

An Exploration of the Impact of Instagram use on the Self-Esteem and Life Satisfaction of Female Undergraduate Students

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Abstract: *The purpose of this study is to examine if and how Instagram use affects female undergraduate college students. Drawing upon primary data derived from interviews with a small range of students and one post-primary school counsellor, the findings suggest that routine use of this social media platform has a substantial negative impact on the self-esteem and life satisfaction of the students. The research results highlight a number of issues including negative feelings about themselves due to upward social comparison, feelings of insecurity, envy, a lowering of self-esteem and in extreme cases, depressive tendencies, all of which they associated with their use of Instagram. This article was originally submitted as the author's final year dissertation project in the 2019-20 academic year.*

Keywords: *Instagram; social comparison theory; dramaturgical theory; uses and gratifications; self-esteem and life satisfaction*

Introduction

Aims of the research

This dissertation examines the impact of Instagram use on the self-esteem and life satisfaction of female undergraduate college students. Particular interest in this area arose due to the growing popularity of Instagram. As of 2018, Instagram had over one billion monthly users (Statista, 2019). This huge and rapidly growing user base has brought concerns regarding the relationship between Instagram use and negative psychological consequences (Lub, Trub and Rosenthal, 2015). However, as Instagram is a relatively new social media site, having only been introduced in 2010, there is a relative dearth of literature regarding its impact on self-esteem and life satisfaction. Existing research on the topic tends to focus on the impact of Instagram use on, for example, body dissatisfaction (Kleemans et al., 2018). This dissertation aims to address the lack of research in the area by offering fresh and original insights.

Dissertation outline

The literature review examines a range of relevant literature pertaining to the topic, with a particular focus on three relevant theories related to the use of social media. These are: social comparison theory (Festinger, 1954), which examines how people judge themselves in relation to others, by engaging in either upward or downward social comparison; dramaturgical theory (Goffman, 1959) which posits that people tend to put on different performances in different settings; and uses and gratifications (U&G) theory (Katz, Blumler and Gurevitch, 1974), which examines what people do with the media, rather than what the media does to people. The literature review also critically examines a range of relevant studies which have applied these theories to social media use, in particular Facebook and Instagram. Also, the literature review examines existing sources on the influence of social media affirmation, particularly in the form of likes, on social media user's self-esteem.

The methodology section outlines the approach taken with the empirical phase of this research study. This section clarifies why interviews were identified as the principal research method;

and how participants were chosen. Ethical considerations, limitations and an outline of the primary data analysis procedures are also addressed in this section.

The following section outlines the key findings of the primary research and proceeds to examine and interrogate these by integrating relevant theories and arguments from the literature review into the analysis. The findings and discussion chapters have not been formally separated, but rather, they have been combined into one, as it was felt that the qualitative nature of the research study better lends itself to this. The final chapter draws conclusions based on the research findings and relates these back to the central research question on which this study is based.

Limitations of the study

Due to the limitations of time with this study, only six student participants are included. This has the potential to limit the depth of the information gathered. However, to combat this a school counsellor is interviewed as she has wide access to female students within the selected age range. Furthermore, due to the onset of the Covid-19 pandemic, all student participants are interviewed by video calls. Great care has been taken to ensure that questions are framed with this in mind in order to elicit the most useful information from all interviewees.

Literature Review

Introduction

The purpose of this research is to examine the impact of Instagram use on the self-esteem and life satisfaction of female undergraduate college students aged eighteen to twenty-two years old. Since the emergence of Instagram in 2010, there has been a growing concern about the psychological consequences of the platform on its users (Lub, Trub and Rosenthal, 2015).

Multiple studies have focused on the relationship between Instagram and body dissatisfaction, depression, and narcissistic tendencies (Kleemans *et al.*, 2018; Lub, Trub and Rosenthal, 2015; Sheldon and Bryant, 2016). It has also been suggested that the visual basis of Instagram, a feature which distinguishes it from other platforms, can have different psychological consequences on users than text-based platforms (Winter, 2013). However, there are significant gaps in the literature regarding the impact of Instagram use on self-esteem and life satisfaction. In light of this, this dissertation proposes to address these gaps by conducting what is felt to be timely research on the subject matter. This literature review will thus explore a range of relevant literature pertaining to the growth in popularity of social networking sites (SNSs), their effect on self-esteem and life satisfaction of users, with as indicated above, a theoretical framework constructed around social comparison theory (Festinger, 1954), dramaturgical theory (Goffman, 1959) and U&G theory (Katz, Blumler and Gurevitch, 1974).

According to Vogel *et al.* (2014), self-esteem refers to the extent to which people value themselves. Similarly, life satisfaction can be defined as the extent to which a person likes or dislikes their life (Veenhoven, 1996). Therefore, in the context of this study it is appropriate to investigate how Instagram may cause users to re-evaluate themselves and their lives, particularly in relation to others as Festinger's (1954) social comparison theory proposes.

The history of social media

According to Boyd and Ellison (2007), social media has been prominent in everyday life since as early as 1997 when the first known SNS, SixDegrees.com, was launched. This platform was the first to allow users to create their own profiles, devise Friends lists and communicate with others. This popular SNS

gained millions of users, however, its features were unsustainable and the business shut down in 2000 (Weinrich, 2007, as cited in Boyd and Ellison, 2007).

In the early 2000s, other SNSs surfaced including Ryze.com, LinkedIn, Tribe.net and Friendster. These sites attempted to work alongside each other, however, Ryze.com never gained immense popularity while LinkedIn became a renowned business network, Tribe.net gained a unique user base and Friendster became one of the biggest failures in internet history (Boyd and Ellison, 2007). Friendster had launched in 2002 with the purpose of helping friends-of-friends meet, with bloggers and homosexual men forming the basis of users.

Advances in SNSs continued and MySpace launched in 2003 as a competitor to sites such as Xanga, AsianAvenue and Friendster (ibid). Friendster users shifted to other sites such as MySpace, following rumours that they would be charged for using the site, highlighting the fluidity of the SNS market (Anderson, as cited in Boyd and Ellison, 2007). Consequently, the user base of MySpace grew rapidly, gaining a unique user base of Indie-rock bands. By 2004, the popularity of MySpace grew with large groups of teenagers joining and encouraging their friends to do the same. MySpace successfully responded to its user's demands by updating its features, allowing users to personalise their own profile page, the only SNS to do so at the time (Boyd and Ellison, 2007). In 2005, NewsCorp purchased MySpace for 580 million dollars, attracting huge media attention (ibid).

Facebook, an extremely successful SNS still in operation today, launched in 2004 as a 'Harvard-only SNS' (Cassidy, 2006, as cited in Boyd and Ellison, 2007). Initially, people had to hold a Harvard.edu email address in order to use the site. Facebook slowly began opening up to other colleges with college-based email addresses still a prerequisite for membership. This small user base contributed to user perceptions that the site represented a private community. Over time, Facebook slowly began to support secondary school students, professionals who used business networks such as Ryze.com, and eventually, the general public. Facebook had two features distinguishing it from other SNSs. Firstly, users were not allowed to make their full profile public to everyone. Secondly, outside innovators could create applications which allowed Facebook users to perform tasks such as personalizing their own profiles (Boyd and Ellison, 2007). Despite the vast popularity of Facebook, Instagram has become a popular SNS amongst younger users (Statista, 2019). The growth of Instagram will be discussed in the following section.

Instagram

According to Blystone (2019) Instagram was developed in 2010 by Kevin Systrom and Mike Krieger. The platform is based on Systrom's earlier invention, Burbn, an app on which users could report their locations, share plans and photos. The Instagram creators re-evaluated Burbn, deciding to focus solely on its photo-sharing element due to its vast popularity amongst users. Following investigations, Systrom and Krieger discovered that Hipstamatic was the most popular photo sharing app because of its unique features which allowed users to enhance their photos by adding filters. However, it did not allow for social interaction. Consequently, Systrom and Krieger saw the possibility of creating a platform which combined the features of both Hipstamatic and Facebook. The pair then redesigned Burbn to consist of only its photo, comment and like features, and renamed it Instagram. They launched Instagram on 6th October 2010, on which day it attracted 25,000 users. By December that year, the app had one million users and hence attracted the immense interest of many investors. In April 2012, when the app had reached 27 million users, Facebook bought Instagram for one billion dollars (Blystone, 2019). Instagram has since grown to be one of the most popular social media platforms worldwide, reaching one billion monthly users as of June 2018, with 41 percent of these users aged 24 years old or younger (Statista, 2019). In Ireland, 41 percent of the population have Instagram accounts, with 65% of these users using the app daily (Communications Hub, 2019).

Instagram users spend an average of 53 minutes per day on the platform (Medium, 2019). It is mainly used to post photos and videos which users can enhance with filters and their followers can like and comment on these. It also has a 'stories' feature, which enables users to post fleeting snapshots from their lives in photo or video form that disappear after twenty-four hours. It has been suggested that the visual basis of Instagram can encourage users to present the most favourable, polished images of themselves (Winter, 2013).

However, Instagram owner, Adam Mosseri, recently made the decision to hide 'likes' on posts, now only visible to the poster, to see if this will encourage users to participate more due to feeling less self-conscious about how many likes their posts get. The decision is also part of an anti-cyberbullying movement (Rodriguez, 2019). Another common feature of Instagram is the ability to follow and be followed by strangers due to the hashtags which multiple users caption their photos with, enabling all posts with the same hashtag to be searchable by all users (Lub, Trub and Rosenthal, 2015).

Social comparison theory in the social media era

Social comparison theory (Festinger, 1954) is the tendency to evaluate oneself in relation to others. He posited that there are two types of social comparison: firstly, upward social comparison, whereby people compare themselves to superior others; and secondly, downward social comparison, whereby people compare themselves to inferior others in order to boost their own self-esteem. This section will explore the relevance of social comparison theory in the digital age.

Social media platforms proffer ample opportunities for users to engage in social comparison through instant access to vast information about others (Chua and Chang, 2016; de Vries *et al.*, 2018; Fox and Vendemia, 2016; Lee, 2014; Vogel *et al.*, 2014). Users can upload photos and posts emphasizing personal attributes which make them either upward or downward comparison subjects (Vogel *et al.*, 2014). Generally, social media platforms encourage users to present their most positive features (Gonzales and Hancock, 2011; Lee, 2014). They also allow users to view quantitative information about a person's social web, such as the number of followers they have, or the amount of likes their posts get (Vogel *et al.*, 2014). Due to these features, it is felt that viewers are likely to make upward social comparisons using this positively biased information, which is argued to have negative psychological consequences (*ibid.*).

Two quantitative studies conducted by Vogel *et al.* (2014) explored the effects of frequent and temporary subjection to upward social comparison targets on social media. Findings concluded that frequent Facebook users had lower self-esteem, and that people tended to engage more in upward rather than downward social comparison. A key finding of the studies was that upward social comparisons resulted in greater self-dissatisfaction, and manipulated quantitative information about a person's social network had a greater effect on self-esteem. A study by Fox and Vendemia (2016) revealed that viewing posts such as attractive photos of others', had a greater negative impact on women than men, while exposure to downward social comparison information resulted in a boost in self-esteem for both women and men. These studies highlight the effect of social comparison on self-esteem.

It is important to note that people differ in tendencies to engage in social comparison based on their social comparison orientation (SCO) (Buunk and Gibbons, 2006). People can either have high or low levels of SCO, but the standard comparer has three common attributes.

People high in SCO tend to be especially self-conscious around others, are deeply interested in how others feel, and have high levels of self-uncertainty. Consequently, those high in SCO are more likely to engage in social comparison than people low in SCO. Due to the multitude of social

comparison opportunities on social media, this concept has been cited by authors examining how a person's SCO is related to their social comparison frequency on social media (Lee, 2014; Vogel et al., 2015). A quantitative study by Lee (2014) examined the role of a person's SCO and Facebook use on social comparison frequency and the effects of engaging in social comparison. This study is central to the current research as Lee chose a sample of college students due to their tendency to engage in social comparison more frequently than older users, which is the same target population of this dissertation. Results of the study concluded that a person's SCO and self-uncertainty is essential in explaining the frequency of engaging in social comparison, and that a person with high levels of SCO is more likely to socially compare with others on Facebook. Vogel et al. (2015) similarly found that people with high SCO used Facebook more frequently and have lower self-esteem after viewing others' Facebook posts. Thus, current research suggests that individual differences are an important factor to be taken into consideration when examining a person's tendency to engage in social comparison on social media, and the effects of doing so.

A link has been found between following strangers on social media and negative psychological consequences (Chou and Edge, 2012; Lub, Trub and Rosenthal, 2015). One of few studies conducted on Instagram (Lub, Trub and Rosenthal, 2015), investigated the relationship between how frequently people use Instagram, how many strangers they follow, and symptoms of depression. Findings concluded that although participants who used Instagram more frequently were not more likely to engage in social comparison, Instagram use was associated with negative psychological consequences for those who follow a lot of strangers. However, surprisingly it had a positive effect on those who follow mainly people they know. A similar study by Chou and Edge (2012) investigating how Facebook users perceive the lives of others concurred. Results concluded that the more strangers' people included as 'friends' in their Facebook social network, the greater they felt that others had better lives than their own. Users who included more people they knew personally had a less biased view of others' lives. However, in contrast to findings that having more personal friends on social media has positive consequences for psychological well-being, a qualitative study by Chua and Chang (2016) found detrimental effects of Instagram-based peer comparison on teenage girls. Feedback from 24 in-depth interviews revealed peer comparison to have negative consequences on self-esteem, result in self-dissatisfaction, intensify the strive for the media-ideal, and in extreme cases lead to self-harming behaviour.

Presentation of the self in an online context

Goffman's (1959) dramaturgical view is essential to understanding self-presentation today, in the social media era. Here, Goffman (1959) likens social interaction to theatre, whereby people put on different performances in different settings. He argues that people have a front and a back stage self. The front stage involves displaying a certain, ideal self to audiences through, for example, wearing certain clothes to give off certain impressions. The back stage self is a more realistic version of the self in which people let their guard down when they are not putting on performances for others (Goffman, 1959).

People have long since engaged in self-presentation strategies (ibid) to attempt to control how others perceive them (Bareket-Bojmel, Moran and Shahar, 2015). The rapidly growing popularity of social media in everyday life has in essence created novel platforms for self-presentation (DeVito, Birnholtz and Hancock, 2017; Pounders, Kowalczyk and Stowers, 2016; Rui and Stefanone, 2013). Users can engage in selective self-presentation by choosing what aspects of themselves and their lives they wish to share with others, and continuously update this information for their audiences (Lee-Won, Shim and Joo, 2014, as cited in Fox and Vendemia, 2016). Photo-sharing opportunities allow a new form of self-presentation and have become a very important feature of social media platforms which also encourages self-objectification (Fox and Vendemia, 2016). Given Goffman's argument that the front-stage self wishes to convey an ideal self to others, it may also be feasible to say that photo-

sharing features, along with photo-enhancing tools on social media further enable users to convey their desired front stage self. Online self-presentation and social comparison are closely intertwined. This is the case as, if people self-present only their most positive attributes, which they usually do on social media (Gonzales and Hancock, 2011), then people tend to make upward social comparisons using that information (Lee, 2014; Vogel et al., 2014).

Engaging in selective self-presentation on social media becomes very complex, as other actors come into play (DeVito, Birnholtz and Hancock, 2017; Rui and Stefanone, 2013). Traditionally, in offline contexts such as in Goffman's original conceptualisation, and even in more recent online chat rooms, all information was self-provided by the poster. However, social media enables other-provided information. This means that others play a major role in an individual's selective self-presentation strategies on social media. For example, users can tag people in photos. Subsequently, all members included in the tagged person's social network can view these photos (DeVito, Birnholtz and Hancock, 2017; Rui and Stefanone, 2013). This can damage a person's self-presentation strategies by going against their idealised, meticulously presented self-image. This is further emphasised by the fact that other-provided information is generally seen as less easily manipulated, and therefore more trustworthy than self-provided information (Walther and Parks, 2002, as cited in Rui and Stefanone, 2013). Therefore, users may become involved in self-protection or subtractive strategies, where, for example, they untag themselves from photos to remove unwanted or damaging information posted by others (ibid).

It has been found that people strive to present the best possible image of themselves online (Bareket-Bojmel, Moran and Shahar, 2015; Gonzales and Hancock, 2011). A qualitative study by Pounders, Kowalczyk and Stowers (2016) found that participants used selfies to construct an ideal image that conveys them as having better lives and being happier than they actually are. Gonzales and Hancock (2011) found that selective self-presentation on Facebook positively impacts self-esteem through viewing positive information about oneself when scrolling through one's own Facebook profile. They suggest that, as Facebook may prompt users to present the ideal self, looking at this ideal self has a positive effect on self-esteem.

Why do people use social media?

In the context of this study, it is necessary to investigate not only the effect of social media use on people, but also why people use the media, which is the very basis of the uses and gratifications (U&G) theory (Katz, Blumler and Gurevitch, 1974). U&G has been cited by authors examining *why* people use social media (Lee et al., 2015; Sheldon and Bryant, 2016; Whiting and Williams, 2013). It is useful to investigate motivations for engaging with social media when one considers its widespread use in everyday life (Statista, 2019), and also the recent prevalence of research on social media in communications literature (Whiting and Williams, 2013).

Blumler and McQuail (1972, as cited in Katz, Blumler and Gurevitch, 1974) identified four distinct media uses and gratifications categories: surveillance, personal relationships, diversion and personal identity. However, social media use also grants new gratifications (Whiting and Williams, 2013). This may be particularly true in relation to Instagram as it is an entirely visual platform (Lee et al., 2015; Sheldon and Bryant, 2016). Social media may also grant 'social identity gratifications', as they allow users to identify with members of their own peer groups who are similar to them, as well as socially compare with others not in their inside groups (Valkenburg, Schouten and Peter, 2005).

Narcissism may also be particularly linked to Instagram use due to the filters people can use to enhance their photos (Sheldon and Bryant, 2016). Sheldon and Bryant conducted a quantitative study central to this dissertation, investigating why people use Instagram. Results found four primary reasons for Instagram use. First, to gather information about others. Second, to use it as a form of

documentation, as Instagram is a visual-based platform, it serves as an online photo album for many. Third, participants used the site for 'coolness', as they wanted to be on a platform that a lot of their friends enjoyed using, that also contains 'cool' affordances such as photo-enhancing tools and the ability to follow celebrities. Fourth, people used Instagram to show their creativity through, for example, photo filters.

A similar study by Lee et al. (2015) investigating motives for Instagram use found that participants used the platform as a means of interacting with others; to document important moments; and also as a powerful new means of self-presentation. Given that photos have become a prevalent means of self-presentation in an online context (Fox and Vendemia, 2016), it is not surprising that Instagram, as a photo-based platform, is used by people to engage in self-presentation. Lee's participants also used the platform to escape from the real world, to develop fantasised relationships with celebrities, and as a means of looking at other photos.

A qualitative study by Whiting and Williams (2013) investigating motives for social media use in general found ten primary reasons for its use. These included using it for interpersonal interaction; to gather information; to relieve boredom; for entertainment; to relax by escaping the real world; to express opinions; to gather content to share with others; instant communication; to share information; and to find out information about others.

Results found in all of these studies largely meet the four categories of media use identified by Blumler and McQuail. However, they also identified new trends in media use, such as using Instagram for coolness and creative purposes, as well as allowing users to document their lives and self-present themselves to others (Lee et al., 2015; Sheldon and Bryant, 2016). These studies indicate that social media can grant new gratifications, in particular visually-based sites like Instagram.

The power of affirmation on social media

Giving and obtaining validation, such as likes and comments on user's posts, is a huge aspect of social media use. Liking posts is a simple way of communicating with others. However, giving and receiving likes has different meanings for different people. For some, receiving likes on a photo may evoke feelings of social acceptance and popularity (Scissors, Burke and Wengrovitz, 2016). A survey by Pew Research Center (2014) found that some people use Facebook in part to receive affirmation from others on content they post. However, the problem with relying on social affirmation like this is that users are allowing others to accredit value to them, and are thus basing their self-worth on how others perceive them in the form of a number (Parnell, 2017).

As previously mentioned, social media enables other-provided information, which is seen as more trustworthy than self-provided information (DeVito, Birnholtz and Hancock, 2017; Rui and Stefanone, 2013). Likes are a type of other-provided content that reveal information to others about the person receiving the likes (Scissors, Burke and Wengrovitz, 2016). For instance, a study by Hall and Pennington (2013) revealed that the more people who like a person's status update, the more strangers think the receiver is outgoing and socially confident. Hence, it is feasible to say that people are judged in a certain way by the amount of likes their content receives on social media.

Questions have arisen regarding how people feel about receiving likes on social media. A quantitative study by Burrow and Rainone (2017) investigating the impact of Facebook likes on their receivers found that the more likes a person receives, the greater the boost to their self-esteem. Similarly, Zell and Moeller (2018) examined how people feel after receiving responses to their Facebook status updates revealing positive news. They found that the more people who responded to participants' status updates, the happier they felt about themselves. The number of likes received resulted in participants' perceiving their status updates as more important. They were also more likely

to remember the status update, and were better satisfied with the number of likes received relative to the number of comments. Harvard researcher Trevor Haynes (2018) actually found that receiving positive social affirmation on social media, such as in the form of likes, leads to a release of dopamine, the brain chemical that, when released, results in feelings of happiness. Haynes equates this online social affirmation to the same feelings that are produced when a person takes cocaine. Hence, on the one hand, receiving social affirmation positively influences self-esteem and happiness. However, on the other hand, Kerris et al. (2000, as cited in Burrow and Rainone, 2017) reported that basing one's self-worth on validation from others can lead to negative psychological consequences in the long term.

A survey of 802 teenagers by the Pew Research Center (2013) examined how participants manage their privacy on social media sites. Findings indicated that the teenagers experienced pressures around receiving likes on social media. Participants revealed that likes are a particularly strong indication of a person's social status, so much so that when using Facebook, they will post specific types of photos that they believe will receive the largest possible number of likes, while removing photos that do not receive enough likes.

There is broad recognition throughout the literature reviewed above that social media platforms impact on the self-esteem and life satisfaction of users.

Methodology

Introduction

This research study focuses on the impact of Instagram use on the self-esteem and life satisfaction of female undergraduate college students. The core research question under investigation is: 'does Instagram use have an impact on the self-esteem and life-satisfaction of female undergraduate college students?'

Engaging in social comparison on social media has been found to have negative psychological consequences, especially upward social comparison (Vogel et al., 2014). Winter (2013) argues that Instagram has a greater detrimental impact on self-esteem than Facebook, as the visual basis of Instagram further encourages users to present the perfect life, thus resulting in greater upward social comparison by viewers. The hypothesis is that Instagram has a negative effect on self-esteem and life satisfaction. The focus on Instagram stems from gaps in the literature and arguments that the image-based site results in greater negative psychological consequences (Lub, Trub and Rosenthal, 2015; Winter, 2013).

This section will provide an outline of the methodological approach employed to answer the central research question; the rationale for choosing this approach; the process of choosing participants; and ethical considerations. The section will conclude with a brief outline of the data analysis process.

Research approach

The majority of similar research studies reviewed leaned towards a more quantitative research approach, thus gathering limited detailed findings. For example, Vogel et al. (2014) took a quantitative approach to investigate the impact of frequent and temporary exposure to social-media based social comparison content on self-esteem, thus gathering numerical data and limited detailed insight upon findings.

Given the nature of this dissertation topic, it was thought best to choose a primary research method that would elicit in-depth information into the impact of Instagram use on interviewees' self-

esteem and life satisfaction. Hence, a qualitative methodological approach using semi-structured, open-ended interviews was chosen, as this approach allows the interviewer to gather more in-depth answers over a more structured format (Robson and McCartan, 2016).

One issue with semi-structured interviews is that findings can be difficult to analyse as individual interviewees may be asked different questions (Opdenakker, 2006). However, to overcome this and ensure consistency, all interviewees were asked at least four of the same questions. Interview questions were informed by the concepts and ideas critiqued in the literature review. Areas explored included participant tendencies to engage in social comparison, selective self-presentation, and reasons for using Instagram. The positive and negative effects of Instagram on self-esteem was also explored in order to gather rich data on both sides of the argument. A limited number of closed questions were asked, such as time spent on Instagram and type of people followed in order to gather necessary background information.

Once compiled, the interview questions were piloted on non-participants of a similar age. As a result of this a number of questions were altered, some removed and extra questions added. This helped to ensure that the desired information was elicited from interviewees rather than information representing the interviewer’s opinion (Silverman, 2013).

Participants

The participants in this study include six female undergraduate college students between the ages of 18 to 22 years old. To participate in the study, all interviewees had to be regular Instagram users, which was defined here as using Instagram at least three times a week, and follow a variety of people (for example, friends and family; celebrities; social media influencers). A senior school counsellor was also interviewed to enhance the data collected from the students.

Data collection method	Research participant (pseudonym used)	Date/interview duration
Semi-structured (video interview)	Emma	15 March 2020 30 minutes
Semi-structured (video interview)	Isabelle	17 March 2020 35 minutes
Semi-structured (video interview)	Mary	31 March 2020 32 minutes
Semi-structured (video interview)	Sarah	14 March 2020 37 minutes
Semi-structured (video interview)	Siobhan	21 March 2020 38 minutes
Semi-structured (video interview)	Sophie	22 March 2020 37 minutes
Semi-structured (video interview)	Anna – school counsellor	3 April 2020 33 minutes

Table 1: Summary of data collection measures

Ethical considerations

In adherence to the ethical guidelines of Dublin City University, all participants were made aware of the topic of the dissertation and the nature of the interview questions that would be asked prior to conducting the interview. All participants were provided with a plain language statement and an informed consent form. Interviewees were ensured that pseudonyms would be used at all times to protect their identities. Participants were also given assurance that participation is voluntary and that they could withdraw from the research study at any time they wished without any negative consequences.

All interviews were taped to aid transcription of accurate information. To this end, all research information gathered during the interview process, including audio taped interviews and transcriptions, was securely stored on a password protected USB key.

Data analysis

After conducting primary research, all interviews were transcribed and subsequently coded into a number of key themes. Transcription of interview data allows the researcher to become familiar with the content, assisting them to choose relevant themes (Cohen, Manion and Morrison, 2011). Themes were identified in relation to the theories drawn upon in the literature review and their relevance to the central research question. Six main themes emerged from the analysis. These included; background information, general uses of Instagram, upward social comparison, selective self-presentation, effect of Instagram use on self-esteem and life satisfaction, and the impact of 'likes'. Further thematic analysis was conducted to identify recurring patterns across the data set (Saldana, 2012). These themes will be discussed in detail in the following chapter outlining the findings of this research study.

Limitations

One limitation of this study was the sample size. As only six student participants were interviewed any conclusions drawn cannot be generalised. Despite judicious selection of participants, the fact that they were known personally to the researcher may further limit the findings. However, to combat this a student counsellor was interviewed to both enhance and validate the data collected from participants. It was hoped that she would provide unbiased information from her experience with a broad range of students in her care.

Findings and Discussion

Introduction

The focus of this research study is to examine the impact of Instagram use on the self-esteem and life satisfaction of female undergraduate college students. It was hypothesised at the outset that Instagram use would have a detrimental impact on self-esteem and life satisfaction. The central aim is to assess the impact of Instagram use through examining user tendency to engage in social comparison and selective self-presentation, alongside reasons for using Instagram. A recent strategy by Instagram to hide likes on posts was also examined to investigate whether this would encourage users to post more frequently as they may feel less self-conscious about others seeing how many likes their posts get.

As outlined in the previous section, data was collected using semi-structured interviews with six female undergraduate college students and a senior school counsellor. All interviews were recorded and then transcribed fully. A thematic analysis was then conducted on the transcripts to

identify major themes in the interviews (Saldana, 2012). Six common themes emerged. These were as follows:

1. Background information;
2. General uses of Instagram;
3. Upward social comparison;
4. Selective self-presentation;
5. Effect of Instagram use on self-esteem and life-satisfaction;
6. The impact of 'likes'

This section will examine the findings and discuss them according to the identified themes and sub-categories that developed within each theme.

Background information

Participants profile

All students were final year students attending Dublin City University and their average age, at the time of the study, was 21 years old. The school counsellor, Anna, works in a large, co-educational, post-primary school and has ten years' experience in her current role. She does not use Instagram herself but frequently provides counselling and support for school going Instagram users. However, the interview questions were compiled to glean information about female students within the specified age range, 18 and over. Anna supports at least ten senior cycle students, within this age group weekly, with counselling sessions lasting between 30-40 minutes.

Frequency of Instagram use

The following table illustrates the average daily time spent on Instagram by each participant. Generally, student participants admitted that daily use fluctuates depending on personal circumstances, thus these averages are a guesstimate. The average daily use of the student participants far exceeds the 53 minutes reported by Medium (2019), therefore it could be suggested that this adds value to the insights gathered from the student participants.

Participant	Average daily use (hours)
Emma	2.0
Isabelle	2.5
Mary	1.5
Sarah	3.0
Siobhan	2.0
Sophie	3.0
Average time spent by participants	2.3

Table 2: Average daily time spent on Instagram per student and overall

General use of Instagram

Information about people

The most common reason for using Instagram reported by participants was to find information, which is in line with findings by Sheldon and Bryant (2016). However, different interviewees sought different types of information on Instagram. All participants said that they use Instagram to find information

about others, including family, friends and strangers. For instance, Emma said that she uses Instagram to see what other people have been doing, such as whether they have gone on a holiday recently, and who is in a relationship with whom.

While using Instagram to seek information about others was found to be the most common reason for its use, other people-centered motives for using Instagram were reported. Two participants said that they use Instagram to share information about themselves and reported commonly using Instagram to post flattering photos as memories of times with their friends. Findings by Lee et al. (2015) concur, revealing that participants in their study used social media to document important moments in their life as well as to present flattering images of themselves. This highlights the fact that individuals use social media sites, including Instagram, to satisfy specific needs, which is the basis of the U&G theory (Katz, Blumler and Gurevitch, 1974). The school counsellor concurred, citing that a common use of Instagram by students on her case load was to post photos of both themselves and their friends.

However, she stressed that students regularly mention the distress caused when unflattering images of them are posted by others. This concurs with the suggestion made by Winter (2013), that the visual basis of Instagram motivates users to try and post the perfect photo of themselves. Furthermore=they highlighted the stress associated with this which is in line with Anna's experience.

Specific information: self-interest topics

All participants stressed that although they commonly use Instagram to find out information about others, they also use it to seek more specific information, which is in line with findings by Whiting and Williams (2013). For example, Isabelle said that she recently turned vegetarian and still finds it difficult to know what to cook. Hence, she follows a lot of vegan pages on Instagram to find helpful recipes. Similarly, Sophie and Mary reported that they use Instagram to find useful home workouts by following fitness pages. Another common use cited by all participants was checking out the current fashion trends and beauty tips.

Participants agreed that this aspect of Instagram use was an enjoyable one as they could choose useful hints and tips without having to post comparative information about themselves (Sheldon and Bryant, 2016).

Upward social comparison

Interviewees' engaged in both upward and peer-based social comparison. However, upward social comparison, whereby people compare themselves with superior others (Festinger, 1954), was found to be the most frequent type of comparison on Instagram amongst participants. This highlights the point made by De Vries et al. (2018), where they suggest that social media platforms which provide instant access to perfect images of others, encourage upward social comparison.

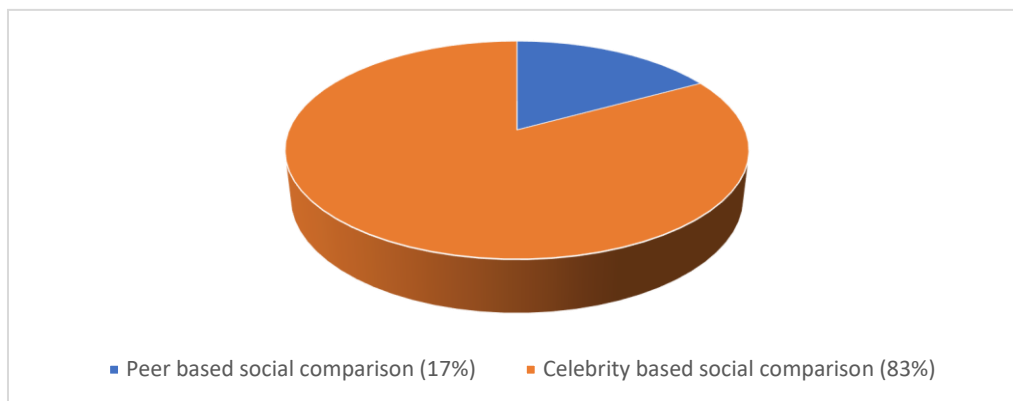


Fig.1: Type of social comparison by participants

Celebrity based social comparison

When participants were asked if they compared themselves to others on Instagram, three (50%) replied stating that they always do, as it is impossible not to when, according to Mary, Instagram is, “a visual collage of people’s highlight reels.” Participants reported engaging in upward social comparison with people such as the Kardashians, fitness models, and other social media influencers and celebrities.

All participants reported engaging in upward social comparison and cited experiencing negative feelings as a result of this. Four participants (66%) stated that they compare themselves more to strangers, such as celebrities, rather than friends as they do not know them or what their real lives are like beyond their Instagram feeds. Emma said that she compares herself a lot to the Kardashians, who she thinks are “flawless”, and seeing their posts on Instagram results in greater self-dissatisfaction. She noted that this self-dissatisfaction is further heightened by the fact that as she does not know them personally, she therefore cannot know if the life they present on Instagram is as perfect offline as it seems online. Quantitative studies by Vogel et al. (2014), reveal similar findings, where one impact of upward social comparison amongst social media users, was greater self-dissatisfaction. A study by Fox and Vendemia (2016) concurs, revealing that upward social comparison resulted in self-dissatisfaction amongst users but they state that it has a bigger impact on females than males. However, due to the gender profile of the participants of this study, this cannot be commented upon.

Peer based social comparison

When questioned about peer-based social comparison, participants agreed that their friends only present their “highlight reels” or perfect moments on Instagram. However, as they know them personally, they realise that their lives are not as perfect as they pretend to be on Instagram, and they can therefore take that into account when viewing their posts. The opposite is true with celebrities which was stressed by all participants. Suggestions made by Valkenburg, Schouten and Peter (2005) concur, as they state that social media sites may enable people to experience social identity gratifications as they are able to socially compare themselves to both their peers and others and find common ground.

In contrast to the aforementioned findings, Siobhan stated that she would more frequently engage in and is more affected by peer-based social comparison. She explained that although she tries not to, she compares herself a lot to one of her best friends. She said that they are both very similar, but her friend is “more girly” and posts a lot on Instagram, again reiterating the fact that it is impossible not to compare oneself on Instagram as it is just a “visual collage of people and their lives.” Siobhan

stated that she often compares herself to small things about her friend, like her “gorgeous long blonde hair”, as she has always had insecurities about her own hair being “really thin”, for example. She also gave an example of comparing herself to other friends of hers that are in long-term relationships and post about them. This peer-based social comparison was found to result in envy and insecurity for this participant.

When asked why she would compare herself more with friends, she noted that she does compare herself to celebrities a small amount, but also recognises that they are “a completely different breed.” Hence, she compares herself more to people similar to herself as she feels she should be more like them. This finding agrees with findings from a study by Chua and Chang (2016), which revealed that peer-based comparison can have a huge negative impact on teenage girls’ self-esteem, often leading to self-harm.

According to the school counsellor, upward social comparison of both celebrities and peers is an issue for many older students in her care. Feeling inadequate, exacerbation of depressive symptoms and loss of the will to attempt to compete with perfect people on social media were stressed as major issues for students. This further supports the impact of upward social comparison on self-esteem and life satisfaction of females, 18 and over. These findings are in line with Buunk and Gibbons (2006) concept of social comparison orientation (SCO), as tendencies towards social comparison, although generally high, differed across the group. However, it was impossible to quantify the SCO levels during this study, therefore no direct correlations can be made between comments made and high or low SCO tendencies.

Selective self-presentation

Positive self-presentation

All participants in this study reported presenting only the most positive aspects of their lives on Instagram. For example, Sarah stated that “with Instagram it’s planned, there’s a few photos together, like definitely after a holiday to show off where I’ve been and stuff”, while Mary reported being “a colourful person whose surrounded by friends all the time, partying, looking good, drinking and beaming with happiness and travels for fun all the time” on her Instagram feed.

These findings are consistent with Goffman’s (1959) dramaturgical view, where he likens people to actors, having a front and a back-stage presence. Presentation of self to their audience is normally constructed to create an ideal impression. There is a broad agreement amongst researchers that social media is an ideal platform for self-presentation (DeVito, Birnholtz and Hancock, 2017; Fox and Vendemia, 2016; Lee et al., 2015; Rui and Stefanone, 2013), which is in line with the findings from this study.

Various reasons for engaging in this type of selective self-presentation emerged. Participants reported posting only the highlights for fear of being judged if they posted a photo that did not make them or their lives look good. It also emerged that participants want others to think that their lives are going better than they actually are. For instance, Isabelle is from Cork and said that she only ever posts photos on Instagram after nights out with her friends. She views it as a way of communicating with her childhood friends from home, who she knows are watching her. In this way, Isabelle views how she presents her life on Instagram as “almost like lying”, so that when she goes back home her friends will exclaim at how much fun she is having, when really her life “is not going in the way they think it is at all.” This once again is consistent with Goffman’s (1959) dramaturgical view as Isabelle creates an ideal life to present to her audience.

Interestingly, none of the participants mentioned negative images of them posted by friends whereas the school counsellor, Anna, highlighted this as a major issue amongst students in her care. She spoke of one student who was struggling after a distorted image of her was posted by a friend. As she was tagged in the post, all of her followers saw the unattractive image. Anna explained that many sessions are spent dealing with the impact of such betrayal where students feel marginalised and targeted by their friends. This highlights the complex nature of social media, as described by Rui and Stefanone (2013), where carefully constructed self-presentation may be complicated by others who post negative images of individuals.

Negative self-presentation

All participants reported that their Instagram feed is not representative of their real lives, but generally only presents the highlights. There was agreement that if negative aspects of life were posted, it was to generate sympathy. Isabelle stated that the only negative aspect of her life she posted was when her dog died. Sophie reported that she is not posting anything on Instagram at the moment, in light of the Covid-19 pandemic, as she has no highlights to post. This further reveals that social media platforms are ideal for positive self-presentation (Rui and Stefanone, 2013) as participants were reluctant to post images when there was nothing exciting happening in their lives.

Effect of Instagram use on self-esteem and life-satisfaction

Negative effects

All participants reported negative effects of Instagram use on their self-esteem and life-satisfaction. Overall, the negative effects of using Instagram were found to be strongly linked to engaging in social comparison with others.

The negative effects of using Instagram generally resulted in feelings of insecurity and envy amongst participants, either regarding their looks or their positions in life. For example, Siobhan stated that she knows some people only slightly older than her who post about having bought their own apartments and started their careers, which she said then brings up insecurities in her own life. Participants reported that viewing posts of others doing what they wish to be doing had a particularly negative effect on how they felt about their own lives. One participant said that she knows a few people who are just slightly older than her, travelling around the world and working from their laptops, which is what she most wishes to be doing. Seeing this then results in feelings of envy. She also noted that this makes her feel “stuck because we’re still in college.” Participants reported feeling much more critical and judgmental of themselves after spending time on Instagram. One participant stated that she heavily dislikes her life after scrolling through Instagram, however, finds this to be both a bad and a good thing. Bad, as it can make her feel “like a failure”, but good, as it increases her motivation. However, it was found that, overall, it does more damage than good. The negative effects highlighted by participants once again concur with findings from a qualitative study by Chua and Chang (2016), where peer comparison by adolescents had negative consequences on self-esteem.

Interestingly, the negative effect of Instagram was especially highlighted by the counsellor. She stressed that many of her clients face huge issues due to Instagram use. Anna described the impact of the addictive nature of social media on many eighteen-year olds and regular refusal to cease use of Instagram despite the unhappiness it causes. Other issues cited were feelings of low self-worth, loss of trust in friends, feeling unattractive and in more complex cases admittance to psychiatric units due to exacerbation of mental health issues caused by lack of life satisfaction triggered by social media.

Positive effects

In contrast to aforementioned findings, one participant stated that Instagram actually increases her motivation and presents new opportunities. This participant stated that if she sees a place is beautiful from someone she knows posting photos of a holiday, she will consider going and experiencing it herself, rather than feeling envious and dissatisfied with her own life. Isabelle noted positive effects of Instagram use on her self-esteem when scrolling through her own feed and those of her close friends. She reported that when scrolling through her own Instagram feed, she feels extremely good about herself, as she noted that “if you go down your own profile, it’s your life filtered, so you don’t necessarily remember all the bad parts.” This is in line with findings by Gonzales and Hancock (2011) that suggest that selective self-presentation has a positive impact on users.

According to Lub, Trub and Rosenthal (2015), there is a positive association from social media for people who mainly follow friends. This agrees with comments made by participants who had positive feelings when reviewing both their own profiles and that of their close friends. Lee et al., (2015) cite escapism as one use of Instagram which was reflected in Isabelle’s comments about scrolling through her feed deflecting the more negative aspects of her life.

That said, Emma noted that scrolling through her own Instagram feed can actually make her feel worse about herself. She explained that viewing old photos of a much better life while she is sitting at home studying or watching television, makes her feel worse about herself and her life. This once again highlights the negative impact of Instagram on life satisfaction.

The impact of ‘likes’

Instagram recently decided on a strategy to hide likes on user’s posts. This means that the person posting can see the number of likes their post gets, but others cannot. The decision to hide likes was made by Instagram owner, Adam Mosseri, to test if it may encourage users to post more due to feeling less self-conscious about others seeing how many likes their posts get (Rodriguez, 2019).

In light of these recent events, this study decided to examine if the strategy of hiding likes would meet Mosseri’s hypothesis that it would lead to lower feelings of self-consciousness when posting. This study confirmed Mosseri’s hypotheses. Five out of six participants reported feeling a lot calmer about posting now that others cannot view their likes. However, one participant stated that she never paid much attention to how many likes her posts got. Therefore, this new feature would not affect her any differently.

Five out of six participants said they feel less judged on Instagram now that likes are hidden. This feeling was reiterated when Isabelle stated that she used to judge people by the amount of likes their posts got, and thus felt as if others would do the same to her. Now that others cannot see her likes she no longer overthinks what she posts on Instagram. These comments reflect suggestions made by Scissors, Burke and Wengrovitz (2016) that social media users equate popularity and social acceptance with the number of likes they received.

Comments made by Sophie concur where she noted that she now posts less as her number of likes are no longer publicly visible. She highlighted the competitive nature of her previous Instagram habits where posts were strategically placed to gain as many likes as possible. This, she explained, made her feel much better. This reflects the findings throughout the literature where a person’s self-worth is based on how other people view them on social media (Kerris et al., 2000, as cited in Burrow and Rainone, 2017; Parnell, 2017; Pew Research Center, 2013; Zell and Moeller, 2018). Two participants revealed that Instagram concealing likes allows them to focus more on the quality of what they are posting, while previously they would post a certain type of photo that they thought would

get enough likes for others to see. That said, they stressed that as they were aware of the number of likes their posts get, it still has an impact on how they feel about themselves and if they receive less likes than expected this still upsets them. This further highlights the effect of Instagram use on self-esteem (Chua and Chang, 2016).

This study demonstrates that Instagram use per se has a substantial impact on the self-esteem and life satisfaction of female undergraduate students. There was general agreement amongst participants that they experienced negative feelings about themselves in particular due to upward social comparison. Feelings of self and life-dissatisfaction were reported as participants frequently compared themselves to celebrities or more attractive peers. This was further emphasised by comments made by the counsellor where students in her care experienced insecurity, envy, stress and depressive symptoms due to peer-based and upward social comparison with celebrities. That said, positive associations were also mentioned by participants when reviewing their Instagram feeds as they only highlighted the good aspects of life.

The following chapter contains a summary of the findings and the conclusions drawn from the research.

Conclusions

Introduction

Social media have been an important aspect of everyday life since as far back as 1997. Many SNSs have come and gone in the era of digital social networking. Although Facebook remains the most popular social media platform, Instagram, having risen to prominence in 2010, has steadily gained a vast number of followers, especially among the young (Statista, 2019). It is now owned by Facebook which is further testament to both its success and popularity. That said, given the visual basis of Instagram there has been a growing concern that users tend to engage in both peer-based and upward social comparison and as a result may experience some negative psychological ramifications (Lub, Trub and Rosenthal, 2015). To this end, this research project explored the impact of Instagram use on the self-esteem and life satisfaction of female, undergraduate college students. The findings from this study strongly support the hypothesis that Instagram has a negative impact on both self-esteem and life satisfaction of participants. The current chapter presents the conclusions drawn from the research and discusses recommendations, and limitations of findings.

Brief overview of the research and presentation of the findings

Due to limitations imposed by the Covid-19 pandemic the student participants were all aged 21 and known to the researcher. A counsellor from a large post-primary school, with ten years' experience, was the remaining participant. The literature review revealed that social media platforms per se can have a negative impact on the self-esteem and life satisfaction of users due to upward and peer based social comparison, tendencies for self-presentation and the power of affirmation. Therefore, this research project was conducted to explore if similar negative impacts resulted amongst student participants.

Findings revealed that participants all partook in above average daily use of Instagram, with average use substantially exceeding the general mean use reported by Medium (2019).

Seeking information about friends and family was cited by all participants as the most common use of Instagram. Other uses included sharing personal information, posting flattering photos of both themselves and friends and gathering specific information about personal interests and hobbies. These uses are consistent with uses identified by Lee et al. (2015) and highlight the

common use of Instagram to satisfy basic needs, reflecting the U&G theory (Katz, Blumler and Gurevitch, 1974).

A central finding from the school counsellor was the impact of other users posting unflattering photos of individuals and the undue stress this causes. These findings are in line with those of Winter (2013) and reveal the tendency to strive for the perfect image when posting and the stress associated when imperfect visual images are uploaded.

It emerged that all participants, including students in the counsellor's caseload, engaged in upward social comparison with 83% engaging in celebrity-based comparison and 17% in peer-based comparison. Participants reported negative feelings as a result of this, especially self-dissatisfaction, envy, depressive symptoms and insecurity which is in line with findings by Fox and Vendemia (2016). However, participants also experienced social identity gratification when socially comparing themselves favourably to friends (Valkenburg, Schouten and Peter, 2005).

All participants revealed that they only presented the most positive aspects of their lives which is consistent with Goffman's (1959) dramaturgical view where people construct the most positive presentation of themselves for their audience. Fear of being judged and a need to present images of an ideal life were cited as reasons for positive self-presentation. All participants, especially the counsellor, described negative effects of Instagram use on self-esteem and life satisfaction especially due to social comparison which concurs with findings by Chua and Chang (2016). Feeling unattractive, loss of self-worth and unhappiness were attributed to Instagram use.

Conversely, one participant highlights the positive effect of selective self-presentation (Gonzales and Hancock, 2011) on her self-esteem when she views only the positive aspects of her life on her Instagram feed.

Finally, participants agreed that since likes are now only visible to the poster on Instagram they feel less judged, however, despite this, receiving less likes for a post still causes upset.

Limitations of this research and recommendations for future research

A limitation of this research was the small sample size and the close relationship between the researcher and participants. Future research could be carried out with a larger sample size, across a wider age group and include at least three counsellors. This would enable the researcher to collate more comprehensive data to confirm if the findings of this research study are conclusive.

Although the findings of this study strongly suggest that Instagram use has negative impacts on self-esteem and life satisfaction of female undergraduate students, it cannot be generalised as it was carried out on a small number of participants from the same college. That said, comments made by the counsellor strengthen the findings and suggest they have tangible merit.

Final reflections

This research has given me substantial insight into the impact of Instagram use on the self-esteem and life satisfaction of female undergraduate users. It has enabled me to recognise Festinger's (1954) social comparison theory in relation to Instagram use and the impact of upward social comparison. Goffman's (1959) dramaturgical theory and the uses and gratification theory (Katz, Blumler and Gurevitch, 1974) are strikingly evident amongst the findings which highlight the presentation of our best self and the common use of social media to satisfy needs.

It has been over twenty years since the inception of social media sites and constant upgrading and technological advances has resulted in development of popular SNSs such as Facebook and Instagram. According to research the visual basis of these sights can have a negative impact on a user's mind set which has been somewhat demonstrated by this study.

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