



Body Dissatisfaction in Young Adults in Relation to Image-Centric Social Media Platforms

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Abstract

Aim: The purpose of the current study was to provide a broader understanding of the relationship between body dissatisfaction and the use of image-centric social media platform, Instagram. This study also aimed to look at gender differences in relation to body dissatisfaction and addiction to Instagram. **Method:** A questionnaire was provided through social media sites such as Instagram, Snapchat and Twitter, for participants ($n = 204$) aged between 18 and 25 to partake in, using items from the Body Esteem Scale (Franzoi & Shields, 1984) and the Body Appreciation Scale (Avalos, Tylka, & Barcalow, 2005) to determine an individual's level of body dissatisfaction, and items from the Instagram Addiction Scale (TIAS) (Sholeh & Rusdi, 2019) to determine an individual's level of addiction to Instagram. The answers to these scales were then calculated for each participant. **Results:** The results for this study found a small positive correlation between body dissatisfaction and addiction to Instagram, with higher levels of addiction to Instagram indicating higher levels of body dissatisfaction. It was discovered that 7.5% of variation of body dissatisfaction can be explained by Instagram addiction. There was also a difference, to a statistically significant level, between males and females in relation to body dissatisfaction and Instagram addiction, with females having higher levels of both. **Conclusion:** We can conclude from the findings of this study that use of image-centric social media platform, Instagram, has a direct effect on body dissatisfaction in young adults, and that females are affected by this more so than males. Implications and future research are discussed.

Introduction

Body dissatisfaction is a term that has been increasingly mentioned in recent years, and is defined as a pessimistic, illusory evaluation of the weight and frame of one's own body (Joseph & Shiffrar, 2011). According to Smolak (2004) there has been a deluge and increase in research in relation to body image and body dissatisfaction in children and adolescents. Unsurprisingly, this research paper has coincided with the increase in popularity of the usage of social media platforms in around 2006. The feeling of body dissatisfaction has been found to be frequently experienced throughout adolescence, and it enhances the risk of unpleasant and adverse health outcomes, predominantly eating disorders (Sharpe et al., 2018). Negative body image may also be associated with disorders such as body dysmorphic disorder, which is a psychiatric condition that is defined by uncontrolled concern regarding one's physical appearance, particularly in relation to subtle or imagined abnormal features of the body (Bulut et al., 2018).

Body dysmorphic disorder (BDD) has been highlighted as a mindset of the constant idealisation of perfection under terms such as "beauty hypochondria" (Castle, Phillips & Dufresne, 2007, p. 100). It is a disorder of which body dissatisfaction is a leading symptom, and has been found to be associated with childhood trauma, such as childhood neglect and abuse (Didie et al., 2006). In one study, results showed that 78.7% of participants ($n = 75$; majority female) who had body dysmorphic disorder, had a history of childhood mistreatment; and sexual abuse was discovered to be significantly related to disorder severity (Didie et al., 2006). Although this study demonstrates a relationship between extreme childhood neglect and abuse, and developing BDD, factors such as gender differences were not taken into account as most participants were female.

As well as generally having more negative body image perceptions, females are also known to have more body dissatisfaction-related problems than males, such as low self-

esteem (Furnham, Badmin, & Sneade, 2002). Furnham and colleagues (2002) discovered that boys longed to be heavier than they actually are, and girls lighter; while girls identified a relationship between body dissatisfaction and self-esteem, and boys did not. The males and females in this study showed comparable rates of body dissatisfaction, but in different aspects of themselves (Furnham et al., 2002). Similarly, in a study conducted on adults aged between 18 and 65, it was discovered that men felt more satisfied than women with their bodies in relation to how much they currently weigh, except amongst the individuals who were underweight, where women were found to feel more confident than men (Frederick, Peplau, & Lever, 2006). Both studies demonstrate differences in body dissatisfaction between genders. These findings suggest that societal values play a huge role in how we see ourselves and our overall levels of satisfaction with our bodies. Specifically, it is commonly known that women generally have the desire to be thin and men the desire to be muscularly built. These typical societal views are reflected in the findings of these two studies, where it was discovered that the men wished to be heavier than they actually are and the women lighter, and in the second study, the women who were in the underweight category felt more confident than the men who were also in the underweight category.

The examination of gender differences in body image research is common, with most studies reporting distinct perceptions of positive and negative physical attributes (Biolcati et al., 2017; Ralph-Nearman & Filik, 2018; He et al., 2020). For example, one study found that both genders differ with regards to areas of the body that they are preoccupied with when it comes to body dissatisfaction (Phillips & Diaz, 1997). Specifically, women tend to be more engrossed with their hips and weight, whereas for men it's their body build and genitals. Interestingly, it was also found that men are just as likely as women to pursue nonpsychiatric medical and surgical treatment, and also as likely to go ahead with cosmetic surgery (Phillips & Diaz, 1997). Another study conducted in 1988 by Silberstein, Striegel-Moore, Timko, and

Rodin (1988) looked into the potential relationship between body dissatisfaction and three factors on male and female participants ($n = 92$); self-esteem, dieting, and exercise. This study concluded that there was no difference between the male and female participants regarding the level of body dissatisfaction that was assessed by the three different measures (Silberstein et al., 1988). Although, when it concerned the direction of body dissatisfaction, they also found that men wanted to be heavier, whereas the women wanted to be thinner (Silberstein et al., 1988). It was also discovered that women reported that they used exercise as a form of weight control more than the male participants, and that exercising for weight control was linked to irregular eating patterns (Silberstein et al., 1988).

This finding is supported by a more recent study that found that Appearance-based Rejection Sensitivity (Appearance-RS; “the dispositional tendency to anxiously expect, readily perceive, and overreact to rejection based on one’s physical appearance”, (Park, Calogero, Young, & Diraddo, 2010, p.489)), predicted prominent advocacy of cosmetic surgery for both intrapersonal and social reasons in both male ($n = 128$) and female ($n = 221$) college students in the U.S. These findings have been replicated in a sample of university students in the UK (Calogero, Park, Rahemtulla & Williams, 2010). Research shows that between the years 1992 and 2008, people going through with cosmetic procedures increased by 882% worldwide (Park et al., 2010). This coincides with the first social media site being set up in the midst of this in 1997, called ‘Six Degrees’. MySpace also became popular in the early 2000’s. Levels of body dissatisfaction, dysmorphic anxiety and the probability of having body dysmorphic disorder predict the number of cosmetic procedures an individual has undergone (Sharp, 2018). In a more recent study, research shows that individuals that convey an interest in undergoing cosmetic procedures predominantly reveal heightened body dissatisfaction, primarily focused on the feature they are considering for treatment, with 5-15% of these patients meeting the diagnostic requirements for body dysmorphic disorder

(Sarwer, 2019). Also, according to Sarwer (2019), the American Society of Plastic Surgeons reported 17.5 million cosmetic surgeries to have taken place in 2017. Similar to this, more recently in 2018, the International Society of Aesthetic Plastic Surgery published that 10.6 million aesthetic surgical procedures and 12.7 million non-surgical cosmetic procedures were carried out, with the increase in number of these procedures being between 15-25% in comparison to 2014 (Jafferany et al., 2020). These increases in cosmetic surgery procedures also coincide with the increase in popularity of image-centric social media platforms, such as Instagram and Facebook.

Media, Social Media, and Body Image

Social media portrays a unique format of media consumption that could be especially pernicious, because it merges media usage with a potential for heightened social comparison within a particularly vulnerable group (Bennett et al., 2020). A number of studies have examined factors related to social media use and body image satisfaction (Ferguson, Muñoz, Garza, & Galindo, 2014; McLean, Paxton, Wertheim, & Masters, 2015; Van den Berg et al., 2007). One study reported that, in females, media body comparison created relationships between self-esteem and levels of body dissatisfaction, either fully or to a limited extent. To the contrary, it was discovered that in males, media body comparison was not a notable factor of body dissatisfaction (Van den Berg et al., 2007). In a later study by Ferguson et al. (2014), the negative effects of social comparison were found to be predominantly concentrated on peers rather than the exposure to social media itself, meaning that males tend to compare themselves to their peers on social media more than comparing their bodies to media bodies, which relates back to the findings from Van den Berg et al. (2007). Social media platforms have also produced a new category of self-presentation that is known as the 'selfie'. Tiggeman, Anderberg, and Brown (2020), asked 130 women aged between 18 and 30 to look at images on Instagram of slim women and average sized women, then asked them to take a

‘selfie’ and edit it on an iPad. The results of this study show that editing their ‘selfies’ heightened negative mood and facial dissatisfaction amongst these women, and it was concluded that heavily investing on and editing how one looks in a photo for social media platforms is a damaging activity for young women to partake in (Tiggeman, Anderberg, & Brown, 2020).

Another study conducted in 2015 by McLean et al. on self-image photoshopping and uploading, showed that females who consistently share images of themselves on social media platforms, in comparison with those who did not, reported significantly higher exaggerated evaluations of weight, body shape, and body dissatisfaction. These girls also reported more frequent thoughts about thin-idealisation (McLean et al., 2015). Similar to the study ran by Ferguson et al. (2014), mentioned previously, it was discovered that it was not the inflated media exposure that was associated with the prominent body-related concerns, but more that these girls were engrossed in manipulation and investment in these photos (McLean et al., 2015). What could be hypothesised from the findings of these studies is that it could potentially be the factors that surround image-centric social media platforms, such as peer groups and photo editing, that relates back to levels of body dissatisfaction rather than the usage of these platforms themselves.

It is not exclusively females that are negatively affected by body and facial dissatisfaction in relation to ‘selfie’ posting on these image-centric social media platforms. Research was conducted on a sample of adult males ($n = 348$) aged between 18 and 50 who completed several self-report questionnaires online in relation to body dissatisfaction and ‘selfie’ posting (Modica, 2020). The results of this study concluded that there is a positive correlation between the use of Instagram and body dissatisfaction, and between posting ‘selfies’ and body dissatisfaction (Modica, 2020). This was also the first study on men and body dissatisfaction that found appearance comparison to be a factor in the association

between body dissatisfaction and social media usage (Modica, 2020). An earlier study was conducted by Griffiths et al. (2018), with male participants ($n = 2,733$) of a sexual minority, who took a survey online regarding which social media platforms they use with questions on body image and eating disorders. The result of this survey was that there are small sequences of associations between social media and body dissatisfaction (Griffiths et al., 2018). Body dissatisfaction can lead to intrusive thoughts in relation to discomfort in a person's own skin (Rosen, Reiter, & Orosan, 1995). The usage of image-centric social media platforms was found to be associated strongly with symptoms of eating disorders and body dissatisfaction amongst these men, with Instagram coming out as one of the most used social media platforms from this survey (Griffiths et al., 2018). This study is unique in terms of its participants, as the majority of studies conducted in relation to eating disorders would mainly be about female participants, even though the outcome of other research in the area of eating disorders suggests that both men and women display comparable eating disorder symptoms (Lavender, De Young, & Anderson, 2010).

More recent research by Lonergan et al. (2019), has been conducted on the influence that 'selfie' manipulation has on an individual's level of body dissatisfaction. This paper looks into the link between the manipulation of selfies that are uploaded online, the "investment" in other's responses to these selfies, and body dissatisfaction (Lonergan et al., 2019). The results from male and female participants ($n = 184$) proposed that the social media variables, 'selfie' manipulation and investment, were associated with body dissatisfaction on a larger scale in both male and female participants (Lonergan et al., 2019). Both manipulation and apprehension about selfies that are uploaded might be risk correlates for levels of body dissatisfaction in men and women (Lonergan et al., 2019). This study helps to identify both the anxiety and concern that young people have when uploading their own selfies online and comparing them to manipulated selfies from other people. By manipulating and editing

photos, it creates an unachievable unrealistic expectation for young people, and by trying to achieve this expectation and failing, it can potentially cause high levels of dissatisfaction with their own body. Further research is required to look into and develop protective factors against body dissatisfaction in an online environment.

The adolescent years are the most influential years of an individual's life.

Smartphones have consistently evolving features, instant communication, and they aid people with staying connected to anyone in the world all the time, and behaviours that suggest addiction to smartphones, and in turn social media sites, has become increasingly prevalent amongst adolescents (Yıldız Durak, 2018). Previous research has provided evidence that shows adolescents' social media usage predicts body dissatisfaction; a study by De Vries & Vossen (2019), found that on average, social media usage had a positive relationship with levels of body dissatisfaction, but this association was weaker between adolescents with a positive mother-adolescent relationship, showing that a good relationship with their mother can protect them from harmful or damaging effects that social media use has on body image. Research by Burnette, Kwitowski, & Mazzeo (2017), also discovered that parental influence plays an important role in the amount of social media consumption amongst adolescents. This study was conducted on adolescent females aged between 12 and 14 ($n = 38$), and in contrast with findings from previous studies, it was found that although these girls possessed some appearance anxieties and concerns about social comparisons, they also showed high levels of media literacy, respect for unique differences between individuals, and confidence, which are characteristics that can be helpful for alleviating potential negative relationships between exposure to social media platforms and body image (Burnette, Kwitowski, & Mazzeo, 2017).

In an earlier study conducted in 2015 by Herring & Kapidzic, it was found that 95% of American teenagers aged between 12 and 17 are on the internet, in comparison to 78% of adults. Out of that 95%, it was discovered that 80% of those teenagers are on social media

platforms, contrasting with only 64% of adults over the age of 30 having social media profiles (Herring & Kapidzic, 2015). This study identified that teenage girls and boys differ in terms of the content that they post on their social media platforms; for example, girls tend to post 'cute' pictures of themselves, whereas the male participants tend to share other peoples' pictures and make comments referencing alcohol and sex (Herring & Kapidzic, 2015). Social media is a ploy to show your 'cool' side and 'your best life', which these results really show.

Conclusion

In relation to investigations written on body dissatisfaction and studies conducted about the influence that social media has on modern day society, there seems to be a gap in the literature when it comes to finding a correlation between both of these variables, which is a gap that should be filled, as image-centric social media platforms are still relatively new. Griffiths et al. (2018), although it was focused on the correlation between the two variables, conducted their study on male participants of a sexual minority only. This study aims to broaden the spectrum in terms of participants and involve all genders of all sexualities to gain a more statistically accurate result for the general population. Image-centric social media platforms, such as Instagram, have become more popular and influential in recent years. What people see on social media is rarely a reflection of real-life situations. Media usage has been found, in both men and women, to predict both a drive for thinness and a desire to diet, and also disordered eating in women specifically (Harrison & Cantor, 1997). Social media can be a toxic environment when used incorrectly, which needs to be acknowledged more universally.

The Current Study

Prior research on the area of body image being associated with media usage has found on average that there is a relationship between those two variables (De Vries & Vossen,

2019). Previous research has also found that media-body comparison has created relationships between low self-esteem and body dissatisfaction in women, but the same has not been found for men (Van den Berg et al., 2007). Although in more recent research, other studies have found a correlation between Instagram usage and body dissatisfaction in males as well as females (Modica, 2020). Previous research has also discovered that females shared pictures more often on image-centric social media sites such as Instagram or Snapchat than males, and also interacted more through other people's photos by both liking and commenting on them (Thelwall & Vis, 2017), and also that women utilise Instagram more often as a reference for their daily lifestyle, which could make an impact on how they connect with other people in their social relationships in the real world (Maranita et al., 2019); both of these findings indicating that females use image-centric social media sites more often, and therefore may have a higher level of addiction to them than males.

Therefore, the aim of the current study is to investigate the relationship between usage of image-centric social media platforms, such as Instagram, and the effect they have on negative body image. This study also aims to explore gender differences in relation to body dissatisfaction and addiction levels towards Instagram. From these research aims, the following three research questions and hypotheses have been produced.

Is there a relationship between Instagram addiction and body dissatisfaction in young adults? The hypothesis for this research question predicts that there will be a positive relationship between addiction towards Instagram and body dissatisfaction. Therefore, the more addicted a participant is to the image-centric social media platform, Instagram, the higher their levels of body dissatisfaction will be.

Do males and females differ in relation to their levels of addiction towards Instagram? The hypothesis for this research question predicts that the female participants will have higher levels of body dissatisfaction than the male participants.

And the final research question for this study; do males and females differ in relation to their levels of body dissatisfaction? In line with previous research on this topic, the hypothesis for this research question predicts that the female participants will have higher levels of body dissatisfaction than the male participants.

Methodology

Participants

The sample for this study was made up of 204 (Males $n = 100$, Females $n = 104$) young adults aged between 18 and 25 years old; $M = 21.23$, $SD = 1.42$. The sampling technique that was used was convenience sampling, and participants were recruited through social media platforms such as Instagram, Snapchat, and Twitter. By recruiting participants through these social media platforms, it ensured that all of the participants had access to and used these forms of social media, and in turn they could provide more accurate responses to the questionnaire. It was essential for the participants to be at least 18 years of age to be in compliance with ethical guidelines. Informed consent was also a requirement from the participants before taking part in this study. Demographic information was not collected from participants for this study, due to it not being required for the results.

Materials

The questionnaire for this study consisted of three individual scales; two scales were combined to determine the participants' level of body dissatisfaction, and the third scale to determine the participants' levels of 'addiction' towards the image-centric social media platform Instagram. Participants were asked for their age and gender before beginning the questionnaire.

Body Dissatisfaction: Four questions were used from the Body Esteem Scale (Franzoi & Shields, 1984) and ten questions were used from the Body Appreciation Scale (Avalos, Tylka, & Barcalow, 2005) for this questionnaire, to determine levels of body dissatisfaction in an individual. Each of the questions were answered along a 5-point Likert Scale for both of these scales, with 1 = *I have strong negative feelings* and 5 = *I have strong positive feelings*. By combining these two scales, this section of the questionnaire was made up of 14 questions for the participant to answer regarding their levels of body dissatisfaction.

Scores from these two scales can be computed by adding up the answers to each of the items asked. The highest possible score is 70, and the lowest possible score is 14. Higher scores calculated from this questionnaire illustrate lower levels of body dissatisfaction, whereas lower scores indicate higher levels of body dissatisfaction. The Cronbach's alpha for this scale was ($\alpha = .93$) showing a high level of internal consistency with the current sample (see Appendix B).

Instagram Addiction: A newly developed scale known as the Instagram Addiction Scale (TIAS) (Sholeh & Rusdi, 2019) was used to gauge the level of addiction that the participants had to the image-centric social media platform, Instagram. This scale is made up of 20 questions that are each answered along a 5-item Likert Scale, with 1 = *Strongly Agree*, and 5 = *Strongly Disagree*. The aim of using this scale was to observe to which extent an individual is addicted to using Instagram regarding both their own Instagram feed, and what is uploaded by others that they follow. Identical to the Body Esteem Scale (Franzoi & Shields, 1985) and the Body Appreciation Scale (Avalos, Tylka, & Barcalow, 2005), the scores for the items in this scale can be computed by adding up the answers from each question. The highest achievable score from this scale is 100, and the lowest achievable score is 20. Higher scores indicate a lower level of addiction to Instagram, whereas lower scores indicate a higher level of addiction to Instagram. The Cronbach's alpha for this scale was ($\alpha = .9$), also showing a high level of internal consistency with the current sample (see Appendix C).

Design

A cross-sectional research design was implemented for this study, as all of the data was collected from the participants at a particular point in time. A quantitative method for collecting the data was also used, as questions were answered by participants using an online questionnaire. There were two independent variables (IV's) for this study which were gender

and image-centric social media platform usage. There was one dependent variable (DV) for this study, which was body dissatisfaction.

Procedure

As previously mentioned, participants for this study were all recruited through social media sites. A briefing section and consent form were provided before the questionnaire began, to make the participants aware of what type of questions would be asked, to let them know that the questionnaire would take approximately ten minutes to answer, and to make them aware of how many questions there would be in each section. The participants were also made aware of the purpose of this study, which was to identify a relationship between body dissatisfaction in young adults and their usage of image-centric social media platforms, using Instagram as the main platform. Participants were informed of the risks involved in taking part in this study, as the topic of this study could potentially have been distressing for people who have, or have had eating disorders, as it is a body image focused study. These people were advised not to take part. Participants were reminded that taking part in this study was completely voluntary, and that they could withdraw from the study at any point without repercussions. They were also informed that all of the data collected would be stored anonymously, and that the only personal information that would be asked of them would be their gender and their age. Also, due to the element of anonymity, once the questionnaire was completed and submitted, their answers could not be withdrawn from the study as they would be unidentifiable. The participants then provided informed consent by ticking a box to confirm that they were between the ages of 18 and 25 years old, and that they had read the information in the briefing section and were willing to take part in the study voluntarily. After they had provided their informed consent, participants were asked to complete the section of the questionnaire on body dissatisfaction levels first, using items from the Body Esteem Scale (Franzoi & Shields, 1984) and the Body Appreciation Scale (Avalos, Tylka, & Barcalow,

2005). After those questions were completed, they moved on to answering questions regarding their levels of ‘addiction’ to Instagram, using items from the Instagram Addiction Scale (TIAS) (Sholeh & Rusdi, 2019). Once the participants had completed both sections of the questionnaire, a debriefing section was provided with my contact details and my supervisor’s contact details, along with contact details for helpline services that participants were encouraged to contact if the nature of this study distressed them in any way (see Appendices B, C, D, & E).

Ethical Implications

All data was collected in conformity with the NCI ethical guidelines. Participants were made aware that taking part in this study was entirely voluntary, and that they could withdraw from the study at any time without consequences. My own contact details and my supervisor’s contact details were provided in the debriefing section so that either of us could be contacted with questions regarding the nature of the study, or if a participant wished to be contacted about the results of the study when it was completed. Contact details for helplines such as Niteline, Pieta House, and Jigsaw were also provided in the debriefing section in case a participant became distressed while taking part in the study, in order to encourage them to reach out and talk about their distress if required.

Results

Descriptive Statistics

The current data is taken from 204 participants ($n = 204$) which comprised of 49% males ($n = 100$) and 51% females ($n = 104$). Participants' age ranged from 18 to 25 years old; $M = 21.23$, $SD = 1.42$. Descriptive statistics were performed for all continuous variables including body dissatisfaction, addiction to Instagram, and age of participants. The means, standard deviations (SD), skewness, kurtosis and the minimum and maximum results were acquired. Preliminary analyses were performed on the data set which indicated that body dissatisfaction was non-normally distributed, Kolmogorov-Smirnov $p = .01$, and Instagram addiction was normally distributed, Kolmogorov-Smirnov $p = .2$. The results for the descriptive statistics for all continuous variables are presented in Table 1.

Table 1

Descriptive statistics and reliability of all continuous variables

	Mean	SD	Skewness	Kurtosis	Minimum	Maximum
Body dissatisfaction	45.16	12.04	-.126	-.676	15	70
Instagram addiction	73.41	15.47	-.409	.083	26	100
Age	21.21	1.42	.007	.353	18	25

Inferential Statistics

A Spearman's correlation coefficient was used to determine the relationship between body dissatisfaction (measured by the Body Appreciation Scale (Avalos, Tylka, & Barcalow, 2005) and the Body Esteem Scale (Franzoi & Shields, 1984)), and addiction to image-centric social media platform, Instagram (measured by the Instagram Addiction Scale (TIAS))

(Sholeh & Rusdi, 2019)) in young adults. There was a small, positive correlation found between these two variables, $r = .23$, $n = 204$, $p = .001$, with higher levels of addiction to Instagram being associated with higher levels of body dissatisfaction.

A simple linear regression was also calculated, and it showed a significant relationship between body dissatisfaction and addiction to Instagram; $F(1, 202) = 16.45$, $p = .000$. The slope coefficient for Instagram addiction was $B = .21$, 95% CI [.11, .32], which indicated that the score for body dissatisfaction increases by .21 for every 1 score on the Instagram addiction scale. This regression had an R^2 value of .075, which revealed that 7.5% of the variation of body dissatisfaction can be explained by the model containing only Instagram addiction. The results for the simple linear regression are shown in Table 2.

Table 2

Regression analysis summary for Instagram addiction predicting body dissatisfaction

Variable	B	95% CI	β	t	p
(Constant)	29.68	[21.92 – 37.44]		7.54	.000
Instagram addiction	.213	[.11 - .32]	.27	4.06	.000

Note: β = Standardised beta value; B = Unstandardised beta value; $N = 204$; Statistical significance: $*p < .05$, $**p < .01$, $***p < .001$

Levene’s test for equality of variance was non-significant for Instagram addiction ($p = .26$), so therefore the assumption of equal variances has not been violated. An independent-samples t-test was conducted to compare Instagram addiction scores between males and females. There was a significant difference found between scores for males ($M = 76.46$, $SD = 15.61$) and females ($M = 70.22$, $SD = 15.61$; $t(202) = 2.93$, $p = .004$, two-tailed). This result indicated that females had a higher level of addiction to Instagram than males, as lower scores illustrate higher levels of addiction. The magnitude of the differences in the means for

males and females (mean difference = 6.24, 95% *CI*: 2.04 to 10.44) was of moderate effect (eta squared = .04). The results for the independent-samples t-test are presented in Table 3.

Table 3

Independent-samples t-test for Instagram addiction

Variables	t	df	Sig (2-tailed)	Mean Difference	Lower	Upper
Instagram addiction	2.93	202	.004	6.24	2.04	10.44

Note: Statistical significance: * $p < .05$, ** $p < .01$, *** $p < .001$

Body dissatisfaction scores of males ($mdn = 48.5$) were higher than females ($mdn = 42$) indicating that the female participants had higher levels of body dissatisfaction than the male participants, as higher scores illustrate lower levels of body dissatisfaction. Body dissatisfaction was non-normally distributed, so a non-parametric Mann-Whitney U test was conducted, and it indicated that the difference in levels of body dissatisfaction between males and females was statistically significant, $U (n = 100, n = 104) = 3,335, z = 4.4, p = .000$. The mean rank and the sum of ranks for both genders in relation to levels of body dissatisfaction are shown in Table 4.

Table 4

Ranks

	Gender	N	Mean Rank	Sum of Ranks
Body dissatisfaction	Male	100	121.15	12115
	Female	104	84.57	8795

In summary, there was a significant correlation found between body dissatisfaction and addiction towards the image-centric social media platform, Instagram, which supports

hypothesis 1. From the results of the linear regression model, the level of addiction towards Instagram was found to be able to predict body dissatisfaction to a statistically significant level, and it was discovered that 7.5% of the variation of body dissatisfaction can be explained by the model containing only Instagram addiction, which also supports the first hypothesis. In support of hypothesis 2, following the results of the independent-samples t-test, females were found to have significantly higher levels of addiction towards Instagram than males. Finally, in support of the third hypothesis, from the results of the Mann-Whitney U test, females were also found to have significantly higher levels of body dissatisfaction than males.

Discussion

The current study aimed to investigate the relationship between body dissatisfaction in young adults and their usage of image-centric social media platforms. It also aimed to determine whether there were gender differences within each of these variables. Previous research has discovered that factors related to social media usage, such as ‘selfie’ manipulation, editing, and uploading, and comparing oneself to peers on social media platforms, have had an impact on levels of body and facial dissatisfaction (Ferguson et al., 2014; Lonergan et al., 2019; Tiggemann, Anderberg, & Brown, 2020).

Prior research has also shown in studies that have been conducted on both male and female participants, that females have been found to have more body dissatisfaction-related problems than males, such as low self-esteem (Furnham, Badmin, & Sneade, 2002). In turn, research has also shown that when it comes to using social media platforms, it has been found that media body comparison was a factor for creating a relationship between self-esteem and body dissatisfaction for females, while for males it did not (Van den Berg et al., 2007). It has also been found that both genders differ with regards to areas of the body that they are preoccupied with when it comes to body dissatisfaction (Phillips & Diaz, 1997). With regards to image-centric social media usage, previous research has discovered that females tend to share and interact more on these platforms than males (Thelwall & Vis, 2017). On account of this research, three hypotheses have been constructed to address the aims for the current study.

Firstly, it was hypothesised from previous research that there would be a relationship between body dissatisfaction and usage of image-centric social media platforms. A correlation analysis was conducted to discover whether there was a relationship between these two variables, and a linear regression analysis was conducted to see whether there was a predictive relationship between these two variables. A small, positive correlation was found

from the correlation analysis, indicating that higher levels of Instagram addiction was associated with higher levels of body dissatisfaction. A significant relationship was also found between these two variables from the linear regression analysis, showing that Instagram addiction predicted body dissatisfaction. This finding is consistent with previous research which has found the usage of image-centric social media platforms, such as Instagram, to be strongly associated with symptoms of body dissatisfaction (McLean et al., 2015; Griffiths et al., 2018; Modica, 2020).

Secondly, it was hypothesised from prior research that females would have higher levels of body dissatisfaction than males. A Mann-Whitney U test was conducted, and the results indicated that there was a significant difference between males and females in relation to levels of body dissatisfaction, with females having higher levels of body dissatisfaction than males. This finding is also consistent with previous research that has found men to be happier with their bodies, in terms of weight and self-esteem, than females (Furnham et al., 2002; Frederick, Peplau, & Lever, 2006).

Thirdly, it was hypothesised from previous research that females would have a higher level of addiction towards Instagram than males. An independent-samples t-test was conducted, and a significant difference was found between scores for males and females, indicating that females had a higher level of addiction towards Instagram than males. This finding has also been found to be consistent with previous research which has found that females share photographs and interact with other people more on these social media platforms than males, and that women tend to use Instagram more consistently as a reference for their daily lifestyle, which could make an impact on how they connect with other people in social relationships in the real world (Thelwall & Vis, 2017; Maranita et al., 2019).

Taken together, these findings indicate that image-centric social media platforms, such as Instagram, can have an effect on levels of body dissatisfaction in young adults. These

overall findings are in line with previous research that has been conducted in this area, which has found that image-centric social media platforms have had an influence on disordered eating patterns and a strive for thinness in young adults, which are two factors that have derived from developing high levels of body dissatisfaction from consistent use of these platforms (Girard, Rodgers, & Chabrol, 2018; Hogue & Mills, 2019; Rounsefell et al., 2020).

It is worrying that there has been a consistent link found in previous research between high levels of body dissatisfaction and usage of image-centric social media platforms, when using these platforms has become something people log on to and interact with daily. Since 2010, the iPhone generation of adolescents have been spending more time using media screen activities than non-screen activities, with the average screen time for an adolescent in America being seven and a half hours daily, and an hour of that time is estimated to be spent on social media (Twenge et al., 2018; Odgers, Schueller, & Ito, 2020). During adolescence, where an individual is most impressionable, an increase in screen time exposure has been identified, which has been found to be a high-risk factor for body dissatisfaction and eating disorders, especially in females (Añez et al., 2018; Añez, 2019, p. 31). Although before social media platforms were readily available on smartphones, it was found that images of the ‘ideal body’ printed in magazines and viewed in music media on the television also caused an increase in negative mood and body dissatisfaction (Tiggemann & McGill, 2004; Tiggemann & Slater, 2004). This indicates that body dissatisfaction has always been related to media exposure even prior to image-centric social media, but could be becoming more prevalent now that this content has become more readily available. Future research could be conducted in this area through a meta-analysis to compare levels of body dissatisfaction in individuals before image-centric social media platforms, and levels of body dissatisfaction in the present day.

Also, although it was hypothesised, it is quite concerning that females were found to have significantly higher levels of body dissatisfaction than males. Women's body types have seemingly become 'trends' on social media platforms, and the use of social networking sites (SNSs) has been found to be associated with a significantly higher internalisation of the ideation of thinness (Mingoia et al., 2017) which could also indicate a partial explanation for the increase in plastic surgery in recent years (Park et al., 2010; Sarwar, 2019; Jafferany et al., 2020).

There has been an increased emphasis on an athletic body type for women on Instagram under the tag "fitspiration", which displays an over-representation of one particular body type, which has been found to heighten body dissatisfaction in women as it cannot be achieved by everybody (Bozsik et al., 2018; Tiggeman & Zaccardo, 2018; Prichard et al., 2020; Krug et al., 2020). Popular Instagram influencers tend to portray this one body type with little or no diversity in representing other female body types, and alongside this, they usually promote specific diet plans by producing body-shape focused images, and they define diet and exercise as factors that are required to be controlled for "body perfection", which again, increases negative mood and body dissatisfaction in women who consume this content (Pilgrim & Bohnet-Joschko, 2019; Lowe-Calverley & Grieve, 2021). People have agreed that it would be beneficial for healthcare professionals to upload educational material regarding maintaining a healthy body image on Instagram, to provide factual information on body differences and body dissatisfaction to balance out the image of 'perfection' that is portrayed through these social media influencers (Hu, 2018). This idea could potentially be a great incentive for a better promotion of body positivity and diversity on image-centric social media platforms, such as Instagram, with information being provided by professionals in this area, and in turn, lower the levels of body dissatisfaction and increase the levels of body acceptance.

Implications

From the findings of this study, it needs to be understood that image-centric social media platforms can have a direct effect on body dissatisfaction levels. The findings from the current study indicate that this impacts females to a significantly higher standard than males, which is also in line with previous research (Furnham et al., 2002; Frederick, Peplau, & Lever, 2006; Van den Berg et al., 2007).

The current study focused on the influence that image-centric social media platforms had on young adults aged between 18 and 25 years old. From prior research in this area, as mentioned previously in relation to screen time, we can also conclude that the age group of individuals who are utilising these social media platforms could also potentially be much younger, such as the age of adolescence (Twenge et al., 2018; Odgers, Schueller, & Ito, 2020). At a societal level, parents who have children who are of adolescent age need to be aware of the impact image-centric social media sites, such as Instagram, have on their levels of body dissatisfaction while they are impressionable, to be able to monitor the content they are consuming on their smartphones, and potentially lessen the risk of them developing higher levels of body dissatisfaction as they get older.

Also, from these findings, secondary school teachers should begin to implement body positivity and diversity into a discussion early on, especially in single-sex girls' schools where it has been found that the thinner 'ideal figure' is sought after more so than in coeducated schools (Tiggemann, 2001). Also, as mentioned previously, research has found that increased screen time increases during adolescence, and in turn, increases levels of body dissatisfaction in girls (Añez et al., 2018; Añez, 2019, p. 31). Another image-centric social media platform that is increasing in popularity amongst adolescents is TikTok, and further studies could be conducted to discover whether TikTok has as much of an effect on levels of body dissatisfaction as Instagram has been found to. A longitudinal study could also be

conducted in the future where a discussion surrounding body positivity is implemented during secondary school years in same-sex girls' schools starting in first year, to discover whether this could impact, and potentially lower, their levels of body dissatisfaction as they develop throughout their school years and grow older.

Finally, the Health Service Executive (HSE) should be made aware of the findings from this study, and also prior research in this area. As mentioned previously, it has been discovered that people would be in agreement with healthcare professionals and medics uploading beneficial and educational information regarding body health and positivity to counteract the false perception of "perfection" on these social media platforms (Hu, 2018). By using the findings from this study, and similar studies, they could base their content on the target audience that requires it most, in this instance, it was discovered that females were affected significantly more than males by higher levels of body dissatisfaction in relation to Instagram. By creating profiles for healthcare professionals to speak out about body health and positivity on these social media sites, and provide facts to the public regarding this topic, levels of body dissatisfaction in relation to the content consumed from these platforms has the potential to be decreased.

Strengths and Limitations

Unlike previous research, gender differences regarding both body dissatisfaction and addiction to Instagram can be taken into account from the current study due to the fact that there are an equal amount of male ($n = 100$) and female ($n = 104$) participants, whereas with prior research in the same area, the participants have been found to be mostly female (Didie et al., 2006; Park et al., 2010; Araia et al., 2017; Fischetti et al., 2019). By having an equal amount of male and female participants for this study, the results for hypothesis two and three are both non-biased and more reliable.

There are some limitations to this study also. For instance, this study only considered two continuous variables, and they were body dissatisfaction and addiction to Instagram. Other continuous variables could be used for future research in this area, such as social comparison, which has also been found to be associated with body dissatisfaction in relation to using Instagram, and the investment in the amount of 'likes' an individual receives on that social media platform (Tiggeman & Brown, 2018; Tiggeman et al., 2018). Another continuous variable that could be considered for future research is self-esteem, which has been found to be associated with body dissatisfaction when related to problematic SNS use, such as "lurking" on other users' profiles on Instagram or other image-centric social media platforms (Santarossa & Woodruff, 2017). By researching more variables such as these, a more generalised and in-depth result can be obtained from future studies regarding the effect of social media sites on body dissatisfaction.

Another limitation to this study would be that it focused specifically on addiction to Instagram instead of a general addiction to social media platforms. The Instagram Addiction Scale (TIAS) by Sholeh & Rusdi (2019), is a relatively new scale that examines only an individual's addiction towards the social media platform, Instagram. Instagram is a social media platform, like any social media platform, that is consistently updating and changing, which could potentially mean the results from this scale could also be susceptible to change depending on when these questions are answered by participants. For a more generalised result in relation to addiction to social media platforms, the Bergen Social Networking Addiction Scale by Andreassen et al. (2016), could be used for future studies.

Also, for measuring levels of body dissatisfaction, the questionnaire used comprised of two different scales: The Body Esteem Scale by Franzoi & Shield (1984), and the Body Appreciation Scale by Avalos, Tylka, & Barcalow (2005). The Body Esteem Scale could potentially be becoming outdated as it was developed in 1984, so for future research, the

Body Appreciation Scale could potentially be used on its own, as it is a newer scale. Also, to specifically look at levels of body dissatisfaction in an individual, the Body Dissatisfaction Scale (BDS), which was developed by an average sized body by using DAZ Studio 4 software (www.daz3d.com), could potentially be used in future circumstances, Another method that could potentially be used, would be asking questions that determine how satisfied people are with their bodies in relation to how big or small a specific body part is, using the Body Parts Dissatisfaction Scale (Corning et al., 2010). This scale could be very useful for future research, as it has been found in previous research that men and women tend to differ in levels of body dissatisfaction regarding the size of particular body parts (Phillips & Diaz, 1997; Furnham et al., 2002).

Demographic information was not collected from participants for the current study. There was no information from this study regarding demographics, such as sexuality, ethnicity and location, therefore demographic information was not found to affect the outcome of the levels of body dissatisfaction and addiction to Instagram, that was found in a participant. Previous studies have used demographic information, such as sexuality, to gain more in-depth and generalised analyses of the answers given by participants (Griffiths et al., 2017; Griffiths et al., 2018). As this study was an exploratory analysis, demographic information was not required from the participants, but it could potentially be useful for future studies for a more generalised result in relation to body dissatisfaction and addiction to Instagram in an Irish context, or in the case of the context of a sexual minority.

Conclusion

Overall, the aims of the current study have been largely supported by the findings in which image-centric social media platforms have a direct effect on levels of body dissatisfaction in an individual. Regarding gender differences, it was discovered from this study that females had a higher level of both body dissatisfaction and addiction to Instagram

than males at a statistically significant level. This study contributes to previous literature as it provides insight into levels of body dissatisfaction in relation to Instagram in an Irish context. These findings are of interest because they fall in line with prior research with equal numbers of male and female participants, providing a non-biased and more generalised result for gender differences. The implications mentioned for this study should be taken into account and are seen as important, as body dissatisfaction is becoming a more serious and well-known topic in relation to adolescents and young adults. Further research is required on this topic to explore other variables that could potentially affect body dissatisfaction in relation to image-dominated social media platforms, such as social comparison and self-esteem, and also to discover whether feelings of body dissatisfaction can be lessened during young adulthood if individuals are taught about body positivity and body health during their adolescent years.

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Appendices

Appendix A

Evidence of SPSS output in variable view (full dataset file available upon request)

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Age	Numeric	3	0		None	None	12	Right	Nominal	Input
2	Gender	Numeric	5	0		{1, Male}...	None	12	Right	Nominal	Input
3	Irespectmyb...	Numeric	2	0	I respect my bo...	{1, Strong N...	None	12	Right	Scale	Input
4	Ifeelgoodab...	Numeric	2	0	I feel good abou...	{1, Strong N...	None	12	Right	Scale	Input
5	Ifeelthatmyb...	Numeric	2	0	I feel that my b...	{1, Strong N...	None	12	Right	Scale	Input
6	Itakepositiv...	Numeric	2	0	I take a positive...	{1, Strong N...	None	12	Right	Scale	Input
7	Iamattentive...	Numeric	2	0	I am attentive t...	{1, Strong N...	None	12	Right	Scale	Input
8	Ifeelloveform...	Numeric	2	0	I feel love for m...	{1, Strong N...	None	12	Right	Scale	Input
9	Iappreciatet...	Numeric	2	0	I appreciate the...	{1, Strong N...	None	12	Right	Scale	Input
10	Mybehaviou...	Numeric	2	0	My behaviour re...	{1, Strong N...	None	12	Right	Scale	Input
11	Iamcomforta...	Numeric	2	0	I am comfortabl...	{1, Strong N...	None	12	Right	Scale	Input
12	Ifeellikelamb...	Numeric	2	0	I feel like I am b...	{1, Strong N...	None	12	Right	Scale	Input
13	Ilikeandamh...	Numeric	2	0	I like, and am h...	{1, Strong N...	None	12	Right	Scale	Input
14	Ifeelthatlam...	Numeric	2	0	I feel that I am ...	{1, Strong N...	None	12	Right	Scale	Input
15	Iamhappywi...	Numeric	2	0	I am happy with...	{1, Strong N...	None	12	Right	Scale	Input
16	IthinkthatIh...	Numeric	2	0	I think that I hav...	{1, Strong N...	None	12	Right	Scale	Input
17	Ioftenthinka...	Numeric	2	0	I often think ab...	{1, Strongly ...	None	12	Right	Scale	Input
18	Ioftenthinka...	Numeric	2	0	I often think ab...	{1, Strongly ...	None	12	Right	Scale	Input
19	Ialwaysthink...	Numeric	2	0	I always think a...	{1, Strongly ...	None	12	Right	Scale	Input
20	Ipostphotos...	Numeric	2	0	I post photos/vi...	{1, Strongly ...	None	12	Right	Scale	Input
21	Ihavecomm...	Numeric	2	0	I have comment...	{1, Strongly ...	None	12	Right	Scale	Input
22	Ialwaysthink...	Numeric	2	0	I always think a...	{1, Strongly ...	None	12	Right	Scale	Input
23	Ilookattheco...	Numeric	2	0	I look at the co...	{1, Strongly ...	None	12	Right	Scale	Input
24	Ilookattheco...	Numeric	2	0	I look at the co...	{1, Strongly ...	None	12	Right	Scale	Input

- Output
- Log
- T-Test
- Title
- Notes
- Active Dataset
- Group Statistics
- Independent Sam

FILE C:\Users\aidfe\OneDrive\Documents\FINAL YEAR PROJECT\FYP dataset.sav

DATASET NAME DataSet1 WINDOW=FRONT.
T-TEST GROUPS=Gender (1 2)
/MISSING=ANALYSIS
/VARIABLES=INSTA
/CRITERIA=CI (.95).

T-Test

[DataSet1] C:\Users\aidfe\OneDrive\Documents\FINAL YEAR PROJECT\FYP dataset.sav

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
INSTA	Male	100	76.4600	15.61495	1.56150
	Female	104	70.2212	14.79370	1.45064

Independent Samples Test

		Levene's Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
INSTA	Equal variances assumed	1.294	.257	2.930	202	.004	6.23885	2.12908	2.04078	10.43691
	Equal variances not assumed			2.927	200.256	.004	6.23885	2.13134	2.03609	10.44160

Appendix B

The Body Appreciation Scale

(Avalos, Tylka, & Barcalow, 2005)

& The Body Esteem Scale

(Franzoi & Shields, 1984)

Participant Instructions

Response Anchors

Strong negative feelings = 1

Negative feelings = 2

Neutral = 3

Positive feelings = 4

Strong positive feelings = 5

Items

1. I respect my body
2. I feel good about my body
3. I feel that my body has at least some good qualities
4. I take a positive attitude towards my body
5. I am attentive to my body's needs
6. I feel love for my body
7. I appreciate the different and unique characteristics of my body

8. My behaviour reveals my positive attitude toward my body: for example, I walk holding my head high and smiling
9. I am comfortable in my body
10. I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors)
11. I like, and am happy with, my facial features, e.g., nose, eyes, lips etc.
12. I feel that I am sexually attractive
13. I am happy with my weight
14. I think that I have a good appetite and my diet is healthy

Calculating Individual Scores

Individual scores can be calculated by adding up the responses to all 14 items ($\alpha = .93$)

Appendix C

The Instagram Addiction Scale (TIAS)

(Sholeh & Rusdi, 2019)

Participant Instructions

Response Anchors

Strongly Agree = 1

Agree = 2

Neither agree nor disagree = 3

Disagree = 4

Strongly Disagree = 5

Items

1. I often think about any photos/videos posted by others on my Instagram feed
2. I often think about what is happening on Instagram when I am not on it
3. I always think about Instagram and feel curious when I am not looking at the contents of my Instagram feed
4. I post photos/videos on my Instagram feed to attract others' attention
5. I have commented on photos/videos posted by friends on my Instagram feed to get feedback
6. I always think about what filters and captions I will use for my photos/videos that I will post on my Instagram
7. I look at the contents of my Instagram feed to reduce feelings of guilt, anxiety, helplessness, or depression

8. I look at the contents of my Instagram feed to forget about personal problems
9. I look at the contents of my Instagram feed to reduce restlessness
10. I spend a lot of time looking at photos/videos on my Instagram feed
11. I try to limit my time for Instagram, but it does not work
12. I decided to look at my feed less often, but I did not manage to do it
13. I get easily irritated if I am prohibited from seeing my Instagram feed
14. I often cancel appointments with other people because of my Instagram feed
15. I feel annoyed when someone else bothers me while I am on Instagram
16. I become anxious or I have problems if I am prohibited from checking my Instagram
17. I often come across a lot of content on my Instagram feed which causes me to neglect
my work/lectures/study time
18. I find it hard to find time for hobbies, rest, or exercise because I spend my time
checking my Instagram feed
19. I find it hard to sleep early because I always look at my feed on Instagram
20. My family often complains about me because I spend too much of my time on
Instagram

Calculating Individual Scores

Individual scores can be calculated by adding up the responses to all 20 items ($\alpha = .9$)

Appendix D

Consent Form

Study Information

My name is Emma Feerick, and I am an undergraduate final year Psychology student in the National College of Ireland. I am inviting you to take part in my final year research study on the levels of body dissatisfaction in young adults in relation to their daily usage of image-centric social media platforms. Image-centric social media platforms are defined as social media platforms that revolve around exchanging ideas via visual content, such as Instagram. Please read the information following this introduction informing you of what this study involves before you decide that you would like to take part in it.

This study is being conducted to identify a relationship between the levels of body dissatisfaction in young adults, their usage of image-centric social media platforms, using Instagram as the main platform, and to see which gender is affected most by body image issues in relation to image-centric social media usage.

Participation

If you volunteer to take part in this study, you will be asked to fill out a questionnaire split up into three sections with questions on:

1. Your levels of body dissatisfaction
2. Your levels of addiction to Instagram, a very popular image-centric social media platform, with questions in relation to posts on your feed which are posted by others

This questionnaire would usually take no more than 10 minutes to fill out and it contains 34 questions; 14 in the first section of the questionnaire and 20 in the second section.

Risks

The topic of body dissatisfaction can be a distressing topic for some people, so therefore some participants may feel distress while answering questions on this topic. Individuals who have a current or prior eating disorder are at high risk of feeling distress while answering these questions, and are therefore advised not to take part in this study.

Confidentiality of Data

The data collected in this study is strictly anonymous. The only personal pieces of information that will be asked about you are your age and gender. No data collected from this study will be shared with anyone else, only the researcher will have access to the data collected.

Taking Part

Taking part in this study is completely voluntary and you can withdraw from this study at any point during the questionnaire phase without repercussions. Although, because the data in this study is stored anonymously, once the questionnaire is completed and submitted, your data cannot be removed from the study as it will be unidentifiable.

Contact Information

If you have any questions or concerns regarding this study, please do not hesitate to contact me, Emma Feerick, by e-mail at emmafeerickFYP@gmail.com. Or you can contact my supervisor, Dr. Michelle Kelly, by e-mail at michelle.kelly@ncirl.ie.

Informed Consent

By clicking next below, you are confirming that:

- 1) You are aged between 18 and 25 years old.

2) You have read the above information and wish to take part in this study.

Appendix E

Debriefing Form

Please press the submit button below to record your responses.

Thank you for taking part in this study!

Just a reminder that all of your data submitted in this study will be kept completely anonymous.

As mentioned in the introduction section of this questionnaire, the topic of body dissatisfaction can be a distressing topic for some individuals.

If this topic has distressed you in any way, please do not hesitate to contact any of these helplines:

Niteline: Freephone 1800 793 793

Or online messaging at niteline.ie

9pm – 2:30am every night of term

Pieta House Dublin North: 01-8831000

Jigsaw: 01 658 3070

If any participant is interested in the results of this study when it is completed or has any questions or queries about this experiment, feel free to contact me at emmafeerickFYP@gmail.com, or my supervisor Dr. Michelle Kelly at michelle.kelly@ncirl.ie.