals)	Median	SD	Range
Social comparison of ability	15.00 (14.14 - 15.86)	15	4.75	20
Social comparison of opinion	12.45 (11.79 - 13.11)	12	3.64	16
Self - esteem	24.15 (22.90 - 25.41)	25	6.94	28
Upward social comparison	3.23 (3.02 - 3.45)	3	1.19	4
Downward social comparison	2.27 (2.09 - 2.46)	2	1.02	4

**Inferential statistics**

A Pearson's correlation coefficient was computed to assess the relationship between upward social comparison and self-esteem. Preliminary analysis were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a significant, moderate, positive correlation between upward social comparison and self-esteem ( $r = .44$ ,  $n = 120$ ,  $p < .01$ ). This indicated that the two variables share approximately 19% variance. Results indicate that higher levels of upward social comparison on social media are associated with lower levels of self-esteem. (See Table 2).

A Pearson's correlation coefficient was conducted to assess the relationship between downward social comparison and self-esteem. Preliminary analysis were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a non-significant, negative correlation between downward social comparison and self-esteem ( $r = -.07$ ,  $n = 120$ ,  $p = .42$ ). Results indicate that downward social comparison is not associated with self-esteem. (See Table 2).

A Pearson's correlation coefficient was conducted to assess the relationship between social media social comparison of ability and self-esteem. Preliminary analysis were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a significant, moderate, positive correlation between social media social comparison of ability and self-esteem ( $r = .48$ ,  $n = 120$ ,  $p < .01$ ). This indicates that the two variables share approximately 23% of variance in common. Results indicate that higher levels of social media social comparison of ability are associated with lower levels of self-esteem (see Table 2).

A Pearson's correlation coefficient was computed to assess the relationship between social comparison of opinion and self-esteem. Preliminary analysis were conducted to ensure no

violation of the assumptions of normality, linearity and homoscedasticity There was non-significant negative correlation between social media social comparison of opinion and self-esteem ( $r = -.12$ ,  $n=120$ ,  $p = .19$ ). Results indicate that there is no association between social media social comparison of opinion and self-esteem (see Table 2).

**Table 2:** *Pearson's correlations between continuous variables*

Variables	1	2	3	4	5
1. Upward social comparison	1				
2. Downward social comparison	.02	1			
3. Social comparison of ability	.65*	.12	1		
4. Social comparison of opinion	.16	.09	.07	1	
5. Self-esteem	.44*	-.07	.48*	-.12	1

N = 120; Statistical significance: \* $p < .01$

Multiple regression analyses was performed to determine how well self-esteem levels could be explained by two variables including upward social comparison and social comparison of ability. Preliminary analyses showed no violation of the assumptions of normality, linearity, and homoscedasticity. The correlations between the predictor variables and criterion variable included in the model were examined. Both predictor variables were significantly correlated with the criterion variable, the correlation between both predictor variables was also significant (See table 2). Tests for multicollinearity indicated that all Tolerance and VIF values were in an acceptable range and indicated that there was no violation of the assumption of multicollinearity and that the data was suitable for examination through multiple linear regression analysis.

No *priori* hypotheses had been made to determine the order of entry of the predictor variables, therefore a direct method was used for data analysis. Both predictor variables entered in the model explained 25.9% of variance in self-esteem levels ( $F(2, 117) = 20.46, p < .001$ ). Both variables entered in the model were found to uniquely predict self-esteem levels to a statistically significantly level (See Table 3).

**Table 3:** *Multiple regression model predicting self-esteem*

	R <sup>2</sup>	$\beta$	B	SE	CI 95% (B)
Model	.26***				
Social comparison of ability		.32**	.47	.15	0.16 - 0.77
Upward social comparison		.24*	1.39	.61	0.17 - 2.60

Note.  $\text{Adj}R^2 = 0.25$ ;  $\beta$  = standardized beta value; B = unstandardized beta value; SE = Standard errors of B; CI 95% (B) = 95% confidence intervals for B; N = 120; Statistical significance: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$



### **Discussion**

In the current study, the association between social media social comparison and self-esteem was explored within an Irish context. The current study sought to provide a greater understanding of the online social comparison process among Irish social media users by examining how two different dimensions of social comparison, including direction (upward and downward) and form of comparison (ability and opinion)- associate with levels of self-esteem.

In support of the first hypothesis, results showed that upward social comparison had a moderate, positive association with lower levels of self-esteem, indicating that individuals who engaged in upward social comparison on social media had lower levels of self-esteem. The second hypothesis was also supported; results showed downward social comparison on social media was not associated with self-esteem. In support of the third hypothesis, results showed that social comparison of ability had a moderate, positive association with lower levels of self-esteem, indicating that individuals who engaged in social comparison of ability on social media had lower levels of self-esteem. In support of the fourth hypothesis, results showed social media social comparison of opinion was not associated with self-esteem. The fifth hypothesis was also supported, variance in levels of self-esteem could be explained by engagement in upward social comparison and social comparison of ability. Both variables were found to uniquely predict self-esteem levels.

Findings are consistent with and provide support to previous research which has suggested that upward social comparison (and not downward) is associated with lower levels of self-esteem (Vogel et al., 2014). Understanding the impact of upward social comparison is important. Information which is presented on social media generally leans in a positive (upward comparison direction), making upward social comparison on social media almost unavoidable

(De Vries & Kuhne, 2015; Vogel et al., 2014). As a consequence, social media users, may be overexposed to positive content on social media, which can be damaging to self-perceptions and self-esteem (De Vries & Kuhne, 2015; Vogel et al., 2014). However, as findings within the current study are correlational, a causal relationship between upward social comparison and self-esteem cannot be inferred. Although it is the contention that upward social comparison on social media leads to lower levels of self-esteem, it may be that self-esteem influences whether an individual engages in an upward or downward social comparison. In fact, research has indicated that self-esteem may have an influence on social comparison behaviour. Vohs & Heatherton (2004) found that individuals who have low self-esteem are more likely to engage in upward social comparison than downward social comparison if there is a threat to their self-image.

Importantly, findings demonstrate the requirement for a distinction of one form of social comparison from the other. Findings indicate that the two forms of social media social comparison (opinion and ability) have different associations with self-esteem. Previous literature in offline contexts has suggested that both forms of social comparison have different associations with self-esteem. For example, as discussed in Festinger's original social comparison theory (Festinger, 1954) opinion based social comparison reflects a self-evaluation motive and therefore is less related with self-esteem. However, ability based social comparison reflects a self-enhancement motive and therefore is more related with self-esteem. Findings obtained within the current study are consistent with this perspective, finding no association between social comparison of opinion and self-esteem and finding that social comparison of ability is associated with self-esteem.

The current study is amongst the first to examine both forms of social comparison (opinion and ability) within an online context. Findings are consistent with the emerging

literature which has indicated that both forms comparison have different psychological and social implications, within an online context (Park & Baek, 2018; Yang et al., 2018; Yang & Robinson, 2018). The finding that social comparison of ability was associated with lower levels of self-esteem is consistent with the rich literature which has demonstrated the negative effects of this form of comparison e.g. (Feinstein et al., 2013; Vogel et al., 2015). The finding that social comparison of opinion had no effect on self-esteem counters the assumption that social comparison is detrimental. In fact, research has suggested that this form of comparison may even be beneficial (Park & Baek; Yang & Robinson, 2018).

Overall, findings contribute to previous literature, finding that both directions of social media social comparison (upward and downward) have different associations with self-esteem, within an Irish context. Importantly, findings add a novel contribution to the literature, finding that both forms of social media social comparison (ability and opinion) have different associations with self-esteem, within an Irish context. Due to the popularity of social media within Irish society, Irish individuals may have an increased risk of engaging in negative forms of social comparison, commonly associated with social media use (Vogel et al., 2014). Therefore, examining the implications for different types of social comparison is important as it may provide a further understanding of how to use social media in a manner which facilitates wellbeing for Irish social media users. For example, Irish social media users should be encouraged to continue engaging in social comparison of opinion and discouraged from engaging in social comparison of ability and upward social comparison.

Understanding the impact that different forms of social media social comparisons have on self-esteem is important from a health and wellbeing perspective. The undermined self-esteem of individuals engaging in negative forms of social comparison may result in the subsequent

development of internalising or externalising problems. Self-esteem plays a role in the development of various mental disorders (Mann, Hosman, Schaalma & De Vries, 2004). While the causes of mental disorders are multi-faceted and complex, lower levels of self-esteem have been linked to the subsequent development of internalising disorders such as, depression (Orth, Robins, & Roberts, 2008), anxiety and other signs of psychological stress (Beck, Brown, Steer, Kuyken, & Grisham, 2001). Self-esteem also plays a role in the development of externalising problems such as violence and substance use (Mann et al., 2004). Furthermore, previous research has indicated that individuals with low self-esteem frequently use social media in order to express themselves in what they perceive to be a safe environment (Forest & Wood, 2012), this may result in a sequence of using social media for social support, while being exposed to upward comparative content and engaging in increased social comparison of ability- damaging self-esteem and starting the sequence again.

### **Implications**

Findings obtained within the current study have important theoretical and practical implications. The current study further demonstrates the importance of examining different forms and directions of social comparison which may occur within an online context. More research is required to examine how social comparison of opinion is associated with behavioural, social, and psychological outcomes. For example, as social comparison of opinion is non-competitive in nature (Festinger, 1954), it may be associated with better social outcomes such as higher social connectedness. In order to explore new research directions, it is necessary to begin challenging the assumption that social comparison is detrimental for wellbeing and begin viewing social comparison as a two featured construct.

Findings obtained within the current study have practical implications for social media use. From a societal point of view, tougher regulations on social media content could help reduce the frequency of social comparisons that are made by users. The result of this could be improved levels of self-esteem which in turn reduces risk for various mental disorders and social problems (Mann et al., 2004). On an individual level, those who engage in social comparison of ability should use social media in a manner which facilitates wellbeing, for example by being mindful of the content which they are exposing themselves to while considering how this content is affecting their psychological wellbeing.

### **Strengths and limitations**

Social media research generally uses two separate methods. The first method involves examining a specific social media platform, such as Facebook e.g. (Park and Baek 2018). This allows for an interpretation of findings, in consideration of the features offered by a specific social media platform. The second method involves examining the general features or content of social media, without examining any specific platform e.g. (Yang et al., 2018). Findings obtained using this method are interpreted by considering the features that most social media platforms have in common. As social media platforms are constantly changing and developing, findings based on a specific platform may be susceptible to change whereas findings obtained using a more general approach are less susceptible to change. Findings obtained using a general approach can be generalized to different platforms. The current study utilized the second, more general method. This method may be considered as both a strength and a limitation of the current study.

Due to the lack of platform specific information obtained within this study, findings cannot be interpreted while taking into account the features offered by a specific platform. For

example, platforms such as Instagram are centred around images, which display users successes, and performance. This may result in greater effects of social comparison of ability on self-esteem than other social media platforms. Similarly, as opinion exchange is centred around communication, message-based platforms such as Facebook and Twitter may result in greater effects of social comparison of opinion. Therefore, future research would benefit from examining the effect of platform specific social comparison on self-esteem.

Second, demographic information was not collected from participants within this study. Therefore, there is no information regarding how demographic variables may be associated with engagement in social media social comparison or how demographic variables may influence the effect of social comparison on self-esteem. Previous research has indicated that females have lower self-esteem and greater use of social media compared to their male counterparts (Joinson, 2008; Kling, Hyde, Showers, & Buswell, 1999; Tufekci, 2008). Therefore, it may be that females self-esteem may be more susceptible to the negative effects of social media social comparison. Obtaining demographic information would also make findings of the current study more generalisable. However, demographic information was not required within the current study as this study was an exploratory analysis which sought to examine different forms of social media social comparison, in order to provide a better understanding of this process occurring within an Irish context. Future research would benefit from exploring how demographic variables, such as gender, play a role in the association between social comparison and self-esteem.

Third, participants' upward and downward social comparisons on social media were assessed using a single item for each type of comparison. Single-item measures may be prone to measurement error. However, the use of a single-item measure within the current study does not invalidate findings as there are empirical and theoretical grounds which suggest that upward and

downward social comparison are distinct processes which produce different outcomes in relation to self-esteem. The single-item measure used within the current study has also been used in previous research (Vogel et al., 2014).

Fourth, the validity of the adapted version of the Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons and Buunk 1999) was not reported within the current study. As this is a newly adapted scale, its validity has not yet been established. However, this scale has been used in two previously published peer-reviewed articles (Yang & Robinson, 2018; Yang, Holden & Carter.,2018) and as such was deemed an appropriate scale to use in this study.

Fifth, within the current study participants ratings of upward social comparison and social comparison of ability were highly correlated ( $r = .65$ ). The high correlation between upward social comparison and social comparison of ability may due to the fact that when individuals are presented with upward comparative content on social media they also engage in more competitive and judgemental forms of comparison (social comparison of ability). In this sense, upward social comparison may drive competition, resulting in social comparison of ability. Furthermore, it has been suggested that individuals with high social comparison orientation are more likely to make upward social comparisons when using social media (Lee 2014; Wang, Wang, Gaskin & Hawk, 2017). Participants within the current study had higher levels of social comparison orientation which may also explain why social comparison of ability was highly correlated with upward social comparison. Another possibility is that when individuals are engaging in social comparisons of ability they are also more likely to make upward social comparisons. In the case of abilities there is a unidirectional drive upward, which is not the case for social comparison of opinion (Festinger, 1954). There is a value set on doing better and better

in the case of performance or abilities, meaning the higher the score on performance, the better it is. In this sense, social comparison of ability may drive upward social comparison.

Lastly, findings obtained within the current study were based on a cross sectional design and therefore no casual relationships can be inferred. However, factors associated with self-esteem are complex and multi-faceted and causality is not necessary in order to make societal changes that could improve an individual's self-esteem. To progress from this study, future research would benefit from using an experimental or longitudinal study to better infer causation. For example, if using an experimental design participants could be presented with upward comparative content, downward comparative content and neutral content on social media. Levels of self-esteem and different forms of social comparison orientations could be measured.

## **Conclusion**

This study expands the current understanding of social media social comparison within an Irish context by examining the direction of social comparison (upward and downward) and the form of social comparison (ability and opinion). In relation to the direction of social comparison, the current study provides support to previous research which has found that upward social comparison ( but not downward social comparison) is associated with lower levels of self-esteem. The current study contributes to previous literature by examining both directions of social comparison within an Irish context. In relation to different forms of social comparison, the current study is consistent with emerging literature which has found that social comparison of ability (but not social comparison of opinion) is associated with lower levels of self-esteem. The current study is the first to examine both forms of social media social comparison within an Irish context. Findings highlight the importance of studying different forms of social media social comparison and challenge the assumption that social media social comparison is detrimental in



relation to wellbeing. Further research is required to explore how social comparison of opinion is associated with behavioural, social, and psychological outcomes.

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## Appendices

## Appendix I

## Upward and downward social comparisons on social media

Please record the appropriate answer for each item, answers range from 1 = not a lot ; 5= a lot.

1. When comparing yourself with others on social media, how much do you concentrate on individuals who are better off than you?
2. When comparing yourself with people on social media, to what extent do you focus on those who are worse than you?

## Appendix II

## Social Media Social Comparison Scale

Most people compare themselves from time to time with others. For example, they may compare the way they feel, their opinions, their abilities, and/or their situation with those of other people. There is nothing particularly “good” or “bad” about such comparison, and some people do it more than others. In this set of questions, we would like to find out the extent to which you compare yourself with other people when using social media. How well do these statements apply to you?

## Social media social comparison of ability

1. When using social media, I compare how my loved ones (romantic partner, family members, etc.) are doing with how others are doing
2. When using social media, I compare how I do things with how others do things
3. On social media, I compare what I have done with others as a way to find out how well I have done something
4. On social media, I compare how I am doing socially with other people
5. I don't really use social media to compare with others to see how well I'm doing (reversely coded)

## Social media social comparison of opinion

6. On social media, I talk with others about mutual opinions and experiences
7. On social media, I try to find out what others think who face similar problems as I face
8. On social media, I try to know what others in a similar situation would do
9. When using social media, I try to find out what others think about something that I want to learn more about

## Appendix III

**RSE**

Please record the appropriate answer for each item, depending on whether you Strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree

2 = Agree

3 = Disagree

4 = Strongly disagree

\_\_\_\_\_ 1. On the whole, I am satisfied with myself.

\_\_\_\_\_ 2. At times I think I am no good at all.

\_\_\_\_\_ 3. I feel that I have a number of good qualities.

\_\_\_\_\_ 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 certainly feel useless at times.

\_\_\_\_\_ 7. I feel that I'm a person of worth.

\_\_\_\_\_ 8. I wish I could have more respect for myself.

\_\_\_\_\_ 9. All in all, I am inclined to think that I am a failure.

\_\_\_\_\_ 10. I take a positive attitude toward myself.

## Appendix IV

### **– Information Sheet**

Before you decide to participate in this study it is important that you understand why it is that this research is being conducted and what this is going to involve for you. Please read the following information and please do not hesitate to ask questions if anything you read is not clear or if you would like more information. Please take time to decide whether or not you would like to take part.

### **WHO I AM AND WHAT THIS STUDY IS ABOUT**

I am a third-year psychology student at the National College of Ireland conducting a study for my final year thesis and I would like to invite you to take part in my research. The aim of this study is to look at the relationship that exists between social comparisons on social media and self-esteem. I will be investigating the relationship between two forms of social media social comparisons with self-esteem. The two forms of comparison that are being investigated are comparisons of abilities and opinions. Social comparison of abilities involve comparisons of achievements and performance with other people. Social comparison of opinions involve comparisons of beliefs and attitudes with other people. This study will also be investigating the relationship between upward social comparison (comparing yourself to somebody who you perceive as better than you) and self-esteem.

### **WHAT WILL TAKING PART INVOLVE?**

Taking part in this research involves completing a questionnaire that should take about 10-15 minutes to complete. This can be completed in your own time. The questionnaire contains three sections in total. The first section will include questions regarding upward social comparisons on

social media. The second section of the questionnaire will be an adapted version of the Iowa-Netherlands Comparison Orientation Scale (Gibbons & Buunk, 1999). This will assess both opinion based, and ability based social comparisons on social media. The third section of the questionnaire will be a self-esteem questionnaire called The Rosenberg Self-Esteem Scale (RSES).

### **DO YOU HAVE TO TAKE PART?**

Your participation in this study is completely voluntary, and so you have the right to refuse participation, refuse to answer any question within the questionnaire. Data will be collected anonymously and so you may withdraw from this study up until the point that you submit your data. You may do this at any time by closing the browser window and exiting the questionnaire. Once your data is submitted it will not be possible to identify in order to withdraw.

### **WHAT ARE THE POSSIBLE RISKS AND BENEFITS OF TAKING PART?**

There is no possibility of any physical risk as a result of participation in this study. There is also no risk of loss of privacy as all of your information will remain anonymous and confidential. If you feel any distress as a result of taking part in this research please contact the researcher. It is also advised that you contact The Samaritans 116 123 or NiteLine 1800 793 793 if you experience any distress or upset following participation.

### **WILL TAKING PART BE CONFIDENTIAL?**

All information that is provided will remain confidential and data collected will be anonyms. Completed questionnaires will be sent to Google forms in which information will be stored and protected. Google forms does not collect any information regarding the identity of participants

and as such you will not be identifiable. When the information is collected it will also be kept in a password protected locked file which only the researcher will be able to open and have access to. The information that will be collected from this questionnaire will be statistically analysed and for this reason all information will be averaged, again making this information more confidential.

### **WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?**

This results obtained from this research will be used in my thesis that will be submitted to the National College of Ireland.

### **WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?**

For further information please do not hesitate to contact Sarah Cunningham at

[x17519553@student.ncirl.ie](mailto:x17519553@student.ncirl.ie)

I have read this information and would like to continue

## Appendix V

## Consent to take part in research

- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me in writing and I have the opportunity to ask questions about the study.
- I understand that participation involves completing a 10-15-minute questionnaire which will consist of three sections including questions regarding upward social comparisons on social media, an adapted version of the Iowa-Netherlands Comparison Orientation Scale (Gibbons & Buunk, 1999) to assess social comparison of abilities and opinions on social media and The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) to assess self-esteem.
- I understand that I will not benefit directly from participating in this research.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous.
- I understand that if I inform the researcher that myself or someone else is at risk of harm they may have to report this to the relevant authorities - they will discuss this with me first but may be required to report with or without my permission.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.



By clicking the “I agree” button below you are confirming that you have read the above information and that you would like to participate. You are also acknowledging that you are 18 years or older.

I agree

## Appendix VI

### **Study Debriefing**

This study is concerned with the relationship between social comparisons on social media and self-esteem. This study is concerned with two different forms of social media social comparisons – social comparisons of abilities and social comparisons of opinions. This study was also concerned with the direction of social comparison (upward social comparison).

#### How was this tested?

You were asked to complete a questionnaire consisting of three sections. The first section included questions regarding upward social comparisons on social media. The second section was an adapted version of Iowa-Netherlands Comparison Orientation Measure which assessed social comparisons of ability and opinion. The third section of the questionnaire was The Rosenberg Self-Esteem Scale, which was used in order to assess self-esteem.

#### What did this research expect to find?

This study expected to find that upward social comparison and social comparison of ability on social media would predict lower levels of self-esteem. It was also expected that social comparison of ability would be associated with lower levels of self-esteem and social comparison of opinion would not be associated with lower levels of self-esteem.

#### Why is this important to study?

Social media social comparisons have been shown to contribute to lower self-esteem. However, more research is needed that looks at the two distinct types of social media social comparisons that people make, social comparison of ability and opinion.

Confidentiality

All information which you provided in this questionnaire will remain anonymous and your information will not be identifiable. The results obtained in this research will be submitted to The National College of Ireland for my final year thesis.

If you are experiencing distress as a result of participation

If you have concerns regarding participation please contact Sarah Cunningham

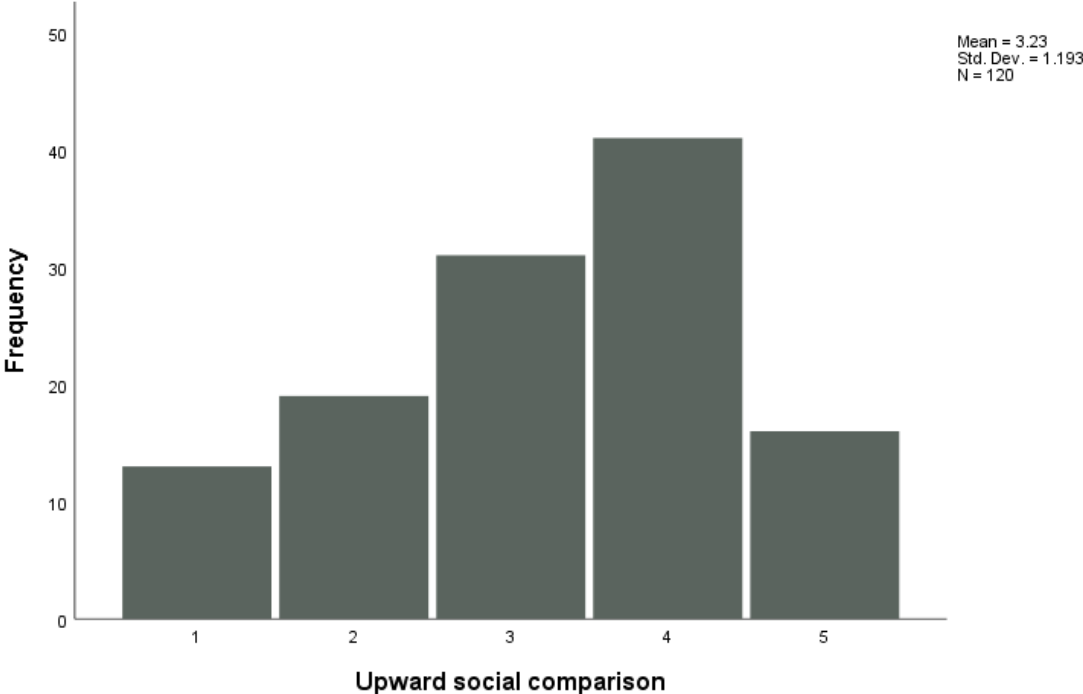
[x17519553@student.ncirl.ie](mailto:x17519553@student.ncirl.ie) or the supervisor for this research, April Hargreaves

[April.Hargreaves@ncirl.ie](mailto:April.Hargreaves@ncirl.ie). If you are experiencing any distress as a result of participating in this study, please do not hesitate to contact the researcher or supervisor of this research. It is also advised that you contact The Samaritans 116 123 which is a charity aimed at providing support for any form of distress or NiteLine 1800 793 793 which is a student run support service.

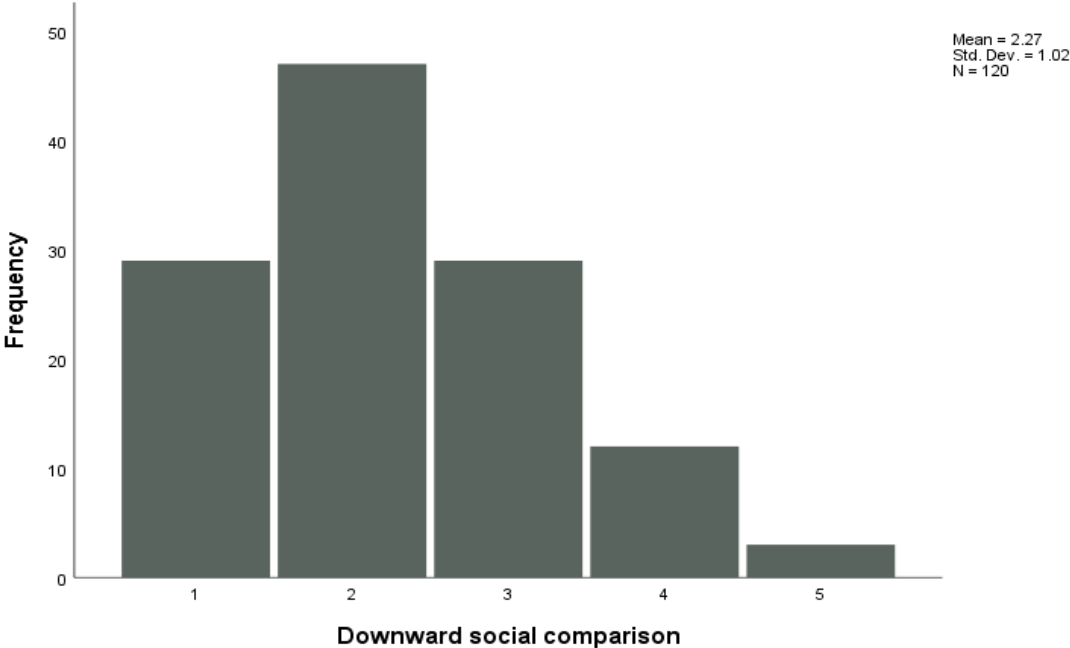
Thank you for your participation.

Appendix VII

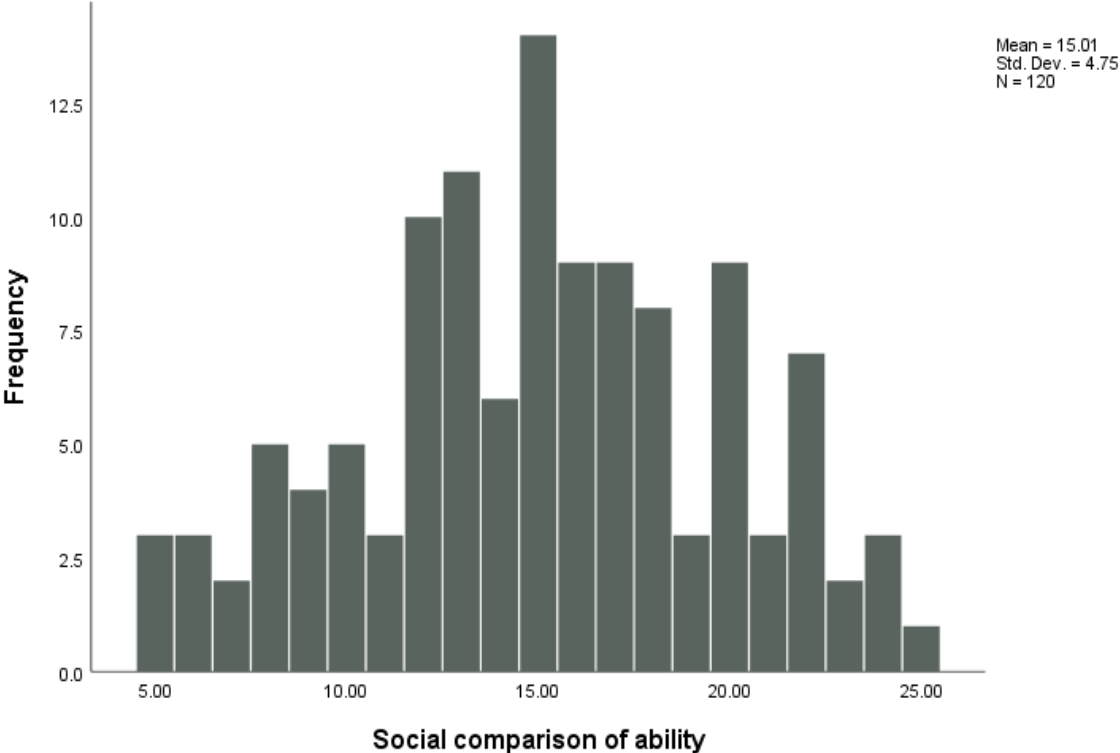
Histogram for Upward social comparison



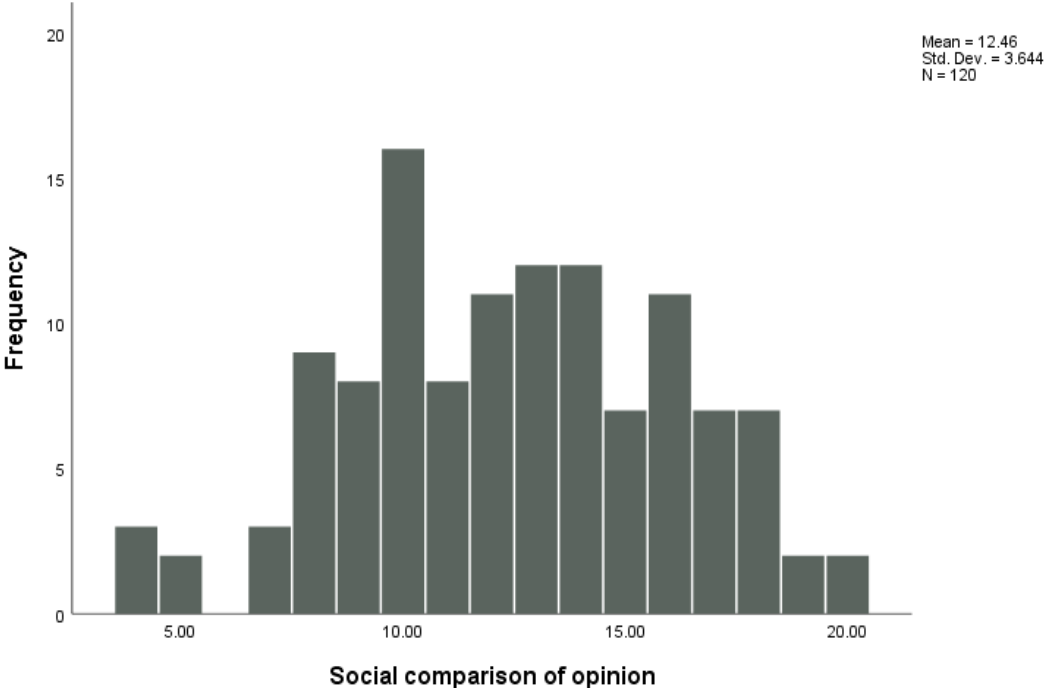
Histogram for Downward social comparison



Histogram for Social comparison of ability



Histogram for Social comparison of opinion



Histogram for Self-esteem

