

**Appearance-related internalization and appearance pressure in relation to body
dissatisfaction in Instagram users**

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Abstract

Photo-based social media activity has been linked with increased body image concerns. Social networking sites like Instagram are comprised entirely of photo-based content, therefore it is important to understand its influence on body image. The present study employed Richard Perloff's Transactional Model to examine body dissatisfaction among users of Instagram by looking at appearance-related internalization and appearance pressure. A sample of 149 male and female participants completed an online survey of several questionnaires relating to the above variables, as well as general psychological distress and social media disorder. Results indicated that time spent on Instagram significantly related to increased weight dissatisfaction as well as increased peer and media appearance pressure. Using a hierarchical multiple regression, appearance-related internalization and appearance pressure were found to be strong predictors of body dissatisfaction. Females scores higher for body dissatisfaction and media pressure and used Instagram more often. Results support the Transactional Model in its conceptualization of appearance-related internalization and appearance pressure from Instagram working in conjunction to influence body dissatisfaction. Future research should account for what users are engaging with and whether they are active or passive in their engagement, as this may clarify any protective factors in preventing the internalization of appearance pressure.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and, to the best of my knowledge, this thesis contains no materials previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

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Chapter 1

Introduction

1.0 Overview

Social networking sites play a key role in the circulation of cultural stereotypes related to body and appearance aesthetics (Kraut, 2002). In comparison to face-to-face communication, social networking sites provide cheap and quick access, are simple to use, and are often embedded within the lives of many people (Young, 2013). Theories such as Bandura's (2009) social cognitive theory and the sociocultural perspective on body image (Tiggemann, 2011; Thompson et al, 1999) have assigned central importance to the media and how its exposure can impart unrealistic images of female and male body ideals. Frequent users of social networking sites are regularly exposing themselves to these ideals, which are putting them at greater risk for body dissatisfaction and possibly eating disorders (Smolak & Thompson, 2009). These issues become prominent when the type of media exposure is photo-based (Holland & Tiggemann, 2016), as it can provide more opportunities for social comparison (Want, 2009). Instagram is one such platform that offers an entirely photo-based experience. As it is readily accessible and has a focus on appearance, users are more at risk of feeling pressured to attain these appearances (Hendriscke et al, 2017), and can internalize them into their worldview (Thompson & Stice, 2001). This relationship between using Instagram and body image can be conceptualized using Richard Perloff's Transactional Model of Social Media and Body Image Concerns (2014). This model illustrates how predisposing characteristics, social media uses, and mediating processes work in conjunction to influence body dissatisfaction in relation to social media use (see Figure 1). Of interest to this study is how appearance-related internalization (i.e., the degree to which an

individual internalizes the ideals they see) and exposure to appearance pressure from the media and peers influence body dissatisfaction amongst users of Instagram. So far, few studies have looked at these variables in relation to Instagram, therefore this study hopes to shed more light on the influence of this platform, and how it can set in motion psychological processes which can negatively affect body image.

This literature review will aim to describe what the concept of body image is, what it is like for males and females, and how it is related to the media in section 1.1. Section 1.2 will give a brief background of what Instagram is and what it is used for. The Transactional Model will then be explained in section 1.3 and will expand upon the concepts of appearance-related internalization and appearance pressure. Lastly, section 1.4 will outline the aims of the study and the current hypotheses.

1.1 Body image and the media

Body image is the subjective, multidimensional and dynamic concept that forms the feelings, perceptions and thoughts of a person's own body (Neagu, 2015). For the layperson, however, body image is mostly understood as satisfaction with one's physical self (i.e., weight, shape, and general appearance) (Cash & Deagle, 1997). Body dissatisfaction has typically been associated with Western values and appearance ideals (Nasser, 1988), which include slender builds for females and muscular builds for males, as well as reverence of youth and constant work and correction of the body (Swami et al, 2014). Moreover, adolescents and young adults see the most decrease in body satisfaction compared to other age groups (Meier & Gray, 2014).

While body dissatisfaction was once considered to be culturally bound to the values and ideals of Western societies (Tsai, 2000), recent research has discovered that it is now a global

phenomenon (Soh, Touz & Surgenor, 2006). Studies conducted with Asian cultures have found that acculturation to Western constructs of beauty can have negative effects on body image (Hill & Bhatti, 1993; Sussman, Truong & Lim, 2007). In contrast, other studies have found acculturation to traditional Asian values (Lau et al, 2006; Ho et al, 2006) and Hispanic values may have more negative effects on body image (Ganem, Heer & Morera, 2009; Crago, Shisslak & Estes, 1996). While the research is still understanding the role of culture on body dissatisfaction, it is agreed upon that because this issue is linked to poor mental health, body image disturbance, and disordered eating (Neumark-Sztainer et al, 2006; Stice, 2002), it should now be considered a global health concern.

Social media has the ability to broadcast these stereotypical appearance ideals and related diet and weight loss rhetoric in an environment that is built on interaction and communication. In a longitudinal study by Vandebosch and Eggermont (2016), they found that social networking sites were a significant predictor of self-objectification and significantly increased body surveillance behaviours amongst female adolescents. Similarly, Meier and Gray (2014) found that photo-based exposure on Facebook was a significant predictor of weight dissatisfaction and self-objectification among women. The propagation of these appearance ideals could be linked to the total control users have over their self-presentation when expressed through photos (Feltman & Szymanski, 2017; Pempek et al, 2009). These images can be heavily curated to ensure they are beautiful, pleasing, and will gain social approval (Siibak, 2009). Therefore, if the images people are choosing to share are only ones that are consistent with appearance ideals, it can create an environment where users feel pressured to achieve the ideals they are seeing. When these ideals

are internalized into the user's worldview, and they are not achieved by the individual, this can lead to body dissatisfaction amongst other mental health issues.

1.1.1 Gender differences in appearance ideals

Appearance ideals differ between females and males, with the former likely to focus on thinness and the latter lean muscularity (Leit, Pope & Gray, 2001; Lanzieri & Hildebrandt, 2015; Ricciardelli, Clow & White, 2010). Large scale surveys have shown that most women are unhappy with their body weight and many desire to change it through various methods (Frederick, Peplau & Lever, 2007). Tiggemann and Lynch (2001) found that young women, around the ages of 20 to 25, struggle with their shape and size and that their dissatisfaction with their bodies remained stable across the lifespan (although intentions or wants to change steadily dropped off as they got older). Dissatisfaction with body weight and shape is considered such a prominent issue among women and adolescent girls, that Rodin, Silberstein and Striegel-Moore (1985) coined it 'normative discontent'.

The ideals that many men and women try to attain are permeated throughout Western societies (Tiggeman & Pickering, 1996; Bell & Dittmar, 2011). When social media contributes to the propagation of these ideals, it is contributing to the present social constraints on gender roles, despite the ongoing activism to increase gender equality (Berk, 2000). Females are often prime targets for media represented appearance ideals, specifically in relation to sexual objectification (Fredrickson & Roberts, 1997). Many outlets depict females as increasingly thin, with data suggesting that thin females are represented the most out of all body types (McKinley, 2002). This representation of females in the media only serves to reinforce gender stereotypic norms and adds to the belief that thinness is a hallmark of contemporary female beauty (McKinley,

2002). Additionally, studies have found that the more females consume thin media, they are at higher risk for internalizing these thin ideals and engage in appearance comparisons with others (Morry & Staska, 2001; Hargreaves & Tiggemann, 2004). Men have become more objectified in the media over recent years as well, with the concept of the 'supermale' becoming more accessible through social networking sites (Westmoreland-Corson & Anderson, 2002). The idea that males should be leaner, more muscular and more handsome can be just as unattainable as females striving for thinness. This has seen them reach parity with females for body dissatisfaction (Murray & Touyz, 2012). This is leading to mental health issues and is making them just as susceptible as their female counterparts to internalizing the unrealistic appearance ideals they view (Aubrey, 2007; 2010; Bessenoff & Del Priore, 2007).

Wright and Pritchard (2009) have suggested that media models may be important predictors in eating disorder symptomology in male and female college students. The responses to media models differ between genders (Tucci & Peters, 2008; Ricciardelli, Clow & White, 2010). Females tend to report more negative affect, body dissatisfaction and lower social self-esteem (Bardone-Cone & Cass, 2007), and males report lower body-esteem and eating disorder behaviours (Gile & Close, 2008). Both report a drive for thinness (Tucci & Peters, 2008; Harrison & Cantor, 1997). Research has also found that females who are more exposed to social networking sites and media outlets often report less social competence and greater appearance dissatisfaction (Tiggemann, Polivy & Hargreaves, 2009; Rivadeneyra, Ward & Gordon, 2007), however this has not been as thoroughly researched in males.

1.2 Instagram Use

Instagram is currently one of the largest social networking sites in circulation, with approximately 1 billion active monthly users (Instagram, 2019). The site also has 95 million photos uploaded daily, of which gain roughly 3 billion ‘likes’ (Instagram, 2019). While much of the research conducted on the impact of social media has been focused towards platforms like Facebook (Feltman & Szymanski, 2017; Meier & Gray, 2014), Instagram is gaining more traction because of its focus on photo-based content.

As previously mentioned, social media is providing new avenues for self-presentation. As Instagram is entirely photo-based (Dumas, Maxwell-Smith, Davis & Guilietti, 2017), users can feel pressured to present themselves as best they can as the images they upload are more relevant to their presentation than written statuses or blog posts. While the images users upload to the platform encompass many different hobbies, passions and subjects, most of the content seen on Instagram is geared towards physical appearance (Hendriscke et al, 2017). Just like the images on other platforms can be curated, the images on Instagram can be as well. It offers editing tools to add filters, crop, and change the structure of the picture, and external applications offer ways to remove blemishes, smooth the skin, and eliminate cellulite. Also, many users know how to pose flatteringly and to use lighting to make their photos look more pleasing. The way Instagram promotes appearance ideals through the circulation of these images has been shown to encourage validative behaviours such as like-seeking (Tiggemann et al, 2018; Moon et al, 2016). The endorsement of appearance ideals can pressure users to look the same way, and when they try to mimic the ideals they see on Instagram, they can turn to these validative behaviours to authenticate their own appearance (Tiggemann et al, 2018).

The circulation of appearance ideals on Instagram can make users place too much value on their appearance. The risk of body dissatisfaction becomes evident when individuals believe they cannot attain the appearances they see online. When individuals are more susceptible to believing these ideals are relevant to their own self-worth (Perloff, 2014), should a discrepancy arise between themselves and the ideal, they may be at risk of mental health consequences.

1.3 Transactional model of Social Media and Body Image Concerns

The increased attention towards social media and body image has seen the development of many theories and models in the attempt to better understand their complex relationship. These include Bandura's social cognitive theory (Bandura, 2009), the sociocultural perspective on body image (Tiggemann, 1996;2011), and the mass communication-focused cultivation model (Morgan, Shanahan & Signorielli, 2009). However, most of these theories and models have focused on conventional forms of media such as television and magazines. More current models have focused on social media and social networking sites, specifically with platforms like Facebook (Meier & Gray, 2014). These recent models have found a socio-cultural creation of body dissatisfaction which emphasizes tripartite influence models that depict the sources and mediators of influence (Neagu, 2015). To account for the complex processes between social media and body image, Richard Perloff developed the schematic Transactional model of Social Media and Body Image Concerns (2014) (Figure 1). The model accounts for the collaborative pathways between a host of psychological and behavioural processes which influence body dissatisfaction and affect. The model even accommodates for the development of eating disorders as a result of transportation, identification and perceived norms in a vulnerable subset of people (Perloff, 2014). By understanding the factors at play in body dissatisfaction, the

Transactional model provides a conceptualization of how social networking sites, working via adverse social comparisons and peer normative processes, can detrimentally influence body image.

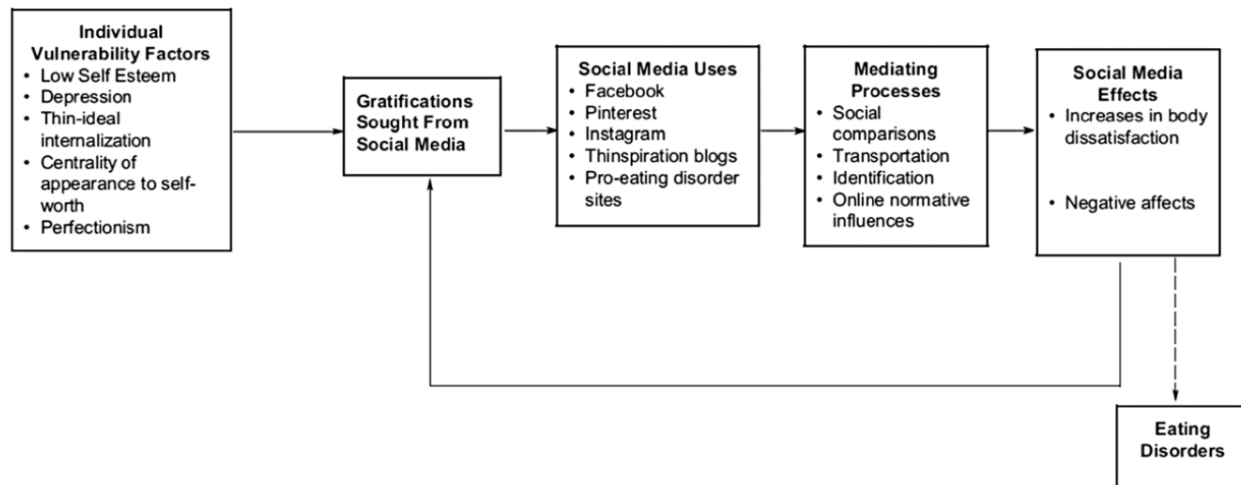


Figure 1. *Transactional model of social media and body image concerns*

1.3.1 Appearance-related internalization and appearance pressure

The deleterious effects of social media rarely occur in isolation. The predisposing variables that place individuals at greater risk have been coined “individual vulnerability characteristics”, which interact with specific “differential-susceptibility variables” to determine body dissatisfaction outcomes (Valkenburg & Peter, 2013, p226; Ferguson, Winegard & Winegard, 2011). Research into the role of predisposing characteristics in the development of body image has found that the following social and individual difference factors can place adolescents and young adults at greater risk for negative body image: depression, internalization

of the thinness ideal, low self-esteem, perfectionism, and centrality of appearance to self-worth (Perloff, 2014; Levine & Chapman, 2011; Neumark-Sztainer et al, 2006). Of these predisposing characteristics, internalization is a primary focus to this study.

Internalization occurs when an individual cognitively “buys into” societal ideals of attractiveness and actively engages in behaviours in order to produce an approximation of the ideal (Thompson et al, 1999). These ideals can be reinforced by socialization agents, such as an individual’s peers, the media they engage with, or their own family (Thompson & Stice, 2001; Kandel, 1980). For example, Instagram propagates exaggerated or manipulated images of appearance ideals that can distort viewers perceptions of what is attainable. When a user is regularly exposed to these ideals, they can feel pressured to attain them. This pressure can then lead to the ideals becoming internalized into their worldview. Due to the propagation of these exaggerated or manipulated images, it could be understood that users of Instagram may internalize the appearance pressures they see more frequently compared to other social networking sites

When these ideals are continually being reinforced or ‘pressured’ towards others, individuals can engage in social comparison in response (Festinger, 1954) which ultimately mediates the relationship between using the social networking site and developing body dissatisfaction (see Figure 1 under ‘Mediating Processes’). As Instagram often displays images of these appearance ideals, users who are more likely to engage in social comparison will do so *upwardly*, meaning they will compare themselves to others they consider better or more attractive than they are (Tiggemann, Slater & Smyth, 2014). Social comparisons that occur on dimensions that are self-relevant bear greater impact than those that do not reflect on the self-

concept (Wood & Taylor, 1991). This can be an issue for individuals high in appearance-related internalization as they are more likely to compare themselves to those who look like the ideals they value. These comparisons are processed at a deeper level, are more readily accessed and connect with self-relevancy, and deliver a greater psychological impact. Therefore, if the individual is high in appearance-related internalization, the appearance pressures they compare themselves to with will likely lead to greater body dissatisfaction and negative self-worth as opposed to comparisons made on a dimension of lesser importance (Perloff, 2014).

The user's awareness of these appearance pressures can significantly predict drive for thinness in both males and females (Fernandez & Pritchard, 2012), and muscularity in males (Giles & Close, 2008). This means that the more users are aware of what they are seeing, it may serve to protect them from internalizing those ideals. So far it is less understood how a user's awareness of appearance pressures relates to internalization. When a user experiences low self-esteem or depression among other predisposing characteristics, if they begin to internalize the ideals they feel pressured to attain, this may serve to worsen their body image should the internalization be occurring in isolation (Crocker, Luhtanen, Cooper & Bouvrette, 2003). Therefore, it is important to acknowledge other predisposing variables that are at play in the development of body dissatisfaction, as these could serve to worsen their perception of appearance ideals and assist in the internalization of appearance (Perloff, 2014).

1.4 The Current Study

This study aims to investigate how appearance-related internalization and appearance pressure is related to body dissatisfaction and Instagram use. It was decided to include both females and males in this study as previous literature on social media and body image have

mostly used the female undergraduate population (Perloff, 2014). By using the Transactional model, this study will have a better conceptualization of how body image is influenced by a complex host of interactions including psychological and behavioural processes (Perloff, 2014). It is important to further the evidence on this topic due to the propagation of appearance ideals on social networking sites and the issue of body dissatisfaction amongst adolescents and young adults.

1.4.1 Hypotheses

- 1) Time on Instagram will be positively associated to:
 - a. Appearance-related internalization
 - b. Appearance pressure
 - c. Body dissatisfaction
- 2) Appearance-related internalization and appearance pressure will be strong predictors of body dissatisfaction
- 3) Females will score higher than males on:
 - a. Appearance-related internalization
 - b. Appearance pressure
 - c. Body dissatisfaction

Chapter 2

Method

2.1 Participants

Participants were male ($N=48$), female ($N=101$) and other ($N = 1$). The study required participants between the ages of 18-25. The sample were primarily Australian (64%), with the rest being European (12%), Asian (16.7%), Indigenous Australian (.7%), New Zealand (.7%), and Other (6%). All participants were students from the RPS. To meet the eligibility criteria for this study, participants had to be within the age range, be an active user of Instagram, and fluent in English to understand the questionnaires. The error rate needed to warrant the exclusion of data was the absence of at least 50% of answers in an entire questionnaire or more.

2.2 Materials

The survey was created and distributed using the online platform SurveyMonkey. An initial pilot run was undertaken to evaluate survey items and to identify any issues prior to official release. Brief feedback was provided which allowed for minor changes and clarification of the survey.

2.3 Power Analysis

Power analyses were conducted using G* Power. For the Mann-Whitney U test, an effect size of 0.5 was estimated at a power level of 0.8. A total sample of 134 was considered satisfactory. A sample of 160 participants were calculated for the hierarchical regression analysis consisting of 4 predictors and 1 dependent variable at a power level of 0.8 and an effect size of .05.

2.4 Study Design

The purpose of this recruitment strategy was to ensure participants were psychologically minded, fluent in English, and of the desired age. Participants were recruited using the first 1st Year Psychology 1A and 1B Research Pool System (RPS) at The University of Adelaide. Recruitment was also achieved using fliers (see Appendix A) that were distributed around The University of Adelaide campus. The survey would be made available for a maximum of 8 weeks on the RPS between May and July 2019. The project comprised of the online survey which took approximately 20-30 minutes to complete. Participants were advised that the survey was voluntary and could withdraw at any time before submission. Students were awarded course credit upon completion of the survey. This study was granted ethics approval by the School of Psychology Human Research Ethics Subcommittee at the University of Adelaide. Ethics number 19/43.

2.4.1 Measures

Demographics. Participants were asked questions about their age, sex, ethnicity, marital status, and employment. They were then administered the following standard measures.

Instagram use. To measure time spent on Instagram per day, participants were asked to fill out at least one of the two boxes labelled 'Hours' and 'Minutes'. Total time spent per day was converted to total minutes for data analysis. To measure time spent on Instagram in the last 3 months, participants were asked to choose one of five options; 'daily', 'a few times per week', 'once a week', 'a few times per month', and 'once a month or less often'.

Appearance-related internalization and appearance pressure. The Internal, Peer and Media Subscales of the SATAQ-4 were used to measure appearance-related internalisation and

appearance pressure. This measure has been examined in non-clinical female and male college students (Schaefer et al, 2017), and therefore was appropriate for this study. Questions focussed on appearance pressure coming from the media and peers, as well as internalization of appearance ideals. The internalization scale comprised of questions related to thin/lean and muscular/athletic appearance ideals. Questions included “It is important for me to look athletic”, “I feel pressure from my peers to look in better shape” and “I feel pressure from the media to look thinner”. All statements were measured on a 5-point Likert scale ranging from 1 (definitely agree) to 5 (definitely disagree), with the maximum possible score being 50. The SATAQ-4 subscales average a Cronbach alpha level of 0.85, and has good internal consistency, reliability and construct validity (Schaefer et al, 2017).

Body dissatisfaction. The Eating Disorder Examination Questionnaire is the survey version of the EDE interview-based instrument. This study employed the Weight and Shape subscales of the EDE-Q to measure body dissatisfaction (Fairburn & Cooper, 1993). Both subscales have good internal consistency ($\alpha = 0.72$ and $\alpha = 0.83$, respectively), construct validity (Berg et al, 2012), and these measures have been administered to non-clinical female undergraduates (Serier, Smith & Yeater, 2018). Questions focused on weight dissatisfaction (ie: “has your weight influenced how you judge yourself as a person?”) and shape dissatisfaction (ie: “have you had a strong dissatisfaction with your shape?”). Questions were measured using a 5-point Likert scale ranging from 1 (never) to 5 (almost always). Higher scores reflected more severe symptomology.

Problematic Instagram use. The 9-item Social Media Disorder Scale was administered to measure disordered (i.e., addicted) and high-engaging non-disordered levels of Instagram use

(van den Eijnden, Lemmens & Valkenburg, 2016). Participants were asked to answer questions related to criteria such as preoccupation, escape, displacement, and withdrawal in relation to their Instagram use. Questions included “during the past year have you often felt bad when you could not use Instagram?” and “during the past year have you often used Instagram to escape from negative feelings?”. These were answered using a dichotomous yes/no format. Scores of 5 or higher indicate disordered Instagram use. The SMD-9 shows sound structural validity, suitable internal consistency ($\alpha=0.81$), good convergent validity, and sufficient test-retest reliability (van den Eijnden, Lemmens & Valkenburg, 2016).

General Mental Health. The Kessler Psychological Distress Scale was administered as a short form measure of psychological distress (Kessler et al, 2002). It was chosen for its brevity and for its administration using convenience samples (Kessler et al, 2002). Questions included “About how often did you feel tired out for no good reason?” and “About how often did you feel worthless?”. All questions were measured on a 5-point Likert scale ranging from 1 (none of the time) to 5 (all of the time). Scores range from 10 to 50, with a score of 30 or more indicating severe distress. The K-10 has good reliability and validity, as well as excellent internal consistency, $\alpha = 0.93$.

Optional open-ended questions. Four optional questions were included at the end of the survey to extend the scope of the project. This allowed participants to provide additional information to further explain their measure responses. The four questions were as follows; “How does Instagram make you feel about your body?”, “Do you feel pressured by Instagram to maintain a ‘socially acceptable’ body?”, “If you couldn’t use Instagram, would it affect how you perceive your body?”, and “Do you have any other comments you would like to add?”.

Chapter 3

Results

3.1 Descriptive statistics

Missing data and participants who did not fit the required age range were eliminated from the data set. The final number of participants came to $N = 149$. The sample was comprised of males and females, aged between 18-25 ($M=20.67$, $SD=2.68$). The majority fell between the ages of 18-23 years (91.2%). All were active users of Instagram.

3.1.1 Assumptions of Normality

A Shapiro-Wilk test was used to assess normality. Results indicated that seven out of the eight main variables did not meet the assumption, with all producing p-values less than the specified alpha level of .05 (Aron, Aron & Coups, 2009). The SATAQ-4 Internalization of appearance measure was the only variable to meet the assumption ($p=.291$).

3.1.2 Correlations

Table 1 shows the correlations between the main variables in this study. There was a strong positive correlation with both EDEQ-Weight dissatisfaction and EDEQ-Shape dissatisfaction with mental health ($r = .533$ and $r = .534$). Appearance-related internalization correlated strongly with weight and shape dissatisfaction ($r = .444$ and $r = .473$). Appearance pressure from peers correlated strongly with dissatisfaction with weight and shape ($r = .432$ and $r = .452$). Media pressure produced the strongest relationship with weight and shape dissatisfaction ($r = .507$ and $r = .533$). Similarly, peer, media and appearance-related internalization produced small to moderate positive correlations with mental health ($r = .279$; $r = .345$; $r = .192$). Instagram use had very small correlations with weight and shape dissatisfaction ($r = .190$; $r =$

.145), and only produced a significant correlation with the weight subscale. Media pressure produced the most significant correlation with Instagram use with a positive small to moderate association ($r = .287$). Social media disorder (SMD) produced non-significant and negligible correlations with all remaining variables.

Table 1

Spearman's rank correlation coefficient between main variables.

	SMD	K-10	Instagram Use	EDEQ Weight	EDEQ Shape	SATAQ-4 Peer	SATAQ-4 Media	SATAQ-4 Internal
SMD-9	–	-.106	-.094	-.023	-.010	0.003	-.009	.025
K-10	–	–	-.006	.533**	.534**	.279**	.345**	.192*
Instagram use	–	–	–	.190*	.145	.162*	.287**	.147
EDEQ Weight	–	–	–	–	.926**	.432**	.507**	.444**
EDEQ Shape	–	–	–	–	–	.452**	.533**	.473**
SATAQ-4 Peer	–	–	–	–	–	–	.400**	.362**
SATAQ-4 Media	–	–	–	–	–	–	–	.345**
SATAQ-4 Internal	–	–	–	–	–	–	–	–

Notes. $N = 149$. * $p < .05$ level. ** $p < .01$. EDEQ Shape = shape dissatisfaction; EDEQ Weight = weight dissatisfaction; K-10 = Psychological Distress; Instagram use = in minutes; SATAQ-4 Internal = appearance-related internalization; SATAQ-4 Media = pressure from the media; SATAQ-4 Peer = pressure from peers; SMD-9 = Social Media Disorder.

3.2 Independent samples for gender

A Mann-Whitney U test was conducted to discover any significant differences between gender for the main variables. The assumption of independent observations was met for all variables (Aron et al, 2009). Homogeneity of variance was assessed using a Levene's test, with results indicating that the K10, EDEQ Weight and Shape subscales, SATAQ-4 Peer and Media subscales, and appearance-related internalization all had equal variances ($p > .05$). However, Instagram use and the social media disorder scale violated this assumption ($p < .05$). Normality was violated by all variables except appearance-related internalization (Aron et al, 2009).

Means and standard deviations are presented in Table 2 and Mann-Whitney U test results are presented in Table 3. There was a statistically significant difference between males and females on daily Instagram use, with females tending to use the platform at a higher frequency. The EDEQ Weight and Shape subscales and the SATAQ-4 Media subscale had significant differences with females producing higher scores on all three. The SATAQ-4 Peer and Internal subscales and social media disorder produced no significant differences between genders.

Table 2

Mean differences of scores on main variables across the total sample and between males and females

Main Variables	Total (N = 150)		Females (N = 101)		Males (N=48)	
	Mean	SD	Mean	SD	Mean	SD
Instagram Use	81.81	81.01	97.13	88.93	49.56	47.69
SMD-9	2.08	1.79	1.94	1.62	2.38	2.11
K-10	26.30	9.14	27.06	9.47	24.69	8.29
EDEQ Weight	15.68	5.52	16.63	5.62	13.69	4.77
EDEQ Shape	26.48	7.80	27.93	7.74	23.44	7.08
SATAQ-4 Peer	10.56	4.52	10.75	4.66	10.15	4.22
SATAQ-4 Media	14.97	4.42	15.95	4.09	12.92	4.42
SATAQ-4 Internal	32.64	7.81	32.33	7.69	33.29	8.10

Notes: EDEQ Shape = shape dissatisfaction; EDEQ Weight = weight dissatisfaction; K-10 = Psychological Distress; Instagram use = in minutes; SATAQ-4 Internal = appearance-related internalization; SATAQ-4 Media = pressure from the media; SATAQ-4 Peer = pressure from peers; SMD-9 = Social Media Disorder

Table 3

Mann-Whitney U independent samples between genders.

	Male	Female					
	Mean Rank	Mean Rank	Median Rank	U	Z	p	r
SMD-9	79.75	72.74	2	2186	-.946	.344	-.077
K10	68.36	78.15	25	2105.5	-1.29	.195	-.105
Instagram Use	55.72	84.16	60	1498.5	-3.77	.000**	-.308
EDEQ Weight	59.50	82.37	15	1680	-3.02	.002**	-.247
EDEQ Shape	57.39	83.37	27	1578.5	-3.43	.001**	-.281
SATAQ-4 Peer	72.32	76.27	10	2295.5	-.525	.600	-.043
SATAQ-4 Media	54.75	84.62	16	1452	-3.99	.000**	-.326
SATAQ-4 Internal	78.65	73.27	33	2249	-.712	.447	-.058

Notes. $N = 149$. * $p < .05$ level. ** $p < .01$. EDEQ Shape = shape dissatisfaction; EDEQ Weight = weight dissatisfaction; K-10 = Psychological Distress; Instagram use = in minutes; SATAQ-4 Internal = appearance-related internalization; SATAQ-4 Media = pressure from the media; SATAQ-4 Peer = pressure from peers; SMD-9 = Social Media Disorder

3.3 Hierarchical multiple regression

A hierarchical multiple regression (HMR) was used to estimate the proportion of variance in body dissatisfaction accounted for by gender, appearance-related internalization and appearance pressure. Prior to interpreting the results of the HMR, several assumptions were evaluated (Aron et al, 2009). Due to the nature of the dataset, the assumption of normality was not met for several variables, however all were free from univariate outliers. Inspection of the normal probability plot of standardised residuals as well as the scatterplot of standardised residuals against standardised predicted values indicated that the assumptions of normality, linearity, and homoscedasticity of residuals were met. Assessing Mahalanobis distance indicated no multivariate outliers. Lastly, collinearity statistics (Tolerance and VIF) were all within acceptable limits, indicating that multicollinearity would not be of issue.

A 2-stage HMR was conducted with body dissatisfaction as the dependent variable. This variable was computed by combining the scores for both weight dissatisfaction and shape dissatisfaction. Given there were significant differences between males and females on the current variables, gender was entered at Stage 1 to control for it. In Stage 2, the predictor variables were entered. These were appearance-related internalization and appearance pressure, which were chosen because of their high correlations with weight and shape dissatisfaction. Regression statistics for the HMR are presented in Table 4.

The results of the regression show that at Stage 1, gender contributed significantly to the model, $F(1,147) = 10.87, p < .001$ and accounted for 6.9% of the variation in body dissatisfaction. When appearance-related internalization and appearance pressure variables were

introduced in Stage 2, they explained an additional 35.4% of variance. The change in R^2 was significant, $F(3,144) = 26.42$, $p < .001$, and was of a large effect ($f = 0.557$) (Aron et al, 2009).

These results indicate that the most important predictors of body image were the appearance-related internalization and appearance pressure variables, as they both uniquely explained 35.4% of variance in body dissatisfaction.

Table 3

Summary of a two-stage hierarchical regression analysis for appearance-related internalization and appearance pressures predicting body dissatisfaction

	β	t	sr^2	R	R^2	ΔR^2
Stage 1				.262	.069	.069
Gender	.262	3.29**	.06			
Stage 2				.651	.423	.354
SATAQ-4 Peer	.211	2.86**	.05			
SATAQ-4 Media	.198	2.56**	.04			
SATAQ-4 Internal	.353	4.86**	.14			

Notes. $N = 149$. * $p < .05$ level. ** $p < .01$. SATAQ-4 Internal = appearance-related internalization; SATAQ-4 Media = pressure from the media; SATAQ-4 Peer = pressure from peers.

3.4 Supplementary qualitative analysis

Three optional open-ended questions were asked at the end of the survey to further the scope of the study. These data were examined to identify additional salient information to expand upon the quantitative responses. The salient themes included pressure to attain appearance ideals, health motivation, and a pressure to maintain what they consider a socially acceptable body. A preliminary analysis of salient themes was conducted in favour of a full thematic analysis as it was beyond the scope of this thesis. To clarify the themes within the questions, a section of quotes will be provided, followed by qualifiers to signify gender (M: Male; F: Female) and the participant's age (years).

3.4.1 How does Instagram make you feel about your body?

The most dominant theme in the answers for this question was related to a feeling of pressure from Instagram (e.g., *It makes me feel like I need to be a lot thinner, happier and more outgoing to be the center of attention* [F, 23]; *Really negative, everything on insta is photoshopped and unrealistic yet my brain thinks that I need to look like they do even though it's impossible* [F, 22]). Other common themes were health related motivation (e.g., *I don't have any insecurities about my body but will use Instagram as a means of motivation to be healthier (not thinner)* [F, 22]; *It makes me want to improve my fitness* [F, 23]) or that it had little or no effect on their perceptions of their body (e.g., *Instagram has no bearing on how I feel about my body* [M, 23]; *It doesn't make me feel anything about my body* [F, 20]).

3.4.2 Do you feel pressured by Instagram to maintain a 'socially acceptable' body?

Most participants responded saying they did feel pressure to maintain what they perceived to be a socially acceptable body (e.g., *Yes, especially to keep slim* [F, 18]; *I think so. I*

think Instagram can promote a specific body type (lean, tanned, tall etc) as the ideal which affects the types of bodies people see as 'socially acceptable [F, 22]). Other participants indicated that they did not feel pressured, or that the only pressure they felt was that from themselves (e.g., No, because I know it is fake [M, 18]; No. Most photos are retouched and often people have had surgical work done [F, 18]; I used to feel pressured by society/social media but now I feel more pressure from myself [F, 23]).

3.4.3 If you couldn't use Instagram, would it affect how you perceive your body?

Results showed that most participants believed that not using Instagram would make no difference in the way they perceived their bodies (e.g., *I think I'd use social media for the same purposes so it wouldn't change [M, 22]; My self-image could improve, but not completely as there are other forms of media [F, 18]; I don't think so. My body image issues are more deeply rooted than from Instagram [F, 22]).* Contrary to this, some respondents did state that they felt not using Instagram would change the perception of their body (e.g., *Yes, [I] wouldn't be comparing it to Instagram models or constantly seeing those type of women with every scroll [F, 22]; Yes I think I would be a lot happier because I wouldn't see unrealistic images all the time [F, 22]).*

Chapter 4

Discussion

4.1 Main findings

The purpose of this study was to extend previous research on the effects of Instagram on body image. To the knowledge of the researcher, this study is the first to investigate the appearance-related internalization and appearance pressure and their relation to body dissatisfaction amongst Instagram users. The relation and impact of these variables on body dissatisfaction were conceptualized using Richard Perloff's Transactional Model (2014). The main findings from this study were that appearance-related internalization and appearance pressures were strong predictors of body dissatisfaction, and that the more time spent on Instagram positively influenced body dissatisfaction and peer and media pressure. Additionally, for the participants of this study, none scored highly enough to permit social media disorder (van Den Eijnden, Lemmens & Valkenburg, 2016). Therefore, the following findings are more generalizable to the non-clinical population.

4.1.1 Hypotheses

Hypothesis 1 predicted that more time spent on Instagram would be associated with greater appearance-related internalization, appearance pressure and body dissatisfaction. This hypothesis was partially supported. Using a correlational analysis, results indicated that there were significant, small positive associations between media pressure, peer pressure and weight dissatisfaction with Instagram use. Appearance-related internalization and shape dissatisfaction produced non-significant correlations with Instagram use. Hypothesis 2 stated that appearance-related internalization and appearance pressure would be predictors of body dissatisfaction. The

results supported this hypothesis. Using hierarchical multiple regression, appearance-related internalization and appearance pressure were significant predictors of body dissatisfaction after controlling for gender. Overall, the results showed that appearance-related internalization and appearance pressure were strong predictors, accounting for over a third of the variance in body dissatisfaction (Cohen's $f = 0.55$). Hypothesis 3 predicted that females would score higher than males on appearance-related pressure, appearance internalization and body dissatisfaction. This hypothesis received partial support. Findings indicated that there were significant differences between gender, with females scoring higher on weight and shape dissatisfaction, as well as media pressure. There were no gender differences for peer pressure or appearance-related internalization.

4.2 Critical interpretation and integration with past findings

4.2.1 Relationship between Instagram use and weight dissatisfaction

This study demonstrates that Instagram use may significantly influence weight dissatisfaction. As evident in Table 1, there was a small correlation between time spent on Instagram and the EDEQ Weight subscale. It was expected that shape dissatisfaction would produce a similar correlation with Instagram use, considering the two EDEQ subscales were so highly correlated ($r = .926$). In this case, it may be that weight dissatisfaction was a more salient feature of appearance when using Instagram.

This is similar to the findings of Tiggemann and Miller (2010), in that more internet 'appearance exposure' decreased weight satisfaction among female adolescents. Meier and Gray (2014) also investigated this appearance exposure on Facebook, finding that while engaging in photo-based activities, their sample reported more weight dissatisfaction. These findings support

this study, in that Instagram is not only a hub of photo activity, but it provides appearance exposure. This type of exposure may involve social comparison processes. The Transactional Model conceptualized social comparison as a mediating process between Instagram use and body dissatisfaction (2014). Therefore, if participants were comparing themselves to the appearance ideals they were seeing on Instagram, they may have developed a discrepancy between themselves and the ideal (Hendrickse et al, 2017; Williamson et al, 1995). It is this discrepancy that may have negatively contributed to their weight dissatisfaction. In saying this, social comparison was not investigated in this study, and therefore replications should account for this process and its influence using a mediational model.

To contrast these findings, Tiggemann (2005) discovered that time spent on YouTube and Google was not related to body image, as the time spent on these sites is dedicated to gathering information or watching videos of content less related to body image. This finding further clarifies the idea that not social networking sites are negatively influencing body image, but rather it seems to be photo-based content that has the most influence on body dissatisfaction. Additionally, this finding does not account for other factors that can contribute to body dissatisfaction. These can include personality, specifically neuroticism (Roberts & Good, 2010) and narcissism (Swami et al, 2015), as well as parental pressure (Helfert & Warschburger, 2013) and social economic status (Heilman, 1998). If possible, these variables should be considered when interpreting this finding, and should be considered in replications. While this finding

4.2.2 Relationship between Instagram use and peer and media pressure

More time spent on Instagram was associated with higher peer and media pressure. The SATAQ-4 (Schaefer et al, 2017) was a good fit for measuring appearance pressure in this study

as it directly examined this pressure stemming from peers and the media. In this instance, the pressure participants felt from their peers to look a certain way was greater when they had spent more time on Instagram. Most studies have looked at peer pressure in school contexts, like that of Helfert and Warschburger (2013) who found appearance pressure was extensive between peers. The finding from this study, however, indicates that peer pressure can occur in an online and indirect fashion (Subrahmanyam & Greenfield, 2008; Stice, 1994). If one's peers are on Instagram, and they also subscribe to specific appearance ideals, they may feel pressured to only upload images that are in line with these ideals. If the user then viewed these photos that depict both their peers and an appearance ideal, the pressure to look that way may hit closer to home as it is stemming from someone who is more relatable and therefore more attainable.

Instagram use was also associated with higher media pressure. Englen-Maddox (2005) claimed that women are comparing themselves to ideal images from the media just as often as they compare themselves to their peers. Similarly, the participants of this study were feeling comparable levels of pressure from the media as they did from their peers. This was apparent in qualitative responses where participants stated they were feeling pressured to look a certain way and meet appearance ideals when using Instagram. This finding is consistent with Groesz, Levine & Murnen (2002) who found that media platforms are largely responsible for generating and reinforcing preoccupations with physical attractiveness. This is also similar to a study by Fernandez and Pritchard (2012) who found that the impact of media models can significantly influence self-esteem and other body image variables. While these findings indicate that Instagram can act as a medium to circulate appearance pressure, it cannot be said that Instagram is the cause of this appearance pressure as individuals are exposed to their peers and media

across many different platforms and contexts. This should be considered when interpreting these results.

4.2.3 Relationship between Instagram and appearance-related internalization

The literature has regularly found an adverse relationship between media exposure and appearance-related internalization (Fitzsimmons-Craft, 2011; Moradi & Huang, 2008; Morry & Staska, 2001). However, this study found no significant correlation between Instagram use and appearance-related internalization. There may be a few reasons why no relationship was found.

Firstly, the SATAQ-4 Internalization subscale asked questions that were not related to any social agent that may trigger the internalization (i.e., the media, peers, family etc) (Schaefer et al, 2017). It was clear that participants were experiencing elevated levels of appearance pressures, and it is likely these pressures were being internalized on some level. However, the statements in the SATAQ-4 Internalization subscale only focused on the internalization itself, rather than linking it to where it originated from. Therefore, a statement such as “*I think a lot about looking thin*” may be true for the participant, but it does not establish where this thought came from in the first place. Thus, the appearance-related internalization may struggle to hold an association with any form of media. Additionally, as the two internalization subscales were combined for brevity, this may have been incorrect and confounded the scores.

An alternative option for measuring appearance-related internalization is the Sociocultural Internalization of Appearance Questionnaire-Adolescents (Keery et al, 2004), as these questions link the internalization to media-presented ideals. An example from the SIAQ-A is “I would like my body to look like the bodies of people in the movies”. This could easily be modified to link this internalization to Instagram use, such as, “I would like my body to look like

the bodies of people on Instagram”. Another option may be creating a similar measure to that of Fernandez & Pritchard (2012), who created their own to assess how media models influenced the participant. This would be good for replications, as the internalization could be specifically linked to Instagram (e.g., “I feel fat after looking at Instagram”).

On the other hand, another possibility is that the appearance pressures they experienced in relation to Instagram were not internalized into their worldview. This interpretation could be supported by a handful of qualitative responses which indicated that Instagram was not the source of pressure, but rather the pressure and expectation to achieve an appearance ideal came from within the participants themselves (e.g., “*I don’t feel pressured by Instagram. Only pressured by myself*”). This raises the question as to whether the type of content or level of participant engagement might have influenced this finding. As this was not studied, it is hard to know what and how users were engaging with on Instagram. If an active user was only viewing content related to cars or gaming, then it is likely that their levels of appearance-related internalization were low even if they were exposed to other appearance pressures. In a similar way, if a passive user was following accounts that promoted appearance ideals, they may see lower levels of internalization because their processing of the content is less accurate than an active user. These scenarios should be studied in future research.

4.2.4 Predictors of body dissatisfaction

Appearance-related internalization and appearance pressure were strong predictors of body dissatisfaction. After controlling for gender, the predictor variables were entered together as they often work in conjunction (Thompson & Stice, 2001). When combined, both appearance-related internalization and appearance pressure accounted for 35.4% of the variance in body

dissatisfaction. Thus, for this sample, those who were experiencing appearance pressures and were internalizing the appearances they saw were the most likely to experience some level of body dissatisfaction.

This finding supports the Transactional model (Perloff, 2014) in that appearance-related internalization acts as a predisposing or predictive factor in the development of body dissatisfaction (Stice, 2001). Further, this dissatisfaction is likely to be worse when appearance pressure is involved as it may serve to worsen the internalization (Perloff, 2014). This finding is supported by Ahern, Bennett and Hetherington (2008), who found that appearance-related internalization measured by the earlier SATAQ-3 (Thompson et al, 2004) was significantly correlated with body dissatisfaction. A study from Stice (2001) is also supportive, which found that appearance-related internalization acted as temporal precedence in the development of body dissatisfaction, and that appearance pressure may contribute to body image disturbance. While his study was conducted longitudinally, having found similar results cross-sectionally may lay claim to the robustness of this finding.

While appearance-related internalization and appearance pressure are known to work in conjunction (Thompson & Stice, 2001), less is known of what factors contribute to the internalization of appearance pressures. While Perloff states that it is appearance-related internalization that has users seek out media that instills appearance pressure (2014), there is reason to investigate whether this internalization develops as a *result* of the appearance pressures reinforced by the media and significant others (Fitzsimmons-Craft, 2011). As mentioned, appearance pressures have the most impact when they become internalized and incorporated into one's worldview (Thompson et al, 2004; Fitzsimmons-Craft, 2011). Therefore, more research is

needed to understand how these pressures are internalized, and in what instances these pressures are not internalized. To see if participants are internalizing the pressures they are viewing on Instagram, replications could investigate whether appearance pressures can predict appearance-related internalization, while accounting for other variables (such as level of engagement and content) that may be at play.

4.2.5 Gender differences on main variables

Females scored higher than males on body dissatisfaction. This is supported by Striegel-Moore and Franko (2002), who established that females across the lifespan are more likely to experience body image concerns than their male counterparts. Similarly, a study by DelFabbro et al (2011) found that female adolescents were significantly more likely to experience body dissatisfaction than males, and that this dissatisfaction accounted for more of the variance in self-esteem than life satisfaction and psychological wellbeing. Their level of body dissatisfaction was clear in the open-ended responses, where many females responded feeling overweight, underwhelming, and ashamed about their bodies. As for media pressure, females also scored higher than males. This finding is supported by Fernandez & Pritchard (2012), who also found that media pressure was significantly different between genders, with females scoring higher than males on the SATAQ-3 (Thompson et al, 2004). Objectification theory could explain why females are feeling more media pressure, in that they feel more evaluated and objectified, and like they are constantly being evaluated in terms of their physical appearance (Fredrickson & Roberts, 1997).

Based on previous findings (Ahern et al, 2008; Tucci & Peters, 2008), it was expected that females would score significantly higher for appearance-related internalization. However,

there were no significant gender differences on this variable. Fernandez & Pritchard (2012) discovered a similar finding amongst their sample of college men and women. The men and women of their study were both viewing media models and believing they should achieve a similar appearance to them. As the mean scores for appearance-related internalization was near identical for both the males and females of this study, it is likely they were both feeling appearance pressure and internalizing the ideals they were being exposed to.

The findings from Fernandez & Pritchard (2012) are comparable to this study, as while there are no significant gender differences for appearance-related internalization, there are differences for media pressure. While this pressure is significantly influencing females, both genders are experiencing similar levels of appearance-related internalization. This may be suggesting that the internalization is stemming from other sources for males, or their level of insight to the pressure they are exposed to online may be less than their female counterparts. Future research should investigate and elaborate on this finding.

4.3 Implications for theory

The conceptualization of psychological processes that can occur in the development of body dissatisfaction amongst users of Instagram were effectively understood using Perloff's Transactional Model (2014). Specifically, how appearance-related internalization and appearance pressure work in conjunction to influence body dissatisfaction.

Appearance-related internalization and appearance pressures were strong predictors of body dissatisfaction. Despite the Transactional model listing just appearance-related internalization as a predisposing characteristic (Perloff, 2014), it was decided to include appearance pressures as well as a predictive component in accordance with past literature

(Fitzsimmons-Craft, 2012; Thompson & Stice, 2001). Instagram is an appearance focused platform (Hendriscke et al, 2017), and therefore it is likely that participants were exposed to appearance ideals in some way.

How appearance-related internalization and appearance pressures are developed in conjunction with one another is not entirely understood in this study. Is the user high in internalization prior to seeing the appearance pressure on Instagram, and it is this internalization that drives them to the platform in the first place? Or do they develop appearance-related internalization once exposed to the appearance pressure on Instagram? According to Perloff (2014), it is the former. According to Fitzsimmons-Craft (2012) and Dittmar (2005), it is the latter. The findings from this study are a snapshot in time for the participants. However, they should be considered with appreciation to other external circumstances and variables not investigated here.

This study did not identify any mediating processes occurring for participants on Instagram as it was beyond the scope of this research. In saying this, understanding any mediating processes is important in understanding what can act as a determinant in the development of body dissatisfaction among Instagram users. A mediating process that may have been occurring for participants was social comparison (specifically upward comparison), as gestured to in many qualitative responses. Again, as this was not investigated, future research should account for this process using a mediational model.

The current study highlights how the Transactional Model can conceptualize the array of processes in the development of body dissatisfaction amongst users of Instagram. The only addition that could possibly work for this model is considering the impact of appearance-

pressure. As mentioned, appearance pressures may act as temporal precedence in the development of appearance-related internalization. If possible, the model should account for these appearance pressures and where they come from, to illustrate a pathway to internalization and even methods to prevent this internalization occurring.

4.4 Strengths

There were several strengths to this study. Firstly, use of standardised measures ensured that the variables of interest were being examined as efficiently as possible. Another strength was the use of open-ended questions. These were able to better understand the participant's feelings and attitudes towards Instagram and how they believed it may contribute to negative body image. These questions were able to gain a personal experience not available from the standard measures. Lastly, the topic of appearance-related internalization and appearance pressure relative to Instagram use has not been thoroughly researched. It is hoped that by conducting this study it will not only add to the existing literature, but further the interest in this topic, specifically in relation to the influence of Instagram.

4.5 Limitations

There are several limitations that warrant acknowledgement. As it was a cross-sectional correlational design, there are issues with internal validity. The research was conducted using convenience sampling, which resulted in a primarily female undergraduate sample. This inhibits the generalizability to other populations. Research should focus on populations that are more diverse, such that different ethnicities, age ranges, and gender are accounted for in their relation to Instagram use and body dissatisfaction.

A possible confounding measure was the combined SATAQ-4 Internalization subscale. When investigating the relationship between appearance-related internalization and Instagram use, no association was found despite a large body of literature indicating a significant relationship between media exposure and internalization. It may be that this measure was not the right choice for this investigation, or that the choice of combining the thin/lean and muscular/athletic subscales to create one combined scale was incorrect. Of the studies that have found a significant relationship, they have utilised measures such as the Sociocultural Internalization of Appearance Questionnaire-Adolescents (Keery et al, 2004) and the SATAQ-3 (Thompson et al, 2004). These measures might be a better choice as the statements in these questionnaires link the internalization to media presented ideals.

The self-report for Instagram use may be lacking in accuracy. Using a self-report measure for an objective construct like time may have confounded the correlations between Instagram use and other variables. Similarly, using a self-report measure for a sensitive topic like body dissatisfaction may have incurred biases or unwillingness to report honestly. Males may be less forthright and honest about their body image concerns (Helgeson, 2009), something worth noting when interpreting their results. This may also warrant keeping males and females separate for the hierarchical regression conducted in this study, as it is possible that appearance-related internalization and appearance pressures work to predict body dissatisfaction differently for males and females and thus may have been overlooked in this research.

4.6 Future directions

The findings from this study further the understanding of the issue of body dissatisfaction in young adults who use Instagram. A suggestion for further research would be to utilize a

longitudinal design to gain insight into exposure vs selection effects of Instagram. This could determine whether using Instagram and being exposed to appearance pressure increases appearance-related internalization, or whether people who are already high in appearance-related internalization seek out Instagram, and thus continue to expose themselves to the appearance pressure.

In line with this suggestion, future studies should account for what users are engaging with on Instagram. This could be achieved with a mixed methods design which could ask participants to answer the standard measures before being asked to describe what content they are viewing and how they are engaging with it (i.e., through active interaction or passive interaction). This could also involve asking participants what they upload to their profiles and how often they do so, and whether they seek validation through specific determinants such as like seeking (Tiggemann et al, 2018). By analyzing the open-ended responses in relation to the standardized measures would add a richness to the current findings by clarifying how users feel about their appearance when using Instagram, and whether they are aware of the appearance pressure they see and whether they internalize them.

More research is needed to understand how males develop and experience body dissatisfaction while using Instagram. An addition to the Transactional model (Perloff, 2014) could be to include more predisposing characteristics that are specific to males, such as drive for muscularity (DeJesus et al, 2015) and drive for leanness/athleticism (Smolak & Murnen, 2008). This research would need to consider any barriers unique to males, specifically the change of less honesty and an unwillingness to report negative body image (Helgeson, 2009). Additionally, different cultural contexts require more research into understanding the impact of social media

on body image. It is important to understand that while most studies on body image and social media have been conducted in Western countries (Fitzsimmons-Craft and Bardone-Cone, 2012), it may be inaccurate to generalize them to the global context. With the aims of this study, replications could seek to better understand how different cultural backgrounds experience body image via social media using the Transactional model as a rough guide. What could be of benefit to the model is recognizing what predisposing characteristics, mediating processes, and social media uses are at play for these ethnically diverse populations. Additionally, as the range of ages for people using social networking sites is broader than ever (Sensis, 2018), it may be worth accommodating for differences in psychological processing and behaviours before applying this model to those not in the typical adolescent or young adult age bracket.

As of the writing of this thesis, Instagram has trialed removing like counts on pictures in seven countries (Instagram, 2019). This is in the hopes of getting users to focus on the photos they upload, rather than how many likes they can get (Fitzgerald, 2019). Instagram stated that they realize the pressure users can feel to only upload photos that will gather likes (or other forms of validation) from their followers. Another change Instagram has recently announced is censoring posts that promote diet rhetoric, weight loss products, and cosmetic procedures to users under the age of 18 (Rosenbloom, 2019). This is a step in the right direction in managing the risk of appearance pressure on Instagram and will hopefully prompt more discussions for proposals to regulate the content on Instagram.

4.7 Conclusion

This study supports the idea that the more time individuals use Instagram the more likely they will experience weight dissatisfaction. By using Perloff's Transactional model (2014), this

study was able to better conceptualise the processes at play in the development of negative body image amongst users of Instagram. Specifically, how appearance-related internalization, while working in conjunction with appearance pressure from the media and peers, can strongly predict body dissatisfaction. This study also questions whether some individuals are protected against internalizing the appearance pressures they see, and whether this protection could be a result of the content they engage with or their type of engagement. Regardless, this should be investigated in follow up studies. This study also discovered that more time spent on Instagram was associated with higher perceived appearance pressure from the media and peers. Therefore, users feel more pressured to meet appearance expectations when using Instagram, and this pressure can ultimately lead to body dissatisfaction if a user begins to internalize these ideals into their worldview. Ultimately, the current study helps raise awareness of the public health implications of using Instagram, specifically the need to understand how appearance-related internalization and appearance pressures are related to Instagram use, and how these processes can put users at greater risk of developing body dissatisfaction.

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Appendix A Recruitment Flyer

SOCIAL MEDIA AND BODY IMAGE

HREC
APPROVED

•
2019

Are you a user of Instagram and fluent in English? If so, please consider taking the following survey!

This project aims to further the understanding of social media use and body image issues.

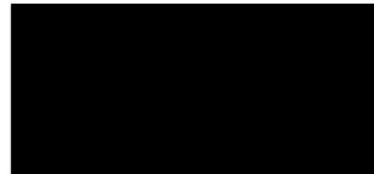
This project is available on the Research Participation System. **Course credit will be awarded on completion of the survey for all Psychology 1A and 1B students.**

The survey will take approximately 20 minutes.

To undertake the survey, copy the link into your browser or scan the QR code:



Contact Info



Appendix B

Ethics Approval



School of Psychology
University of Adelaide
North Terrace, Adelaide SA 5005
Ph. 61 8 8313 5693
Fax 61 8 8313 3770

School of Psychology: Human Research Ethics Subcommittee
Approval Sheet

Dear Dan

The members of the subcommittee have considered your application:

Code Number:

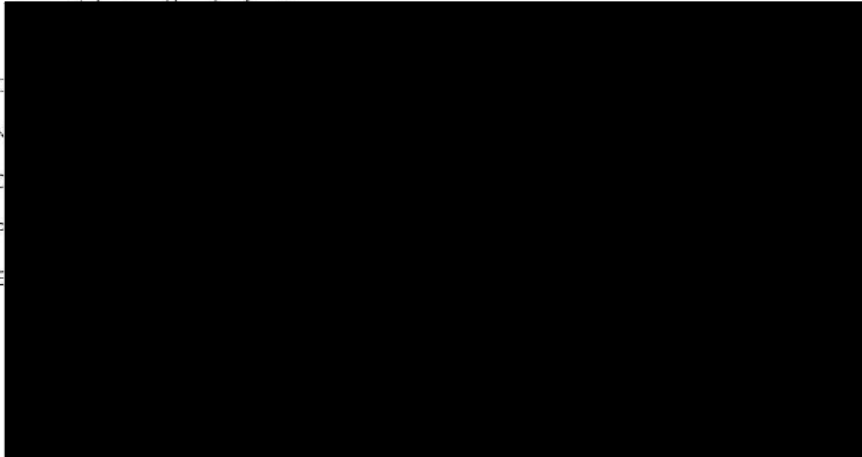
Title:

A CORRELATIONAL STUDY OF
PROBLEMATIC PHOTO-BASED SOCIAL
MEDIA USE AND BODY IMAGE

With [Student name, if applicable] ATHLET DECUDET

I am writing to confirm that approval has been granted for this project to proceed.
Approval is granted to 12 months from the date specified below.

Yours sincerely,



Appendix C

Participant Information Sheet

PROJECT TITLE: Instagram Use and Body Image: The roles of Appearance-Related Internalization, Appearance Pressure in relation to body dissatisfaction in Instagram users.

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: [REDACTED]

PRINCIPAL INVESTIGATOR: Dr Daniel King

STUDENT RESEARCHER: Ashlee Beecroft

STUDENT'S DEGREE: Bachelor of Psychological Science (Hons)

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?

This project aims to further the understanding of the impact of social media. Specifically, how Instagram use can affect body image.

Who is undertaking the project?

This project is being conducted by Daniel King and Ashlee Beecroft. This research will form the basis for the degree of Bachelor of Psychological Science (Hons) at the University of Adelaide under the supervision of Daniel King.

Why am I being invited to participate?

You are being invited as you fit the description of the sample we are looking for. Participants will be aged 18-25 and frequent users of a photo-based social media platform.

What am I being invited to do?

You are being invited to take part in an online survey (approx. 20 minutes) which will form the basis for data collection regarding this project. This survey will be asking questions related to social media usage, social pressures, body image, narcissism, and a standard measure of psychological health.

How much time will my involvement in the project take?

Involvement in this project will take no more than 30 minutes.

Are there any risks associated with participating in this project?

There are no risks associated with this project. However, discomfort may occur with having to fill out the survey or feeling slightly uncomfortable with the nature of the questionnaires.

What are the potential benefits of the research project?

The benefits of this project are furthering the understanding of social media and the risks that could result from increased use. Any possible risks that are found in this project could be mediated by proposed prevention or intervention techniques which could be made available for public awareness.

Can I withdraw from the project?

Participation in this project is completely voluntary. If you agree to participate, you can withdraw from the study at any time before submission of the survey with no repercussions.

What will happen to my information?

All participant information will remain strictly anonymous with no chance of linking responses with you as an individual. Storage of information will be kept on the student researcher's password

protected computer. If this project goes to publication, information will still remain entirely anonymous. Your information will only be used as described in this participant information sheet and it will only be disclosed according to the consent provided, except as required by law.

Who do I contact if I have questions about the project?

If you have any questions during participation of this project, please do not hesitate to contact

What if I have a complaint or any concerns?

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number _____) This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). If you have questions or problems associated with the practical aspects of your participation in the project or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. If you wish to speak with an independent person regarding concerns or a complaint, the University’s policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee’s Secretariat on:

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

If I want to participate, what do I do?

To participate, please see the following link to the survey:

<https://www.surveymonkey.com/r/uofainsta>

If you are a Psychology 1A or 1B student, the survey will be available on the Research Participation System.

Yours sincerely,

Daniel King and Ashlee Beecroft

Appendix D

Survey

Instagram use and body image

Welcome!

My name is Ashlee Beecroft and I am an undergraduate of The University of Adelaide undertaking the Honours degree of Psychological Science.

I am working on a project investigating Instagram usage and its impact on body image. I'll be looking at personality and social pressure variables as well.

I am asking you to participate in my project by completing a series of questionnaires which will take approximately 20-30 minutes. You must be aged 18-25 to partake. This survey is voluntary and you can withdraw at any time.

All answers will be kept strictly anonymous. If your responses are included in the write up of the project, they will be kept entirely confidential.

This project has no anticipated risks, but if this survey raises issues of concern to you personally, please contact The University of Adelaide's Counselling Service at +61 8 8313 5663 or counsellingcentre@adelaide.edu.au.

If you have any questions, please contact me at a1668381@student.adelaide.edu.au or my supervisor, Daniel King, at Daniel.king@adelaide.edu.au.

This study has been approved by the HREC subcommittee at the University of Adelaide (Code: 19/43). If you wish to speak with an independent person regarding concerns/complaints, the University's policy on research, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on (+61) 8 8313 6028 or hrec@adelaide.edu.au. Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

If you choose 'yes' down below, that will be understood as your informed consent and declaration that you are 18 years or older.

* 1. Do you consent to the terms of this survey?

Yes

No

Demographics

* 2. What is your gender?

- Male
- Female
- Other

* 3. What is your age?

* 4. What is the highest level of education you have completed?

- Less than high school degree
- High school degree or equivalent
- Some university but no degree
- TAFE
- Bachelor's degree
- Master's degree
- Doctorate degree

* 5. What is your ethnicity?

- Australian
- Indigenous Australian
- New Zealander
- European
- Asian
- Other

* 6. What is your marital status?

- Single, never married
- Married or partnership
- Widowed
- Divorced
- Separated

* 7. What is your current employment status?

- Employed full time
- Employed part time
- Unemployed (currently looking for work)
- Unemployed (currently not looking for work)
- Self-employed
- Student
- Retired
- Unable to work

Societal Pressure

* 10. Please choose which response best reflects your agreement with the statement.

	Definitely agree	Mostly agree	Neither agree nor disagree	Mostly disagree	Definitely disagree
It is important for me to look athletic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about looking muscular.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want my body to look very thin.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want my body to look like it has little fat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about looking thin.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I spend a lot of time doing things to look more athletic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about looking athletic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want my body to look very lean.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think a lot about having very little body fat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I spend a lot of time doing things to look more muscular.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 11. I feel pressure from my **PEERS** to...

	Definitely agree	Mostly agree	Neither agree nor disagree	Mostly disagree	Definitely disagree
make myself thinner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
improve my appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
look in better shape	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
decrease my level of body fat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 12. I feel pressure from the **MEDIA** to...

	Definitely agree	Mostly agree	Neither agree nor disagree	Mostly disagree	Definitely disagree
look in better shape	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
look thinner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
improve my appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
decrease my level of body fat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Body Image

* 13. Choose the answer that best reflects the following questions.

	Almost always	Often	Sometimes	Rarely	Never
Have you had a strong desire to have a totally flat stomach?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has thinking about body shape or weight made it very difficult to concentrate on things you are interested in?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had a strong fear that you might gain weight?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt fat?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had a strong desire to lose weight?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your weight influence how you judge yourself as a person?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your body shape influence how you judge yourself as a person?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel upset you when you weigh yourself?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had a strong dissatisfaction with your weight?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had a strong dissatisfaction with your body shape?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt uncomfortable seeing your body?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt uncomfortable when others can see your body shape/figure?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Personality

Which statement best describes you?

Please choose from either the LEFT or RIGHT statement

* 14. .

- I know that I am good because everybody keeps telling me so When people compliment me I sometimes get embarrassed

* 15. .

- I like to be the center of attention I prefer to blend in with the crowd

* 16. .

- I think I am a special person I am no better or nor worse than most people

* 17. .

- I like having authority over people I don't mind following orders

* 18. .

- I find it easy to manipulate people I don't like it when I find myself manipulating people

* 19. .

I insist upon getting the respect that is due me

I usually get the respect that I deserve

* 20. .

I am apt to show off if I get the chance

I try not to be a show off

* 21. .

I always know what I am doing

Sometimes I am not sure of what I am doing

* 22. .

Everybody likes to hear my stories

Sometimes I tell good stories

* 23. .

I expect a great deal from other people

I like to do things for other people

* 24. .

I really like to be the center of attention

It makes me uncomfortable to be the center of attention

Instagram usage

* 32. During the past year have you..

	Often	Sometimes	Never
regularly found that you can't think of anything else but the moment that you will be able to use Instagram again?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
regularly felt dissatisfied because you wanted to spend more time on Instagram?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
often felt bad when you could not use Instagram?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tried to spend less time on Instagram, but failed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
regularly neglected other activities (e.g. hobbies, sport) because you wanted to use Instagram?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
regularly had arguments with others because of your Instagram use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
regularly lied to your parents or friends about the amount of time you spend on Instagram?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
often used Instagram to escape from negative feelings?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
had serious conflict with your family/friends/partner because of your Instagram use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Time spent on Instagram

Please fill out the boxes below. One or both boxes can be filled.

* 30. How much time do you usually spend on Instagram in a typical day?

Hours

Minutes

* 31. How often have you used Instagram in the last 3 months?

- Daily
- A few times per week
- Once a week
- A few times per month
- Once a month or less often

General Mental Health

* 33. For all questions, please select the appropriate response.

in the last 4 weeks, about how often did you....

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
...feel tired out for no good reason?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel nervous?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel so nervous that nothing could calm you down?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel hopeless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel restless or fidgety?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel so restless you could not sit still?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel depressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel that everything was an effort?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel so sad that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...feel worthless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OPTIONAL questions

These questions are entirely optional. You do not need to answer them.

34. How does Instagram make you feel about your body?

35. Do you feel pressured by Instagram to maintain a 'socially acceptable' body?

36. If you couldn't use Instagram, would it affect how you perceive your body?

37. Do you have any other comments you would like to add?