

# **Filtering our selves: Associations between early adolescent self-perceptions and Instagram activity**

**by**

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## Ethics Statement



The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

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## **Abstract**

The purpose of this study was to examine relationships among early adolescents' self-perceptions, Instagram use (viewing photographs, posting photographs, and importance of getting "likes"), and self-reported impacts of Instagram use on feelings about physical appearance and peer relationships. Harter's (2012) Self Perception Profile for Adolescents and The Instagram Questionnaire (developed for the present study) were administered to 104 (male = 51; female = 53) grade eight students. Eighty four percent of participants had an Instagram account, and the majority reported viewing Instagram more than once daily. There were no gender differences in Instagram use. Boys reported more positive self-perceptions than girls in the social, athletic, appearance, and general self-worth domains. Girls reported Instagram use having a greater negative impact on their feelings about their appearance than did boys. Correlations revealed those who viewed Instagram more frequently were more likely to have negative self-perceptions about their behavioural and academic competence. Boys and girls who were more concerned with getting "likes" on their photos had more negative perceptions of their appearance, behaviour, and overall self-worth. Students who reported negative impacts of Instagram use tended to have less favourable self-perceptions, an effect that was more pervasive in girls than boys. Among girls only, frequency of viewing Instagram was associated with greater perceived negative effects of Instagram. Results are discussed in relation to implications for parents, teachers, and counsellors, as well as suggestions for future research.

**Keywords:** early adolescent; self-perception; Instagram

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# Table of Contents

Approval.....	ii
Ethics Statement.....	iii
Abstract.....	iv
Acknowledgements.....	v
Table of Contents.....	vi
List of Tables.....	viii
List of Acronyms.....	ix
<b>Chapter 1. Introduction.....</b>	<b>1</b>
1.1. Early Adolescent Development.....	2
1.1.1. Self-understanding.....	2
1.1.2. Susan Harter’s conceptualization of early adolescent self- understanding.....	4
1.1.3. Structure and development of early adolescent self-perceptions.....	4
1.1.4. Early adolescent self-perceptions: Symbolic interactionism and the looking glass self.....	5
1.1.5. Content of early adolescent self-perceptions: Harter’s domains of self-understanding in early adolescence.....	7
1.1.6. Two domains of particular importance.....	8
1.1.7. Peer context in early adolescence.....	8
1.1.8. Physical appearance in early adolescence.....	9
1.1.9. Differences in self-perceptions between early adolescent boys and girls.....	10
1.2. Social media use in Adolescence.....	12
1.2.1. Instagram.....	13
1.2.2. Social networking sites and the early adolescent experience.....	14
1.2.3. Facebook and the self.....	14
1.2.4. Facebook and peer relationships.....	15
1.2.5. Facebook and physical appearance and body satisfaction.....	16
1.2.6. Social Networking Sites, Feedback, and Self-worth.....	18
1.3. The present study.....	19
<b>Chapter 2. Predicted Associations.....</b>	<b>21</b>
<b>Chapter 3. Methods.....</b>	<b>23</b>
3.1.1. Participants.....	23
3.1.2. Procedure.....	23
3.1.3. Measures.....	24
The Self-Perception Profile for Adolescents (Harter, 2010).....	24
The Instagram Questionnaire.....	24
<b>Chapter 4. Results.....</b>	<b>27</b>
4.1. Analytic Strategy.....	27

4.2. Instagram use .....	27
4.3. Self-perceptions .....	28
4.4. Reported Impacts of Instagram use .....	28
4.5. Relationships among variables: Frequency and nature of use, self- perceptions, and self-reported impacts of Instagram use .....	29
4.5.1. Self-perceptions and Instagram use .....	29
4.5.2. Self-perceptions and reported impacts of Instagram use.....	30
4.5.3. Frequencies of Instagram viewing, posting, and importance of “likes” and the reported impacts of Instagram use .....	32
<b>Chapter 5. Discussion .....</b>	<b>34</b>
5.1. Early adolescent Instagram use .....	34
5.2. Early adolescent self-perceptions .....	34
5.3. Self-reports of impacts of Instagram use.....	36
5.4. Relationships between self-understanding and using Instagram .....	38
5.4.1. Self-perceptions and viewing Instagram .....	38
5.4.2. Self-perceptions and posting photographs on Instagram.....	39
5.4.3. Self-perceptions and the importance of receiving “likes” on Instagram .....	39
5.5. Relationships between self-understanding and reported impacts of Instagram use .....	41
5.6. Implications. ....	44
5.7. Limitations. ....	45
5.8. Future research. ....	46
<b>Chapter 6. Conclusion. ....</b>	<b>47</b>
<b>References .....</b>	<b>48</b>
Appendix A. Informed Consent for Parents or Guardians.....	52
Appendix B. Informed Assent for Participants.....	54
Appendix C. Questionnaire .....	55

## List of Tables

Table 1	Pattern matrix coefficients from the principal component analysis of items 16 to 39. ....	25
Table 2	Means and standard deviations for all variables by gender .....	27
Table 3	Correlations between self-perceptions and Instagram use within full sample .....	30
Table 4	Correlations self-perceptions and the three IGQ subscales. ....	31
Table 5	Correlations between frequency of Instagram use and the three IGQ subscales .....	33



## List of Acronyms

SNS(s) Social Networking Site(s)

IGQ Instagram Questionnaire

# Chapter 1.

## Introduction

Social networking sites (SNSs) have undoubtedly changed the way individuals interact in their daily lives. It is impossible to ignore the countless news stories regarding social media that highlight both the positive and negative impacts of using this powerful medium. As of April 2015, Facebook had 1.44 billion monthly active users, with almost 700 million daily users (Facebook, 2015). In April of 2012, Facebook purchased the mobile photo-sharing application 'Instagram' (Facebook, 2012) and although Instagram remains its own application, with approximately 400 million active users and 75 million daily users (Instagram, 2015), the connection between these two SNSs creates a fluid channel for individuals to share personal photos and information with a large online community.

The relatively new phenomenon of social media use has generated an outpouring of research as questions continue to arise regarding its effects on users. A significant portion of this research has examined the association between social media use and self-understanding, mostly in college-age populations (Wilson, Gosling, & Graham, 2012). Very little research has been conducted with early adolescents, which is surprising given (a) the widespread usage of social media in this age group (Kirschner & Karpinski, 2010), and (b) that this is a period during which identity formation and gaining self-understanding are salient developmental tasks (Erikson, 1956).

As students move from elementary school into the high school environment, the significance of their peers as a source of feedback for identity exploration and development increases (Marcia, 1987). Two domains of self-understanding that have been identified as particularly prominent in early adolescence are physical appearance and peer relationships (Harter, 1999). Given the highly visual and interpersonal features of popular social media outlets (e.g., Facebook, Instagram) it is likely that adolescents,

who already have heightened awareness of their physical and social selves, will be particularly sensitive to these aspects of SNSs. Hence, the use of SNSs may have important implications for teens' self-understanding, particularly in the domains of physical appearance and peer relationships.

The purpose of the current study is to examine young adolescents' perceptions of themselves and how these perceptions are associated with their Instagram use. Specifically, this study examines how early adolescent's perceptions within nine domains of self-understanding, including physical appearance and peer relationships, are related to their frequency of Instagram use, the importance they place on positive feedback from peers on their Instagram posts, and perceived effects of using Instagram on their self-perceptions concerning peer relationships and physical appearance.

In the following review I discuss key points from pertinent developmental literature as well as the extant literature on SNSs to suggest potential links among early adolescent self-understanding and various facets of Instagram use. To date, there is no clinical literature on this topic. Given the widespread usage of Instagram among youth, it is hoped that the findings of this study might provide some guidance to counsellors, teachers, and clinicians working with teens who struggle with concerns about their physical appearance and social self-perceptions.

## **1.1. Early Adolescent Development**

### **1.1.1. Self-understanding**

Adolescence is a time of great developmental change as individuals are faced with a host of physical, social, and emotional transformations. Erik Erikson (1988) describes adolescence as a time during which individuals must solidify aspects of their identity in order to continue on their developmental trajectories. Indeed, the structuring of one's sense of self has been presented as the most important developmental task of adolescence. This developmental task coincides with a grand shift in social landscape, when individuals move from elementary school to high school. High school serves as an

environment conducive to intense self-reflection, and peer groups become increasingly important for identity exploration (Marcia, 1987).

Several theories serve as foundations for conceptualizing early adolescent development. Erik Erikson's (1956) theory of psychosocial development describes a lifespan model that is comprised of eight stages. Each stage involves a psychological 'crisis' that must be negotiated before successfully transitioning into the next stage. The task to be considered in adolescence is essentially the transition from childhood to adulthood. Erikson posited that adolescents must try to develop an integrated sense of self by exploring various facets of their identity. These domains include occupational identity, romantic and sexual identity, as well as political and religious worldviews. In addition to discovering ones' role in society, Erikson also noted the physical changes accompanying adolescence and the likelihood of feeling discomfort with these changes.

Expanding on Erikson's theory, James Marcia (1987) moved away from developmental sequences to a categorical approach in order to capture individual differences in adolescent identity development. That is, Marcia used a framework that highlights the degrees to which individuals have explored and committed to various domains within their identity. The domains as outlined by Marcia are similar to those discussed by Erikson and include vocational choice, political ideology, sexual orientation, and religious beliefs. Identity formation in Marcia's theory incorporates a sense of agency by necessitating exploration of, and commitment to, various roles, values, and beliefs. Marcia's four identity statuses are identity diffusion, identity foreclosure, identity moratorium, and identity achievement. Each status represents an individual's level of consideration of the various domains as well as the level of commitment to one of many alternatives. Marcia noted that individuals can shift to different statuses as they continue to explore facets of their identities.

Both Erikson's (1956) and Marcia's (1987) approaches acknowledge various domains of importance within adolescent identity development. There are undoubtedly certain aspects of the self that become more salient at this stage of life and require specific attention and consideration. However, these theories eschew some of the complexities of adolescent development by neglecting the impacts of the many social relationships

experienced by adolescents. In contrast, Susan Harter (1999) considers social experiences as a foundation for the diverse trajectories of adolescent self-understanding.

### **1.1.2. Susan Harter's conceptualization of early adolescent self-understanding**

Susan Harter's (1999) conceptualization of the structure, evaluation, and content of early adolescent self-understanding guides the present investigation of the links between self-perceptions and Instagram use. Harter's approach to self-understanding in early adolescence emphasizes the centrality of social experience and the state of flux of self-understanding at this developmental period. Harter divides adolescence into three sub-stages with each sub-stage having its own normative representations of the self. Of particular relevance for the present study is the sub-stage of early adolescence (ages 11-13) when the structure, the appraisal, and the salient content of self-perceptions are highly influenced by one's social context.

### **1.1.3. Structure and development of early adolescent self-perceptions**

Harter (2012) describes early adolescent self-understanding as a collection of perceptions about the way one is in the world. These perceptions evolve with regards to both structure and salient content, and are a product of both cognitive development and the social environment. Harter suggests that entering the high school context creates a shift in social landscape that promotes increased social comparison and intense self-reflection; as a result, early adolescents' exhibit uncertainty in their self-understanding. This shift in social landscape occurs simultaneously with cognitive changes. In contrast to the concrete thinking of younger children, early adolescents are able to engage in abstract thought and consequently their self-perceptions are typically abstract in nature. Abstract reasoning is reflected in the ability of young adolescents to form overarching descriptions of their traits. For example, early adolescents might conceptualize themselves as "nice" by linking together traits such as giving, thoughtful, and friendly. Therefore one's overall understanding of being nice is a combination of several self-perceptions. This ability allows for early adolescents to create a more refined understanding of their selves. Moreover, in adolescence, the self becomes more

differentiated. For example, youth can compartmentalize themselves into self as a student, self as a friend, and self as an athlete; differentiation that reflects the varying social contexts they face.

This higher-order thinking, however, is not always reflected in the ways in which early adolescents integrate the different domains of self-understanding. That is, Harter (2012) speaks of the potential incongruence between the young adolescents' self-appraisals in one domain versus another. As noted above, in adolescence one can consider oneself as student, friend, and athlete, and as a result one can also see oneself as an intelligent student but a poor athlete.

The structure of early adolescent self-understanding is thus highly differentiated as a product of different social settings. Harter (1999) notes although this is indicative of cognitive development, some cognitive processes remain less developed, which precludes the ability to form a coherent unified understanding of the self. Early adolescents do not have the cognitive skills to determine which of their self-perceptions are accurate and which are not, which causes uncertainty to arise. Harter highlights that this uncertainty in self-understanding creates room for distortion of self-perceptions and increased sensitivity to the impacts of social comparison, an important concern when considering social media use.

#### **1.1.4. Early adolescent self-perceptions: Symbolic interactionism and the looking glass self**

Symbolic interactionism centers human development within a social context wherein experiences with others help shape the way we are in the world. An example of early symbolic interaction theory is Cooley's (1902) notion of the *looking-glass-self*. The *looking-glass-self* captures the idea that individuals' self-perceptions are highly influenced by their interpretations of how *others*' see them. That is, significant people in different social roles (peers, family, teachers) act as social mirrors and play a meaningful role in the development of ones' own self-perceptions and evaluations. Over time the imagined ideas of how others view us, through a process of internalization, become part of the way we see or understand our selves.

George Mead (1925) extended on Cooley's concept of the *looking-glass-self* by introducing the notion of amalgamated and averaged perceived views of the self. That is, while Cooley (1902) focused on unique perceptions derived from interactions with significant others, Mead believed individuals create a 'generalized other'-- that is, an averaged perception of how others' view them. Finally, James Baldwin (1897) highlighted how the significance of various social influences changes with development. For example, in early childhood one's most important interactions are with family and caregivers, while in adolescence interactions with peers significantly contribute to the way individuals see themselves.

Extending the symbolic interactionist tradition, Harter (1999) has focused on one's interpretations of the opinions of significant others, how they change with development, and how they are incorporated into self-understanding. In her view, the level of impact of feedback from others on ones' self-perceptions is dependent on the significance of the relationship one has with that other. That is, feedback from someone important in one's life will have implications for one's self-perceptions whereas feedback from someone who is not important will not be internalized as readily. Like Baldwin (1897), Harter notes that in adolescence, as individuals become more autonomous from their parents, perceived appraisals from peers become increasingly significant. Furthermore, according to Harter (2012) feedback regarding different domains of functioning contributes to varying levels of perceived competency across aspects of the self. For example, one can feel very competent in athletics because they receive compliments from their coaches, but may simultaneously feel poorly about themselves in academics if they do not receive similar accolades from teachers.

In summary, Harter (2012) posits that in early adolescence self-understanding is (a) structured in various domains; (b) importantly influenced by interpretation of feedback from peers; and (c) can vary in valence (positive or negative) across domains. Given that young teens have endless opportunities to provide feedback to one another via social media, we might wonder how social media use relates to their self-understanding.

### **1.1.5. Content of early adolescent self-perceptions: Harter's domains of self-understanding in early adolescence**

Harter (2012) outlines nine domains of self-understanding that she believes are most relevant to early adolescent experience. These include scholastic ability, athletic ability, social competence, ability to form and maintain close friendships, romantic appeal, job competence, behavioural conduct, physical appearance, and overall self-worth.

Scholastic ability represents ones' understanding of their academic competence as it relates to the school environment. Athletic ability is considered to be the degree to which individuals possess physical prowess and the capability to succeed in sports. Social competence, as defined by Harter (2012), refers to abilities and dispositions that contribute to competency and acceptance within the peer context. Knowledge about what it takes to make friends, qualities of popular individuals, and peer acceptance are some of the areas that are included within this domain. Social competence is differentiated from the ability to form and maintain intimate relationships, which is considered an entirely separate domain in Harter's conceptualization. Ones' ability to form and maintain intimate friendships refers to more meaningful interactions with friends like sharing personal and private information. Romantic appeal emerges as a salient domain beginning in early adolescence (Harter, 2012). Individuals reflect on their perceived likeability and their potential for being fun and attractive to a prospective partner. Job competency is another domain that is usually first considered in early adolescence. This domain refers to ones' perceived ability to have the skill set for working along with the ability to hold part-time employment. The behavioural conduct domain taps whether individuals' are proud of their actions and have a sense of right and wrong. Because teens are increasingly faced with opportunities to make decisions and get into trouble, it is important to explore how they see themselves in terms of behavioural compliance in different settings. Physical appearance is one of the most salient domains in early adolescence. This domain includes ones' perceptions of their body, face, hair, and overall attractiveness. Finally, Harter identifies the domain of self-worth. Unlike other theories of adolescent identity (e.g. Coopersmith, 1967), Harter asserts that self-worth is not simply an amalgamation of perceived competencies in the other domains nor does it necessarily relate to these domains. Instead, self-worth represents early adolescents' understanding of themselves as a whole and measures the degree to which one likes the way they are. Instead of being



domain-specific, Harter's conceptualization of self-worth is a more general overview of ones' life satisfaction.

### **1.1.6. Two domains of particular importance**

Two domains of particular importance that arise during early adolescence are peer relationships and physical appearance (Harter, 2012). A host of research studies (e.g. Newcomb, Bukowski, & Pattee, 1993; Smolak, 2004) highlight the salience of these domains as well as the volatility with which early adolescents evaluate themselves in these domains. Not only are they two of the most salient domains in early adolescence (Harter, 2012), but given the social and visual nature of SNS's, they are also the domains that would appear to be most likely related to Instagram use. After a brief review of key points concerning the salience of the peer context and physical appearance in early adolescence, I will review studies in which SNS use has been examined in relation to self-perceptions of social competence and physical appearance and discuss what still remains uncertain.

### **1.1.7. Peer context in early adolescence**

In early adolescence the peer context becomes increasingly important. Individuals seek autonomy from their parents, and their friends and peers serve as an important environment for socialization and identity exploration (Marcia, 1987; Waldrip & Malcolm, 2008). Peer relationships provide an arena for learning important life skills such as establishing intimate friendships and adjusting to various facets of the high school environment (Harter, 1999).

Researchers have considered the importance of peer relationships in early adolescence and its relationship to variables such as overall wellbeing (Crockett, Losoff, & Petersen, 1984), scholastic achievement (Kingery, Erdley, & Marshall, 2011) and high-risk behaviours (Logan, Crosby, & Hamburger, 2011). Crockett, Losoff, and Petersen (1984) found that by grade eight, adolescents revealed an increase in personal disclosure to friends and an increase in perceived feelings of being understood by friends. According to Crockett, Losoff, and Petersen, early adolescence (grade eight) marks a significant shift

towards the importance of intimate friendships as well as cliques in the social environment. Notable is the finding that high quality reciprocal friendships are an important factor in early adolescent wellbeing (Crockett, Losoff, & Petersen, 1984).

Harter (1999) points to an interesting nuance within the peer context of early adolescence by delineating between private and public sources of peer support. She has consistently found that public offers of support (e.g. by classmates, or colleagues) are more predictive of self-worth than support from friends. She argues that support within a public arena like school or work is representative of the objective 'generalized other' and therefore more readily contribute to ones' sense of self-worth. This does not contradict the importance of support from close friends but highlights an important distinction between the types of peer support and how they relate to ones' perceived self-worth. Particularly relevant for the present study are peer relationships within the public domains of social media. Social networking sites like Instagram add another layer of relationship complexity to the peer environment by bringing ones' social network online; therefore it is important to query how the adolescent social experience is related to social media use.

### **1.1.8. Physical appearance in early adolescence**

Along with peer acceptance, physical appearance is a central concern in early adolescence (Harter, 2010). Speaking about her own research, Harter (2010) states "we have yet to find a group for whom physical appearance is *not* the best predictor of one's overall sense of worth as a person" (p. 159). Studies on early adolescents reveal that self-perceptions of appearance are related to self-esteem (Harter, 2000), wellbeing and mental health (Polce-Lynch, Myers, Kilmartin, Forssmann-Falck, & Kliewer, 1998), and peer acceptance (Harter, 2006).

An increasing amount of research addresses the relationships between self-perceived physical appearance and media consumption such as Internet use, watching television, and playing video games. For example, Eyal and Te'eni-Harari (2013) found that among seventh and eighth grade students, greater exposure to media, such as ones' favourite television character, was associated with more negative self-perceptions of physical appearance and that this association was particularly strong for girls in grade 8.

The authors suggest that characters portrayed in visual media are a source for social comparison and, given the presentation of ‘ideal’ female bodies in media, this results in viewers reflecting negatively on their own bodies. Not unlike peers, television characters in popular shows serve as socialization agents, and individuals with whom one can compare their own physical attractiveness. This is but one study demonstrating the link between exposure to visual images of others and feelings about ones’ body and physical appearance that raises potential concerns about Instagram use. As noted, Instagram is a highly visual medium and those who use similar social media sites tend to post only “flattering” pictures (Delise, 2012; Gonzales & Hancock, 2011). Young adolescents users of Instagram are thus repeatedly exposed to images that, given their propensity for social comparison, have a high likelihood of encouraging negative self-appraisal in the appearance domain.

Harter’s model of self-understanding in early adolescence provides a useful foundation for the present study. Building on her work on the social construction of self-understanding in early adolescence, I argue that social media, and Instagram in particular, provides a new social context in which to consider self-understanding. Taken together, the salience of peer acceptance and physical appearance in early adolescence and the highly social and visual nature of Instagram, suggests that Instagram use by young adolescents may have important implications for their self-understanding.

### **1.1.9. Differences in self-perceptions between early adolescent boys and girls**

While peer relationships and physical appearance are central concerns for both boys and girls in early adolescence, research has consistently revealed systematic differences in the ways boys and girls rate their competency across these domains. For example, in a sample of 1099 participants, from middle to upper class Colorado, Harter (2012) found that girls consistently rated their athletic ability, physical appearance, and global self-worth lower than boys. Alternatively, boys rated their competence in making and maintaining close friendships lower than girls. The aforementioned differences in self-perceptions between boys and girls are in line with socially constructed ‘gender norms’. That is females are understood as more caring and relationship-oriented while males are

focused on athletics and physical ability. These differences reflect a larger social issue of gender stereotypes that undoubtedly plays out in social media as well.

In an exploratory study of gendered characteristics of online profiles, Delise (2012) examined what aspects of identity, including examples of traditional feminine or masculine roles, were included in Facebook profiles versus in a face-to-face meeting and found that both male and female Facebook users were more forthcoming with pieces of their identity (e.g. religious affiliations) online than they were in person. Females stated concern for the presence of unflattering or 'ugly' pictures on their profiles far more readily than males, demonstrating how the social importance of physical attractiveness for women translates online. Delise also found that females checked their Facebook profiles more regularly than males and suggested this may be a nod to the socially constructed norms of females needing more social connection than males. During the in-person interview, Delise noted a lack of congruence between portrayals of physical appearance online and in person. Interestingly, both male and female participants appeared more physically attractive in their Facebook profiles than in real life suggesting that self-presentation of appearance was important to males in addition to females.

Looking further, it can be argued that females are subjected to much greater scrutiny regarding their appearance than males are, particularly in the media. A study conducted by Jones, Vigfusdottir, and Lee (2004) examined the relationship between engaging with 'appearance culture' (appearance-based magazine exposure, peer conversations about appearance, and criticism from peers about ones' appearance) and adolescent boys and girl's reports of body dissatisfaction. Their findings revealed that consumption of appearance-based magazines was related to lower ratings of body satisfaction only in girls, and, that this relationship was mediated by endorsing the internalization of appearance ideals from visual media. Further, reading appearance-based magazines was positively related to peer conversations about physical appearance suggesting that females who are reading these magazines are also engaging with other aspects of 'appearance culture' within their friend groups. Interestingly, the authors point out that there are limited magazines targeted at adolescent males suggesting that females are exposed to socially constructed appearance ideals much more broadly and at a much younger age than are males.

Studies like Delise's (2012) indicate that social media is not necessarily an equal playing field for males and females. The social construction of identity both in real life and online contexts is influenced by societal values and expectations that differ for males and females. Hence, differences observed between males' and females' self-perceptions are more properly thought of as gender differences rather than sex differences. Indeed, as noted, there are particular gendered themes that emerge within different domains of self-understanding. While the domains of self-understanding remain the same for boys and girls in early adolescence, they undoubtedly see themselves differently within these domains (Harter, 2012).

## **1.2. Social media use in Adolescence**

In the past, identity exploration took place through mediums such as sports, theatre, and religion (Marcia, 1987) but now, teenagers have additional outlets through which to explore their identities: Facebook, YouTube, Instagram, Twitter, Vine, Pinterest, Tumblr are only some of the popular social media outlets that allow users to share photographs, videos, and thoughts. By updating and changing their social networking sites, individuals engage in virtual identity exploration.

Past literature has explored relationships between the use of SNSs and a host of variables related to personal wellbeing. Specifically, research on the SNS Facebook has included examination of a range of correlates such as jealousy (Muise, Christofides, & Desmarais, 2009), self-esteem (Steinfeld, Ellison, & Lampe, 2009), narcissism (Mehdizadeh, 2010), peer acceptance (Bonetti, Campbell, & Gilmore, 2010) and overall feelings of wellbeing (Valkenburg, Peter, & Schouten, 2006). Particularly relevant to the present study is research examining links between SNS use and variables related to peer relationships such as group belongingness and social competence (Bonetti, Campbell, & Gilmore, 2010) as well as variables related to appearance such as body image satisfaction (Rutledge, Gillmor & Gillen, 2013). It is not surprising that the primary populations sampled in these studies are young adult users (Brown & Bobkowski, 2011) as they are not only heavy users of Facebook but, as college students, are also a relatively easy population for researchers to access.

A search of the literature on Facebook reveals inconsistencies in findings regarding the relationship between frequency of Facebook use and self-perceptions. Further, the very limited research on the SNS Instagram leaves a gap in literature regarding its impact on young users. With its focus primarily on photographs, it is impossible to ignore how the SNS Instagram may be related to the ways in which users see and understand themselves and their peers.

### **1.2.1. Instagram**

As of September 2015, the SNS Instagram has 400 million users worldwide with an average of approximately 55 million photographs shared daily (Instagram, 2015). The Instagram application was launched in 2011 in hopes of creating a SNS that would allow users to post photographs immediately to a public or private social network. This application is described as “a fun and quirky way to share your life with friends through a series of pictures”. Users are encouraged to “snap a photo with [their] mobile phone, then choose a filter to transform the image into a memory to keep around forever” while letting users “experience moments in (their) friends’ lives through pictures as they happen” (Instagram, 2015).

Along with a constant feed of insight into other’s lives, Instagram allows followers to instantly appraise other peoples’ photographs. The viewer does this by clicking “like” in response to others’ photographs and in doing so, provides evaluative feedback to the person who posted the photograph. In addition users can comment on the photographs they view and post their own in return. In short, Instagram is a SNS that provides teens with direct evaluative feedback from peers as well as provides a platform that pulls for social comparison. What does Instagram use mean for the adolescent who gets no “likes”; or, the adolescent who, on the basis of others’ photographs, perceives them to be more attractive and popular than themselves? The present study seeks to address the relationship between adolescent’s self-understanding, and their feelings about their own and their peer’s activity on the mobile photo-sharing app Instagram.

### **1.2.2. Social networking sites and the early adolescent experience**

As individuals transition into the high school setting, the peer context becomes an increasingly influential environment for personal exploration. As already noted, use of a SNS like Instagram can serve as a magnifying glass that highlights the physical appearance and social lives of users through photographs. Further, because of SNSs like Instagram, an adolescent's social experience continues to be active even when they are completely alone. That is, with the pervasiveness of online social networking, the peer audience is no longer only at school; it is in the palm of teen's hands. Not only do Instagram users have constant access to others' photographs, but users can also post their own photographs and wait for feedback from their peers. Given the limited amount of research on Instagram, in the following paragraphs I discuss research on Facebook and other SNSs that share features with Instagram, to highlight the ways that adolescents engage with social media.

Facebook is the most popular SNS in the world based on the amount of active users (Facebook, 2015). Since its creation, an outpouring of research has sought to explore different variables related to Facebook use (Wilson, Gosling, & Graham, 2012). The following studies, primarily reviewing Facebook, shed light on some of the potential relationships between SNS use and variables related to perceived physical appearance and peer relationships.

### **1.2.3. Facebook and the self**

In an exploratory study, Thompson and Loughheed (2012) surveyed college students for their reported frequency of Facebook use and thoughts about Facebook. They found no significant differences between males and females in *overall* Internet and SNS use with approximately eighty percent of participants agreeing that they used Facebook for an average of two hours every day. When examined further, results indicated that females reported more time viewing profiles of others. Females were more likely than males to report that Facebook caused them stress and were more likely to agree that posted photos caused them to have a negative sense of their own body image. Further, this study explored the links between Facebook use and anxiety and feeling out of control and found that females were more likely than males to report these feelings as

well. Interestingly, approximately 1 in 10 females said that Facebook helped them feel closer to friends that they cannot see everyday, which speaks to a potential positive impact of Facebook on peer relationships. Overall this study provides preliminary evidence that while male and female college students have a similar frequency of Internet and SNS use, social media use is associated with greater distress and negative impacts on wellbeing among females than males.

#### **1.2.4. Facebook and peer relationships**

Not only is Facebook use associated with self-perceptions; it also is associated with the ways users see others. There is an important distinction between using SNSs for communication purposes versus viewing photographs. For example, a study by Antheunis, Schouten, and Kraemer (2014) revealed that early adolescent users of the SNS Hyves in the Netherlands (which is widely considered similar to Facebook) used the communicative attributes of this SNS (e.g. private messaging, posting messages) and reported a positive correlation between SNS use and ratings of online friendship quality. Although this is an encouraging component of SNS use, the authors did not address the relationships between ratings of peers relationships and viewing photographs of peers online. This is particularly important as Instagram is primarily used for sharing photographs. While the communicative aspects of SNSs may foster friendships by allowing others to keep in touch, viewing photographs creates vulnerability to social comparison.

In a study titled “They are Happier and Having Better Lives than I Am”: The impact of Using Facebook on Perceptions of Others’ Lives”, Chou and Edge (2012) revealed that individuals who use Facebook very frequently interpret other peoples’ social status as better than their own. Chou and Edge discovered that individuals who used Facebook for more hours per week, and thus were subjected to photographs of others for longer periods of time, were more likely to rate other peoples’ lives as better than their own. In addition, results indicated that the more “friends” individuals listed and the more years they had used Facebook, the more likely they were to agree with the statement “life isn’t fair”. This study reveals that even ‘experienced’ Facebook users are vulnerable to developing misconstrued perceptions of others; that viewing images of the social lives of others



creates a potentially false sense of others being happier and better off than oneself. This finding highlights how seeing peers through a social network lens can create a framework from which to compare ones' own social situation as participants made significant inferences based solely on photos leading them to assume that their online friends were consistently happy regardless of their actual circumstance.

The available evidence suggests that SNS use is related to the way individuals understand and feel about themselves and their online friends. Facebook presents significant information about peoples' lives through photographic evidence, which provides visual information for others to compare themselves to in terms of physical appearance and social interactions. Further, Facebook is a daily facet in most college student's lives, which in turn increases their exposure to their friend's reportedly 'happier' and better lives. These findings have implications for the impacts of other SNSs particularly ones that focus solely on photographs, like Instagram.

### **1.2.5. Facebook and physical appearance and body satisfaction**

Not only is Facebook use related to skewed perceptions of others' social lives, but studies have also revealed relationships between Facebook use and users' sense of their physical appearance. Historically most studies have reviewed overall exposure to Facebook and its relationship to negative body image. More recently, researchers have begun to explore specific behaviours on Facebook and how they might mediate these concerns.

Kim and Chock (2015) conducted a study to address the relationship between Facebook use and body image concerns (desire for muscularity in males and thinness in females) among university students. The authors made a distinction between passively viewing a SNS and actively 'social grooming' wherein the latter includes engaging in, commenting and 'liking' photos of particular people in their social network. Results indicated that concerns with ones' appearance were not related to overall Facebook exposure, but to active social grooming (time spent viewing profiles, 'liking' photos, and leaving comments on profiles). Number of reported Facebook friends was also correlated with increased drive for thinness among males and females. Kim and Chock explain that

a significant contributor to drive for thinness was social comparison among Facebook friends. That is, it seems that appearance related social comparisons are taking place within the context of social media use and that both male and female users engage in this behaviour with their own peers as opposed to just with celebrities or models. This study identifies not only the links between social media use and concerns about ones' appearance but also the importance of measuring specific behaviours on SNSs versus just exposure. Further, it reveals that comparisons are easily made about ones' own physical appearance based on the presence of photographs in social media.

In a study of female adolescent students, Meier and Gray (2014) furthered the notion that body dissatisfaction is related to specific behaviours on Facebook. Specifically these researchers looked at features of Facebook related to 'appearance exposure' such as posting photos, or viewing others' photos. The amount of time spent engaging in behaviours related to physical appearance was positively correlated with the thin ideal, self-objectification, drive for thinness, and negatively correlated with weight satisfaction. Given the diverse features of Facebook, this study hones in on the particular importance of photograph-related research and its impacts on adolescent users. Although causality cannot be inferred, it is clear that there is a relationship between body image concerns and photo-related SNS activity.

In line with this, Zywicka and Danowski (2008) found that individuals with low perceived popularity and low self-esteem engaged in behaviours that made their Facebook profiles appear more visually appealing. For example, participants edited their photos and untagged unflattering photos so that they did not show up on their profile for others to see. Although some students did not report negative feelings about their body or appearance from viewing Facebook, it was clear they were very concerned about their own appearance on social media.

The studies reviewed above focus on the correlates of viewing others' photographs on SNSs, but do not directly address the experiences of individuals sharing their own photographs. There is an important distinction within SNS use wherein viewing others' photographs and posting ones own photographs are different experiences. Most studies related to 'posting' on social media are found within the literature on feedback from peers.

The studies reviewed below reveal how posting information, and the resulting feedback from peers relates to specific impacts of SNSs.

### **1.2.6. Social Networking Sites, Feedback, and Self-worth**

Not only do SNSs provide a venue for individuals to share their lives with an online network, they also allow users to appraise others' photos in the form of "likes" and comments. A "like" on a photo is essentially a digital stamp of approval from peers. Users can instantly appraise photos signifying they condone or appreciate what others have shared. Taken together with Harter's (2012) supposition that in early adolescence "heavy dependence on the perceptions of other's opinions sets the stage for volatility in one's assessment of the self" (p. 82) it becomes clear that appraisal via SNSs like Instagram may have significant implications for the ways in which early adolescents perceive and understand themselves. Particularly during early adolescence it is difficult for a teenager to ignore their 'audience' (Harter, 2012).

The importance of peer feedback was addressed by Valkenburg, Peter, and Schouten (2006) who examined a SNS used by approximately 22% of adolescents in Holland. These authors examined self-perceptions related to appearance, close friendships, and romantic appeal in relation to frequency of SNS use, friends generated online, tone of feedback from friends, and overall wellbeing. Results indicated that being a member of this SNS led to more online communication with more individuals and therefore more feedback on profile pages. The increase in social network size led to more feedback that prompted participants to modify their profiles to foster even more positive feedback. That is, individuals changed the appearance of their profiles, perhaps by posting additional photos, in order to garner more attention and praise from others. Sadly, some participants reported receiving predominantly negative feedback that was, in turn, related to lower reported ratings of competency in their social selves. In short, these researchers found that both social self-esteem and physical appearance self-esteem were boosted for adolescents who received positive feedback on their social networking profile page and, unfortunately, that the opposite was also true. Consistent with the views of Harter (2012), the authors of this study argue that adolescents are particularly vulnerable to feedback

from their peers, stating “there is no period in which evaluations regarding the self are as likely to affect self-esteem and well-being as in adolescence” (pp. 585).

### **1.3. The present study.**

A number of themes emerge from the SNS literature, which are important for the current study. First, it appears as though visually appealing and manicured Facebook profiles contribute to unrealistic positive perceptions of others’ social lives and physical appearance. As a result, not only do users spend time grooming their own profiles, but they also engage in social comparison when viewing others’ profiles, often coming to the conclusion that they are not as happy or as attractive as their fellow Facebook users. With extended amounts of time spent viewing others’ photos and social grooming it is no wonder that these studies highlight an increase in stress related to SNS use and dissatisfaction with the self, particularly in females. Along with feeling more negatively about ones’ social competency and physical appearance after engaging with Facebook, it also appears that many users are fixated on receiving positive feedback from their peers. Given that peers are a significant source of feedback in adolescence, individuals will likely be concerned with how their online audience perceives and appraises them.

Gaps in the extant literature help frame the current study. First, there is no research on Instagram that explores the relationships between self-understanding and Instagram behaviour. Second, there is limited research on early adolescents, which is surprising given their developmental context and widespread use of social media. Stated plainly, early adolescents tend to be hyper-aware of their physical appearance and peer relationships and at the same time they are likely engaging with a social media application that puts a microscope on both. Further, the structure of early adolescent self-understanding being uncertain and vulnerable to peer feedback allows for increased susceptibility to social comparison.

The purpose of the present study is to explore the relationships between early adolescents’ self-understanding and Instagram activity with a particular focus on early adolescents’ understanding and perceptions of their physical and social selves and how they may relate to the frequency of Instagram use (both viewing others’ and posting own

photos), the importance of positive feedback on Instagram, as well as the self-reported impacts of Instagram on feelings regarding peer relationships and perceived physical appearance.

## **Chapter 2.**

### **Predicted Associations**

Based on the research outlined above, several associations among the variables of self-perceptions, Instagram use, and self-reported effects of Instagram on ones' feelings about their social and physical selves are predicted.

Based on studies of Facebook by Meier and Gray (2014) and Kim and Chock (2015) revealing that greater Facebook activity was associated with more negative self-perceptions, I expect that frequency of viewing photographs on Instagram will be negatively related to self-perceptions of physical appearance and peer relationships and positively related to self-reported negative impacts of Instagram on early adolescent's feelings about their physical appearance and peer relationships.

Second, given past literature noting the importance of peer feedback in early adolescence (Harter, 2012) coupled with research showing the benefits of positive peer feedback on SNSs (Valkenburg, Peter, & Schouten, 2006) I expect that placing higher importance on receiving "likes" on Instagram will be negatively related to ones' assessment of themselves in the domains of physical appearance, peer relationships, and overall self-worth. That is, the less favourable one's self-perceptions are, the more importance individuals will place on positive feedback in the form of "likes" on their Instagram photographs.

Third, I expect that ratings of competency within the domains of perceived physical appearance and peer relationships will be negatively related to self-reports of negative impacts of Instagram use on these particular domains of self-understanding. Research highlighting the prevalence of social comparison in early adolescence (Eyal & Te'eni-Harari, 2013; Harter 1999) along with the vulnerability of early adolescent self-perceptions (Harter, 1999) leads me to predict that early-adolescent users who feel less favourably about themselves within these domains will thus report greater negative impacts of Instagram use.

Finally, based on findings suggesting that females are particularly vulnerable to appearance culture and the internalization of appearance-based ideals (Jones, Vigfusdottir, and Lee, 2004), I predict that the association between viewing Instagram and negative reports of Instagram use on one's perceptions of their physical appearance will be stronger in female than male users.

While the above predictions are informed by previous studies, there is no research providing adequate foundations from which to predict associations between posting photographs on Instagram and self-perceptions or reported impacts of Instagram. Instead, the resulting associations between these variables will provide new data to guide future research.

## **Chapter 3.**

### **Methods**

#### **3.1.1. Participants**

Participants were 104 (51 male; mean age 13.2 years) students from five Grade 8 Science classes in a mid-sized high school located in an upper middle-class suburban community in the Lower Mainland of British Columbia. The ethnic makeup of the school was approximately 75% Caucasian-Canadian students and 25% ethnic minorities, predominantly international students from China. All participants were proficient in reading and writing English. Parental consent forms were distributed to all students in each of the five classes (n=150). Students were asked to return the forms regardless of their parent's decision to give or withhold consent. As an incentive, the students were told that the class with the most returned consent forms, regardless of granted consent, would be provided a pizza lunch. One hundred and twenty-five consent forms were returned, and 110 parents consented for their child to participate. Four students with consent were unable to participate at the time of data collection. Upon reviewing the completed surveys, two were found to be incomplete and were removed, making the final sample size 104.

#### **3.1.2. Procedure**

Prior to commencing this study, approval was obtained from the Office of Research Ethics at Simon Fraser University, the Director of Instruction for the School District in which the participating school was located, the school principal and the teacher in whose classes data were collected.

On the days of data collection, students were scheduled to write a Science quiz and wooden dividers were set up between them to provide confidentiality and privacy. Prior to taking the quiz, it was explained to them that once they finished their Science quiz they would be completing questionnaires for the research. At this time the response formats in the study survey were explained and demonstrated and students were encouraged to ask any questions they might have about the research.



The Science quiz took approximately twenty minutes to complete. Once students had finished, they raised their hands and their quiz was collected. If they had parental consent for participation in the research, they were then supplied with the study survey. If students did not have an Instagram account, the survey took approximately 10-15 minutes to complete. For those with an Instagram account the survey took approximately 20-30 minutes to complete. Students who did not have parental consent to participate were given a science worksheet to do for the remainder of the class. Completed surveys were collected from the students and their signed assent forms were removed. A code number was written on the assent form and the survey. Assent forms were kept in a separate file folder from the surveys.

### **3.1.3. Measures**

#### ***The Self-Perception Profile for Adolescents (Harter, 2010)***

Participants' self-perceptions were measured with The Self-Perception Profile for Adolescents (Harter, 2010), which provides perceived competence scores in 9 different domains: scholastic competence, social competence, athletic competence, physical appearance, job competence, romantic appeal, behavioural conduct, close friendships, and global self-worth. This questionnaire contains 45 items, with each subscale consisting of 5 items. Internal consistency coefficients (Cronbach's alpha) for the current sample were adequate ranging from .74 to .89 (scholastic competence = .85, social competence = .74, athletic competence = .89, physical appearance = .86, job competence = .75, romantic appeal = .76, behavioural conduct = .82, close friendship = .80, and global self-worth = .79).

#### ***The Instagram Questionnaire***

The Instagram Questionnaire (IGQ) was developed for the present study in order to explore participant's Instagram use and perceived impacts of Instagram (see Appendix A). Items analyzed for this thesis include Questions 6, 7, and 12 that address participants' frequency of viewing others' posts, frequency of posting their own photos on Instagram, and the importance of peer feedback on their posts in the form of "likes", respectively. Items 16 to 39 from the IGQ, which address participants' perceptions of how Instagram

use impacts them were subjected to a principal component factor analysis with oblique rotation. This analysis yielded 3 clean factors (see Table 1). Items 16, 17, 19, 20, 25, 28, 31, 32, 33, 34, 35 comprised Factor 1, which was labeled Negative Impact-Appearance; items 21, 22, 26, 39 comprised Factor 2, labeled Negative Impact-Peer Relationships; and items 23, 24, 27, 29, and 30 comprised Factor 3, labeled Positive Impacts of Instagram. To create scale scores, all reversed items were recoded and then scores for each of the factors were computed by summing their constituent items. Internal consistency (Cronbach's alpha) for Negative Impact - Appearance, Negative Impact- Peer Relationships, and Positive Impacts of Instagram were .93, .81, and .77, respectively.

**Table 1** Pattern matrix coefficients from the principal component analysis of items 16 to 39.

Items	Factor 1	Factor 2	Factor 3
16. More aware of the way I look	.446	.145	-.342
17. More critical about my body	.803	.106	.013
18. Friends include or tag everyone	-.096	.446	.408
19. More concerned with what I look like in pics	.722	-.137	-.120
20. Feel bad about how I look	.770	-.121	.018
21. Friends post to show off	.239	.538	-.053
22. Friends post to make people jealous	-.070	.848	-.182
23. Seeing pics makes me feel better about looks	-.062	-.173	.654
24. Instagram makes me feel better about looks	.072	-.163	.768
25. Pics of myself on Instagram make me feel bad about body	.828	.028	.013
26. Friends post to exclude others	.129	.774	.109
27. Pics of myself on Instagram make me feel better about body	.006	-.206	.741
28. See pics makes me wish I could change something	.725	-.063	-.219
29. Feel closer with my friends when see pics together	-.336	.014	.523
30. Instagram makes me feel more connected with my friends	-.050	.078	.656
31. Pics of friends makes me feel bad about how I look	.863	-.014	.205
32. Pics of friends makes me feel bad about my body	.890	-.057	.137
33. Instagram has made me want to lose weight	.819	.031	.073

34. Instagram has made me want to workout more	.663	-.087	-.197
35. I compare myself with other people on Instagram	.778	.043	-.102
36. My friends post pictures to show how much they care	-.024	.275	.394
37. See friends without me = feels left out	.581	.230	-.103
38. When I see pictures on Instagram I never get jealous	.314	.156	-.013
39. Friends post pictures to make others feel bad	-.049	.787	-.230

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## Chapter 4.

### Results

#### 4.1. Analytic Strategy

Of the 104 participants, 84% had an Instagram account (N= 86, males = 47). All subsequent analyses include only these participants. First, using a multivariate analysis of variance, gender differences were examined for all variables. Although the omnibus test for gender was not statistically detectable, (Wilk's Lambda = .760 (15, 64)  $p=.20$ ), several univariate tests were and these are reported where appropriate. Second, correlations were computed to address associations among variables in the full sample and within each gender.

#### 4.2. Instagram use

Instagram use was measured with self-reports of frequency of viewing others' pictures and frequency of posting one's own pictures. On a scale from 1 (monthly) to 4 (multiple times a day) participants reported that, on average, they posted their own photos less than once a week but more than once a month (M = 1.5, SD = .57) and viewed others' posts daily (M = 3.2, SD = .73). On a scale of 1 (Not important at all) to 5 (very important), on average, participants reported that receiving "likes" on their photos was somewhat important (M = 2.6, SD = 1.13). An examination of gender differences revealed that boys and girls did not differ on how often they posted photos on Instagram, how often they viewed other people's posts on Instagram, or how important receiving "likes" was for them (see Table 2).

**Table 2** Means and standard deviations for all variables by gender

Variable	Boys (n=44)	Girls (n=38)
Frequency of viewing other people's photos	3.1 (.74)	3.3 (.70)
Frequency of posting own photos	1.4 (.50)	1.6 (.63)
Importance of receiving "likes" on own photos	2.5 (1.10)	2.9 (1.2)

Scholastic competence	2.90 (.70)	2.79 (.73)
Social competence	3.17 (.41)*	2.95 (.63)*
Athletic competence	3.28 (.62)**	2.84 (.95)**
Physical appearance	2.84 (.55)*	2.54 (.75)*
Job competence	2.88 (.50)	2.92 (.61)
Romantic competence	2.60 (.63)	2.36 (.60)
Behavioural competence	2.99 (1.16)	3.05 (.73)
Close friendships	3.30(.61)	3.15 (.70)
Overall self-worth	3.24 (.49)*	2.99 (.62)*
IGQ negative-appearance	22.93 (8.20)**	28.69 (10.24)**
IGQ negative-friends	8.80 (3.28)	9.13 (3.55)
IGQ positive impacts	15.82 (3.56)	15.00 (3.23)

\* $p \leq .05$ ; \*\* $p \leq .01$

### 4.3. Self-perceptions

Univariate tests indicated significant gender differences on the Harter subscales for perceived competence in the social, athletic, appearance, and general self-worth domains (see Table 2). In all cases, boys reported higher, or more positive self-perceptions than girls.

### 4.4. Reported Impacts of Instagram use

In addition, a gender difference was found for Negative impact – Appearance. Results indicated that girls reported Instagram use having a greater negative impact on their feelings about their appearance than did boys. No gender differences were found for Negative impact – Peer relationships or Positive impacts of Instagram. Descriptive statistics by gender can be found in Table 2.

## **4.5. Relationships among variables: Frequency and nature of use, self-perceptions, and self-reported impacts of Instagram use**

Central to the purpose of the present study was to determine if there were associations among Instagram use (viewing, posting, and importance of “likes”), participants’ self-perceptions as assessed by the Harter scales, and their perceived impacts of Instagram as assessed by the IGQ scales. To this end, correlations were computed among IGQ items 6, 7, and 12 (Instagram use), the IGQ scale scores (reported negative impacts on perceptions of physical appearance, reported negative impacts on perceptions of peer relationships, and reported positive impacts of Instagram), and the scale scores from The Self-Perception Profile for Adolescents (Harter, 2010) within the full sample and for boy and girls separately.

### **4.5.1. Self-perceptions and Instagram use**

Within the full sample, as seen in Table 3, self-reported frequency of viewing Instagram was negatively associated with self-perceptions of scholastic ability ( $r = -.234$ ,  $p=.05$ ) and behavioural competence ( $-.24$   $p=.05$ ). In other words, the more frequently students viewed Instagram the worse they felt about their scholastic and behavioural competence. Relationships between frequency of viewing Instagram and perceptions of physical appearance, athletic ability, social skills, romantic appeal, job readiness, ability to create intimate friendships, and overall self-worth were not statistically detectable. The pattern of correlations between Instagram viewing and self-perceptions did not differ between boys and girls.

Participants’ reports of their frequency of posting on Instagram were unrelated to all Harter subscale scores. This was true in the full sample and within boys and girls.

Within the full sample there were significant negative relationships between self-reported importance of receiving “likes” on photos and participants’ perceptions of their appearance ( $r = -.38$   $p<.001$ ), behavioural competence ( $r = -.23$   $p=.035$ ), and self-worth ( $r = -.39$   $p<.001$ ). That is, participants who were more concerned with getting “likes” on their

photos had more negative perceptions of their appearance, behaviour and overall self-worth. This pattern of correlations was replicated within both boys and girls.

**Table 3 Correlations between self-perceptions and Instagram use within full sample**

Self-perception	Frequency of viewing (IG7)	Frequency of posting (IG6)	Importance of likes (IG12)
Appearance	-.16	-.16	-.38***
Athletic	-.08	-.05	-.08
Scholastic	-.234*	.102	-.05
Social	-.05	.09	-.02
Job	-.09	-.004	-.04
Romance	.18	.07	-.04
Behaviour	-.24*	.103	-.23*
Friends	.16	.06	-.03
Self worth	-.16	-.14	-.39***

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$

#### 4.5.2. Self-perceptions and reported impacts of Instagram use

Correlations were computed between the nine Harter subscales and the three IGQ subscales within the full sample and boys and girls separately (see Table 4). As can be seen in Table 4, within the full sample the IGQ subscale Negative Impact- Appearance was significantly and negatively correlated with self-perceptions of physical appearance ( $r = -.59$   $p < .001$ ), athletic ability ( $r = -.36$   $p = .001$ ), social competence ( $r = -.30$   $p = .006$ ), close friendships ( $r = -.30$   $p = .005$ ), and general self-worth ( $r = -.58$   $p < .001$ ), indicating that reports of greater negative impacts of Instagram on ones' perceptions of physical appearance were associated with lower self-perceptions in the reported domains. An examination within gender revealed a somewhat different pattern of associations for boys and girls. Within boys only self-perceptions of physical appearance ( $r = -.38$   $p = .01$ ) and general self-worth ( $r = -.49$   $p = .001$ ) were significantly related to reports of negative impacts of Instagram on perceived physical appearance. Within girls, self-reported negative impacts of Instagram on ones' perceived physical appearance was significantly related to self-perceptions of physical appearance ( $r = -.68$   $p < .001$ ), athletic ability ( $r = -.51$   $p = .001$ ), social competence ( $r = -.40$   $p = .013$ ), job competence ( $r = -.32$   $p = .05$ ), close friendships ( $r =$

= -.45  $p=.005$ ), behavioural competence ( $r = -.34$   $p=.03$ ), and general self-worth ( $r= -.60$   $p<.001$ ).

As can be seen in Table 4, within the full sample the IGQ subscale Negative Impact-Peer Relationships was significantly and negatively correlated with self-perceptions of physical appearance ( $r = -.29$ ,  $p =.008$ ), social competence ( $r = -.21$ ,  $p=.06$ ), close friendships ( $r = -.26$ ,  $p=.02$ ), and general self-worth ( $r = -.33$ ,  $p = .003$ ), indicating that reports of negative impacts of Instagram use on peer relationships were associated with lower self-perceptions in the reported domains. An examination within each gender again revealed a different pattern of associations for boys and girls. Within boys only self-perceptions of general self-worth ( $r= -.43$ ,  $p=.004$ ) were significantly related to reports of a negative impact of Instagram on peer relationships. Within girls, self-reported negative impact of Instagram on peer relationships was significantly related to self-perceptions of physical appearance ( $r= -.38$ ,  $p=.02$ ), and social competence ( $r = -.31$   $p = .06$ ).

Finally, as can be seen in Table 4, within the full sample the IGQ subscale Positive Impacts of Instagram was significantly and positively correlated with self-perceptions of general self-worth ( $r = .29$ ,  $p = .009$ ). This was true within boys ( $r = .32$ ,  $p =.03$ ) but within girls, positive impacts of Instagram was unrelated to domains of self-understanding.

**Table 4 Correlations self-perceptions and the three IGQ subscales.**

Self-perception	Negative Impact – Appearance	Negative Impact – Peer Relations	Positive Impact of Instagram
Appearance (all)	-.59***	-.29**	.15
Boys	-.38**	-.19	.12
Girls	-.68***	-.38*	.14
Athletic (all)	-.36***	-.12	.07
Boys	.02	.02	.02
Girls	-.51***	-.20	.06
Scholastic (all)	-.16	-.03	-.07
Boys	-.04	-.04	.06
Girls	-.25	-.01	-.26
Social (all)	-.30**	-.21	-.05
Boys	-.04	-.07	.11
Girls	-.40**	-.31	-.23



Job (all)	-.20	-.09	.03
Boys	-.11	.07	.19
Girls	-.32*	-.25	-.11
Romance (all)	-.17	.04	.02
Boys	.04	.12	.01
Girls	-.29	-.03	-.02
Behaviour (all)	-.16	-.18	-.003
Boys	-.10	-.24	-.08
Girls	-.34*	-.10	.16
Friends (all)	-.30**	-.26*	.001
Boys	-.12	-.28	.03
Girls	-.45**	-.24	-.05
Self worth (all)	-.58***	-.33*	.29**
Boys	-.45**	-.43**	.32*
Girls	-.60***	-.23	.23

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$

#### 4.5.3. Frequencies of Instagram viewing, posting, and importance of “likes” and the reported impacts of Instagram use

As seen in Table 5, participants’ reports of frequency of viewing others photographs were significantly related to scores on the IGQ Negative Impact – Appearance scale with more frequent Instagram viewing being associated with stronger perceptions that Instagram use negatively impacted views of one’s body and physical appearance ( $r = .26, p = .015$ ). An examination of this correlation within genders revealed that the association was statistically detectable only in females ( $r_{\text{female}} = .35, p = .03$ ;  $r_{\text{male}} = .12$ ). Frequency of viewing Instagram was not related to IGQ Negative Impact – Peer Relationships scale, or IGQ Positive Impacts of Instagram scale.

Participants’ reports of frequency of posting on Instagram were unrelated to all IGQ subscale scores. This was true in the full sample and within boys and girls.

Correlations between importance of “likes” and the IGQ subscales revealed significant associations with Negative impact - Appearance ( $r = .51, p < .001$ ) and Positive impacts of Instagram ( $r = -.41, p < .001$ ). In other words, within the full sample, participants who placed greater importance on receiving “likes” also reported Instagram use having a

greater negative impact on their perceptions of their physical appearance and a lower positive impact of Instagram use. Again, this pattern of correlations was replicated within both boys and girls.

**Table 5** Correlations between frequency of Instagram use and the three IGQ subscales

IGQ Scales	Freq. of views (IG7)	Freq. of posts (IG6)	Importance of likes (IG12)
Negative Impact – Appearance (all)	.264*	.10	.51***
Boys	.12	.16	.54***
Girls	.35*	-.05	.44**
Negative Impact – Peer Relations (all)	.21	.03	.18
Boys	.17	-.07	.20
Girls	.24	-.06	.13
Positive Impact of Instagram (all)	-.19	-.08	-.41***
Boys	-.06	-.06	-.46***
Girls	-.32*	.09	-.34*

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$

## **Chapter 5.**

### **Discussion**

In this study I examined relationships among domains of self-perceived competence, frequency of Instagram use (viewing and posting pictures), importance of peer feedback in the form of “likes” and finally, the self-reported impacts of Instagram use in early-adolescents. In doing so, I hoped to address gaps in the SNS literature that neglects the early-adolescent population as well as the mobile photograph-sharing application Instagram.

#### **5.1. Early adolescent Instagram use**

It was important at first to uncover how many young adolescent students were using Instagram. Data revealed the vast majority of participants in this study had an Instagram account, which supports the need for research in this area within this age group. Further, the majority of participants reported viewing Instagram more than once daily which again highlights the prominence of this application within this age group. In short, early adolescents in this study were very likely to have an Instagram account and to use it multiple times throughout the day.

In line with past research on college students’ use of Facebook (Thompson & Loughheed, 2012), findings from the present study indicated that early adolescent males and females used Instagram in similar ways with regard to frequency of posting, viewing, and importance of “likes”, yet there were clear differences in the ways that boys and girls reported being impacted by Instagram use as well as in the ways Instagram use correlated with their self-perceptions. These differences are discussed in the following sections.

#### **5.2. Early adolescent self-perceptions**

Differences found between boys’ and girls’ self-perceptions in the present study are similar to those reported by Harter (2012) when using the same instrument as used in

the present study: The Self-Perception Profile for Adolescents. In Harter's study and the present study, differences between boys and girls were found within the domains of athletic ability, physical appearance, and general self-worth domains, wherein boys rated themselves more favourably. This may be explained by Harter's (1999) discussion of gender differences in boys' and girls' ratings of their physical selves, namely their perceived appearance and perceived athletic ability. These systematic findings can be explained perhaps by the historical male emphasis on sports figures and athletes. Given that playing and watching sports is a stereotypically masculine pastime, perhaps boys see the array of different athletes as positive role models to whom they can aspire to look and be like. Specifically in terms of physical appearance, there is much more diversity in what an athlete looks like in terms of their physical build (e.g. a swimmer versus a football player); in comparison, young girls primarily see females in roles of actresses, models, and other celebrities who undoubtedly resemble the idealized standards of the female body, which is likely viewed as an unattainable physique and thus may make girls feel less adequate about their appearance. Therefore, while boys may have multiple male role models who are excelling in sports and athletics, girls traditionally see popular women in roles where their physical appearance (held to a punishing standard) is their most important trait. It is not surprising then, that girls will systematically rate their own perceived appearance lower than boys.

Further the robust connection between the domains of perceived physical appearance and overall self-worth whereby by perceived appearance is the best predictor of self-worth (Harter, 1999), explains why girls likely rate their self-worth lower than boys. Harter notes that in middle childhood both boys and girls rate themselves equally in terms of perceived physical appearance but by grade four girls begin to rate their perceived physical appearance lower than boys, and by the end of high school, these ratings are drastically lower; unfortunately so are the ratings of self-worth.

In the present study, boys also rated themselves more positively in the social competency domain. This is in contrast to Harter's report that females regularly rate themselves as more competent in social domains than do boys. Perhaps the widespread usage of SNSs like Instagram allows boys to connect with one another in a way that has not previously been available. The communicative aspects of SNSs may be giving young

boys the chance to connect with their peers more openly, and with greater comfort than one might experience face-to-face.

### **5.3. Self-reports of impacts of Instagram use**

As expected, girls were more likely than boys to report negative impacts of Instagram use on their perceptions of their physical appearance. Boys and girls did not differ in the extent to which they reported Instagram use having a negative effect on their peer relationships, or in their reports of positive impacts of Instagram.

These results are consistent with findings that girls engage in ‘appearance culture’ more frequently than boys. Jones, Vigfusdottir, and Lee (2004) found that engaging in ‘appearance culture’ (reading appearance-based magazines, having conversations with peers about appearance, and experiencing criticism from peers about their physical appearance) was related to body dissatisfaction; and, this connection was mediated by the internalization of unrealistic body ideals portrayed in the media. While peer criticism about physical appearance was related to body dissatisfaction in both boys and girls, more frequent reports of peer conversations about physical appearance and greater internalized appearance ideals were reported only in girls. Perhaps then, females engage in more appearance-related conversations among their peers and this creates a channel for internalization of popular and unrealistic body ideals, which then leads to negative feelings about ones’ body and appearance.

It may be then that females are primed to pay specific attention to appearance-related criteria given that it is a topic of discourse among friends. A study by Hargreaves and Tiggeman (2004) wherein males and females viewed mainstream television commercials that epitomized thin female or muscular male body ideals revealed that only females were more likely to report negative feelings about their body after viewing the commercials. The authors explain these findings by suggesting that engaging in appearance-based upward social comparison is a more common and normative process in girls. That is, girls report having more conversations about appearance-related topics and, are heavily exposed to the unrealistic body ideals at a younger age. Taking together the propensity for young girls to engage in appearance-culture and the available media to

substantiate this engagement, it is not surprising that girls are more likely than boys to report negative impacts of Instagram on their feelings about their perceived physical appearance.

These findings are also in line with the work of Kim and Chock (2015) who explored the relationship between viewing social media and drive for popular body ideals in college students. Their results indicated that frequency of viewing social media was not related to a drive for muscularity in males but was related to a drive for thinness in females. We can infer that drive for thinness in females is likely related to a sense of dissatisfaction with ones' body and that engaging with social media tends to exacerbate those feelings. Kim and Chock cite Festinger's (1954) social comparison theory as a lens to conceptualize their findings; that is, they suggest that viewing photos of peers, or perhaps models, on social media creates a visual representation to which viewers can compare themselves.

Frequency of posting photos on Instagram was unrelated to self-reported negative or positive impacts of Instagram. Overall, participants reported more time *viewing* Instagram than actually posting their own photos, suggesting that students are more interested in viewing and interpreting their peers' photos than they are with posting their own for others to see. Considering the importance of peer feedback in the early adolescent context for the development of self-understanding, the reduced interest in posting photos might be explained by students' fear of receiving less than positive feedback.

As previously mentioned, positive feedback from peers in early adolescence has a direct relationship to ratings of ones' perception of self-worth (Harter, 1999). Because Instagram provides a way for viewers to appraise photographs, thus providing evaluative feedback, it was worthwhile to examine relationships between the importance of receiving this feedback and reported effects of Instagram use.

Initial predictions were partially supported as greater importance placed on receiving 'likes' on one's photographs was positively correlated to negative reports of Instagram use on feelings about physical appearance, but not peer relationships. That is, users who placed more importance on receiving 'likes' on their photos were also more

likely to report that using Instagram made them feel negatively about their physical appearance.

It is possible that individuals who place more importance on “likes” are those who care more about what other people think of them. This heightened sensitivity to others’ feedback likely makes them more vulnerable to the negative impacts of Instagram. Such users may post photographs of themselves in hopes of receiving positive feedback from their peers. When their expectations of positive feedback are not met it perhaps contributes to lowered self-perceptions and hence the experience that using Instagram has as a negative impact on one’s sense of their physical appearance.

In 2015, the free application ‘LikeBlockr’ was created by Dan Zimmerman in order to hide the amounts of ‘likes’ from user’s photographs on Instagram as well as the number of followers a user has (<http://www.likeblockrapp.com>, 2015). The rationale behind this application was to put the joy back into social media by removing the quantifying component of “likes” and number of followers. The creators of LikeBlockr acknowledge the ‘like culture’ of SNSs and how it can be detrimental to ones’ self-worth and ask users to kick their “like addiction”. The creation of this application puts emphasis on the link between the importance of receiving ‘likes’ and feelings of self-worth. Perhaps applications such as LikeBlockr should be introduced to younger users along with explanations about its importance.

## **5.4. Relationships between self-understanding and using Instagram**

### **5.4.1. Self-perceptions and viewing Instagram**

Frequency of viewing photos on Instagram was not related to self-perceptions of physical appearance or peer relationship competency. However, increased viewing of photographs on Instagram was related to lower self-perceptions in the academic and behavioural domains. These findings were unanticipated and require some comment.

Frequent Instagram use, if it occurs during school hours, is in fact an indication of inappropriate behaviour that quite likely detracts students' attention from the learning activities at hand. The link between Instagram use and self-perceived academic competence is consistent with this view and with findings of other researchers that increased social media use in college-aged students is related to overall lower grade point average (GPA) scores (Kirschner & Karpinski, 2010). It is possible that students who feel less academically competent may turn to applications like Instagram to distract themselves during the school day. Alternatively, it may be that the distraction provided by frequent Instagram viewing results in students missing out on activities and information that, in turn, contributes to their lowered academic competence. Rosen, Carrier, and Cheever (2013) have suggested that students who switched tasks from studying to Facebook use were seeking social or emotional gratification that may come from engaging with Facebook. It is plausible that in the high school environment, students switch from focusing on schoolwork (proper academic and behavioural activities), to viewing Instagram in order to fulfill social and emotional needs. In addition Instagram use may serve as an escape from anxiety-provoking academic challenges faced by grade eight students in the new and possibly intimidating high school context. These suggestions may underscore the relationship between lower self-perceptions of academic and behavioural competence and more frequent Instagram viewing.

#### **5.4.2. Self-perceptions and posting photographs on Instagram**

Unlike frequency of viewing Instagram, which was related to both academic and behavioural self-perceptions, posting on Instagram was unrelated to all domains of perceived self-competence. This speaks to the difference in experiences of viewing Instagram and posting on Instagram and highlights the need to distinguish these differences in future research.

#### **5.4.3. Self-perceptions and the importance of receiving “likes” on Instagram**

As predicted, the importance of receiving ‘likes’ on Instagram was negatively related with perceptions of self-worth and physical appearance, but not with ratings of



competency in peer relationships. Participants with greater concern about receiving “likes” on their photos had lower ratings of overall self-worth and self-perceived physical appearance. In interpreting this finding it is difficult to know the direction of effect. It may be that lower self-esteem leads to a greater concern with getting likes. Perhaps young Instagram users who have lower self-worth turn to Instagram in search of positive reinforcement from their peers thus placing increased importance on acquiring “likes”. Consistent with Valkenburg, Peter, and Schouten (2006), this may enhance ones’ sense of self-worth and motivate them to continue to groom their Instagram profile in a manner that will garner more “likes”.

On the other hand, it is possible that individuals who are concerned with receiving positive feedback, and do not receive the expected or desired number of “likes”, may as a consequence, see themselves less favourably in the domain of self-worth. These findings can be partially explained by the looking-glass-self theory (Harter’s, 2010; Mead, 1925), which suggests early adolescents turn to peer feedback to construct their self-perceptions and their self-worth. The individual who receives fewer “likes” than desired may think that peers do not value him or her and thus, in turn, value their own self less.

It is interesting that the domain of self perceived competence most strongly associated with the importance individuals place on getting “likes” on their Instagram posts was physical appearance. That is, greater concern with getting “likes” on one’s photographs was associated with less positive self-perceptions of ones’ physical appearance. This is likely explained by the importance of both physical appearance and peer feedback in early adolescence and the fact that a significant proportion of pictures posted by young adolescents on Instagram highlight their appearance. We see this in the prevalence of appearance-related photos like ‘the selfie’. In the present study, 45% of participants indicated that their friends were most likely to post selfies and 20% reported that selfies were the second most common type of photo to post. That is, it appears that the majority of posted photos in this sample may in fact be related to appearance. In one open-ended response, a participant wondered, “If I had a different face or body will more people follow me or like my pictures?” thus associating their physical appearance with peer appraisal.

Participants who placed more importance on receiving “likes” on their photos also rated their behavioural competency lower. This taken together with the negative association between importance of “likes” and perceived appearance and self-worth suggests students in need of positive peer appraisal might be engaging in off-task activities to fulfill their needs. Perhaps students who are more concerned with positive peer feedback and appraisal are more likely to engage in activities that are inappropriate in a given setting in order to garner attention and appraisal from their peers. In fact, one student stated that “the amount of likes and followers prove your level of popularity”.

## **5.5. Relationships between self-understanding and reported impacts of Instagram use**

Moving beyond frequency and nature of use, I considered how early adolescent self-perceptions of their physical appearance and peer relationships related to reported impacts of Instagram use.

Findings revealed that lower ratings of competency within the domains of physical appearance and peer relationships were related to greater reports of negative impacts of Instagram use on ones’ feelings about their physical appearance and peer relationships, thus supporting initial predictions. Stated plainly, those who did not view themselves favourably within these domains were more likely to report being susceptible to negative impacts of Instagram use on these domains of self-understanding.

In addition to being related to lower self-perceptions in the domains of physical appearance and peer relationships, self-reported negative impacts of Instagram use on ones’ perceived physical appearance was also negatively related to self-perceived athletic ability, making and maintaining close friendships, and overall self-worth. In other words, if users reported negative effects of Instagram use on their perceptions of their appearance, the less adequate they felt in the domains of athletic ability, maintaining close friends, and overall self-worth. Looking within gender revealed that among girls the additional domains of physical appearance, job competence, and behavioural competence were negatively associated with reports of negative impacts of Instagram use on their perceived physical appearance.

What is unsettling about these results is the number of domains of self-understanding that are related to negative impacts of Instagram use on girls' perceptions of their physical appearance. Once again we can refer to the centrality of appearance culture in young girls' social contexts and how, if a threat exists to one's physical appearance, it will likely threaten their sense of themselves within other domains as well.

Perhaps females with lower self-perceptions in a number of domains (not only appearance-related) are more vulnerable to the negative impacts of Instagram on their feelings about their appearance. On the other hand, it could be that using Instagram at this age has an effect on the development of ones' self-perceptions within the domain of physical appearance, the impact of which then spills over into other domains of self-perceived competence. Considering the notion of co-created selves - wherein early adolescents develop their sense of self based on how they imagine others' view them - perhaps viewing Instagram leads young users to develop a sense of self that reflects a perceived inability to compare to the unrealistic portrayals of 'beauty' online. Thus they may view themselves less favourably within the domain of physical appearance because of the unrealistic standards or beauty expectations portrayed online.

The results discussed herein point to the importance of considering ways in which we can help girls become more resistant to the negative impacts of Instagram use in the domain of physical appearance. A first consideration may be the frequency of Instagram use and how that may be exacerbating the ways that young users see and understand themselves. A second consideration may be school-based media awareness classes that explicitly teach students that most SNS profiles are unrealistically positive and do not provide a realistic basis for social comparison.

When considering the reported negative impacts of Instagram use on ones' perceived competence in peer relationships, relationships emerged between the domains of physical appearance, social competence, making and maintaining close relationships and overall self-worth domains. That is, participants who had lower ratings of self-perceptions within these domains were also more likely to report negative impacts of Instagram use on their peer relationships. Once again, differences between genders were present in these relationships.

Females who reported negative impacts of Instagram on their peer relationships were also likely to report lower self-perceptions of appearance and social competence. These results are consistent with past findings (e.g. Crockett, Losoff, & Petersen, 1984; Jones, Vigfusdottir, & Lee, 2004) that highlight the relationship between peer relationships and physical appearance in early adolescent girls. For example, Crockett, Losoff, and Petersen (1984) found that physical appearance was the primary indicator for popularity in early adolescent females whereas for males it was athletic ability. These findings further highlight the pervasive effects of ‘appearance culture’ in girls’ peer groups and may offer insight into how parents, teachers, and mental health providers may be able to move away from appearance culture by inviting girls to focus on other domains or topics of interest.

Interestingly, males were more likely to report that Instagram influenced their peer relationships when they reported lower perceptions of self-worth. This is not surprising given the host of research citing the relationships between feelings of peer group security and over all self-worth in early adolescents (Harter, 1999).

These differences highlight the ways in which boys and girls perceive Instagram as influencing them as well as the pervasiveness of appearance-based concerns in female early adolescents.

Finally, of note is the finding that reported positive impacts of Instagram were associated with higher ratings of ones’ overall self-worth. When examined within gender, we saw that males drove the magnitude of this significant association. That is, there were no relationships between reported positive impacts of Instagram use and self-perceptions in females.

Considering the widespread usage of Instagram among early adolescents, it is worrisome to find that despite reporting that Instagram use has positive impact, those perceived impacts do not relate to how young adolescents perceive themselves. The daily exposure to photos appears to create a constant stream of social comparison, which in turn leads to negative feelings about the self. Unlike Facebook where users have to sift through articles and status updates, Instagram is a visual flood of perfected photos. For example one student wrote, “I use Instagram to show people I’m *actually* doing cool stuff” while another stated that peers, “post pics [*sic*] of themselves [*sic*] to show off”. These

anecdotes highlight both the desire for early adolescents to seek appraisal from their peers but also the reactions and perceptions that are developed by viewers.

## **5.6. Implications.**

Although causality cannot be inferred from the findings of this study, it is clear that relationships exist among self-understanding and using Instagram. These results have implications for Instagram use in the school environment as well as implications that extend beyond the classroom. This study has revealed the widespread and daily use of Instagram as well as some existing relationships between early adolescent self-perceptions in specific domains and self-reported effects of Instagram use. I believe it is essential for individuals who work with and care for adolescents to gain awareness about the potential significance of Instagram use within an early adolescent context. Specifically, school counsellors who interact with early adolescents should consider closely the relationships between the way students' see themselves and the potential for negative impacts of social media use. This is echoed by results of the current study that reveal students who are using Instagram more frequently are also more likely to perceive themselves as less academically and behaviourally competent.

A principal and worrisome finding of this study is the association between Instagram use and reported negative impacts on female appearance-related concerns. These results suggest that body positive programming and discussions about healthy body image should be incorporated into curriculum where appropriate. When considering the uncertain and wavering nature of early adolescent self-understanding, what might be the best approach to increasing positive messages about perceived physical appearance? Perhaps by focusing on the presence of early adolescent 'co-created selves' one might develop an intervention that engages young females in constructing positive views about themselves in a collaborative manner. By acting as a positive social mirror for their peers, young females may be more likely to develop competent and favourable understandings about their physical appearance which may in turn make them more resilient to negative influences of Instagram use on their body image.

Another way to help early adolescent's become more resilient to SNS use might be to teach teens about the phenomena surrounding social media use such as social grooming and 'like culture'. By alerting young users to the theories about how using Instagram might affect them, they may be more critical about the way they use Instagram in the first place.

The topic of peer relationships in connection to social media use is certainly an important area of discussion (Valkenburg & Peter, 2007). This study did not uncover robust relationships between using social media and negative impacts on ones' peer relationships. Perhaps further exploration of the social aspects of Instagram use may reveal positive avenues of peer communication for young male users.

Another area of interest is the different types of "friendships" that occur on social media accounts. That is, Instagram can connect users with certainly other friends and peers, but also acquaintances, friends of friends, strangers, celebrities etc. This was seen in the present study in a participant's disclosure that, "sometimes the people I know will become friends with someone who has a lot of followers just to gain followers, not even for friendship". It is interesting to consider the different ways that varying qualities of relationships might be correlated with peer-related and appearance-related concerns in early adolescence, which was outside the scope of the present study.

## **5.7. Limitations.**

The current study has recognized limitations that are important to review. First, the sample size was relatively small. In addition, the participants were limited to those from a higher socioeconomic background wherein access to personal cell phones was ubiquitous. Further, it is likely that these students also have increased access to material goods and opportunities perceived as desirable and valuable. It is possible that early adolescents from an affluent upbringing may also be more concerned with issues of appearance and social standing. This study utilized a correlational design, which did not allow me to reach conclusions regarding causality. We cannot be certain from my findings whether Instagram use leads to lowered self-perceptions or whether lowered self-perceptions lead to particular kinds of Instagram activity. Nevertheless, the findings are

suggestive of an important link between Instagram use and adolescent self-perceptions that should be further explored in subsequent studies.

## **5.8. Future research.**

The results of this study indicate a need for continued research on the relationships between social media and the early adolescent context. It will be important for studies to narrow their scope of research to focus on specific aspects, such as particular behaviours, related to social media use in order to create appropriate interventions. For example, researchers may want to consider the nuanced ways in which viewing Instagram is related to reported negative impacts on female body image. Indeed this relates to the importance of qualitative explorations of the early adolescent experience on Instagram. Another avenue for future research would be a longitudinal analysis of reported impacts of Instagram. Given the relative novelty of Instagram it will be important to examine the long-term effects of use in early adolescence.

## **Chapter 6.**

### **Conclusion.**

Information from the present study lends support to the notion that social media use creates an accessible channel to view others' lives and to develop, perhaps skewed, perceptions of their appearance and friend groups. In turn, this may lead early adolescents to understand themselves in different, less positive, ways. Specifically Instagram is an application that may encourage users to engage in social comparison by having access to a consistent stream of photos of their peers' lives. In early adolescence, when appearance and peer relationships are of primary importance, Instagram can serve as a context for social comparison and, particularly in females, may be related to perceived negative impacts. Moreover, by putting personal photographs on Instagram, users create an open forum for appraisal and feedback. This is worrisome given the direct impacts of peer feedback on early adolescent's development of self-understanding and ratings of self-worth.

This study contributes to the conversation around early adolescent susceptibility to social media use. The ever-changing landscape of social media highlights the need for consistent research within the early adolescent population. Perhaps by setting a foundation of resiliency earlier on in adolescence, individuals will be less likely to report negative impacts of social media use in later adolescence and adulthood.



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## Appendix A.

### Informed Consent for Parents or Guardians



Study title: Filtering our selves: Associations between early adolescent self-perceptions and Instagram activity

This study is being conducted by Lisa Bay (MA candidate in Counselling Psychology at Simon Fraser University) under the supervision of Dr. Lucy Le Mare and with the permission of [REDACTED] and your child's school principal. The chief concern of the University Ethics Board is for the health, safety and psychological wellbeing of research participants. This form and the information it contains are given to you so that you have a full understanding of the procedures involved in this project. Your signatures on this form will signify that you have read the description of the procedures of the study below, that you have had adequate opportunity to consider the information in that description, and that you voluntarily give consent for your child to participate.

#### DESCRIPTION OF PROCEDURE

With your and your child's consent, your child will complete paper and pencil survey during school hours that will take approximately 30 minutes. If students do not have consent to participate in this study, they will remain in their classroom during the time that others leave to complete the survey.

The survey includes questions about your child's perceptions of his or her peer relationships and body image as well as his or her use of Instagram, a photo-sharing social media application. Examples of questionnaire items include: "How often do you post pictures on Instagram" or "If no one 'likes' your picture on Instagram, how does that make you feel?" Upon completion of the questionnaire, your child will be entered in a draw to win a [REDACTED]

Your child's participation is voluntary

Your child is under no obligation to participate in this study and is free to withdraw at any time without any consequences. Participation in this study is in no way related to your child's academic standing.

#### Confidentiality

The survey will be completed on school grounds in a designated classroom. All information that participants provide is completely confidential and will only be accessed by the researchers. Participants will be given a code number so that their responses will not be linked to their name.

## Risks and Benefits

There are no known risks to participating in this study. The results of the study, based on aggregated data, will be available to all participants, their families and their school. It is hoped that these results will be informative for students, parents and teachers regarding the potential social and psychological impact of Instagram use.

Who can I contact if I have any questions or concerns?

If you have any further questions or concerns about this study, please contact:

Lisa Bay at [REDACTED] or her supervisor Dr. Lucy LeMare at

If you have any concerns about your child's rights as a research participant and/or your child's experiences while participating in this study, you may contact Dr. Jeffrey Toward,

Director, Office of Research Ethics [REDACTED]

## Consent and signature

Your child's participation in this study is entirely up to you. Your child can withdraw from the study at any time. If they choose to withdraw, all existing documentation will be destroyed.

By signing this form I consent for my child, \_\_\_\_\_ to participate in this study.

PRINTED NAME OF PARENT OR GUARDIAN

SIGNATURE OF PARENT OR GUARDIAN

The investigators of this study would also like to share the results of this study with individuals who indicate their interest in the information.

Yes, please send the results of this study to my email address

\_\_\_\_\_

No thank you, I am not interested in the results of this study

# Appendix B

## Informed Assent for Participants



### INFORMED ASSENT FOR PARTICIPANTS

Your parents have consented for you to participate in the research project I am conducting. Even though you have consent, you can choose not to participate.

By signing this form, you are indicating that you are voluntarily agreeing to participate in this study, which entails completing the attached survey.

The attached survey asks about your Instagram use and some questions about you. It is important that you know that your responses on this survey will be confidential to the full extent permitted by law. After turning in your survey, I will detach your signature from the questionnaire so that your name will not be associated with your responses.

I understand that I may withdraw my participation in this study at any time with out *any* consequences. If you do choose to withdraw before completing the survey, your survey will be destroyed.

I also understand that I may register any complaint I might have about the study with the researcher named above or Dr. Jeffrey Toward, Director, Office of Research Ethics [REDACTED]

I may obtain copies of the results of this study, upon its completion, by contacting:

Lisa Bay [REDACTED]

NAME

SIGNATURE

# Appendix C

## Questionnaire

### What I Am Like

Name \_\_\_\_\_ Age \_\_\_\_\_ Birthday \_\_\_\_\_  Boy  Girl  
Month Day (check one)

	Really True for me	Sort of True for me			Sort of True for me	Really True for me
<b>Sample Sentence</b>						
a.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers like to go to movies in their spare time	<b>BUT</b>	Other teenagers would rather go to sports events	<input type="checkbox"/> <input type="checkbox"/>
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they are just as smart as others their age	<b>BUT</b>	Other teenagers aren't so sure and wonder if they are as smart	<input type="checkbox"/> <input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers find it hard to make friends	<b>BUT</b>	Other teenagers find it pretty easy to make friends	<input type="checkbox"/> <input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers do very well at all kinds of sports	<b>BUT</b>	Other teenagers <i>don't</i> feel that they are very good when it comes to sports	<input type="checkbox"/> <input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are <i>not</i> happy with the way they look	<b>BUT</b>	Other teenagers <i>are</i> happy with the way they look	<input type="checkbox"/> <input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they are ready to do well at a part-time job	<b>BUT</b>	Other teenagers feel that they are not quite ready to handle a part-time job	<input type="checkbox"/> <input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that if they are romantically interested in someone, that person will like them back	<b>BUT</b>	Other teenagers worry that when they like someone romantically, that person <i>won't</i> like them back	<input type="checkbox"/> <input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers usually do the right thing	<b>BUT</b>	Other teenagers often don't do what they know is right	<input type="checkbox"/> <input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are able to make really close friends	<b>BUT</b>	Other teenagers find it hard to make really close friends	<input type="checkbox"/> <input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are often disappointed with themselves	<b>BUT</b>	Other teenagers are pretty pleased with themselves	<input type="checkbox"/> <input type="checkbox"/>



	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are pretty slow in finishing their school work	<b>BUT</b>	Other teenagers can do their school work quickly	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers know how to make classmates like them	<b>BUT</b>	Other teenagers don't know how to make classmates like them	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers think they could do well at just about any new athletic activity	<b>BUT</b>	Other teenagers are afraid they might not do well at a new athletic activity	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers wish their body was different	<b>BUT</b>	Other teenagers like their body the way it is	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they <i>don't</i> have enough skills to do well at a job	<b>BUT</b>	Other teenagers feel that they <i>do</i> have enough skills to do a job well	<input type="checkbox"/>	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are <i>not</i> dating the people they are really attracted to	<b>BUT</b>	Other teenagers <i>are</i> dating those people they are attracted to	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers often get in trouble because of things they do	<b>BUT</b>	Other teenagers usually <i>don't</i> do things that get them in trouble	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers <i>don't</i> know how to find a close friend with whom they can share secrets	<b>BUT</b>	Other teenagers <i>do</i> know how to find a close friend with whom they can share secrets	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers don't like the way they are leading their life	<b>BUT</b>	Other teenagers do like the way they are leading their life	<input type="checkbox"/>	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers do very well at their classwork	<b>BUT</b>	Other teenagers <i>don't</i> do very well at their classwork	<input type="checkbox"/>	<input type="checkbox"/>
20.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers don't have the social skills to make friends	<b>BUT</b>	Other teenagers do have the social skills to make friends	<input type="checkbox"/>	<input type="checkbox"/>
21.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they are better than others their age at sports	<b>BUT</b>	Other teenagers don't feel they can play as well	<input type="checkbox"/>	<input type="checkbox"/>
22.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers wish their physical appearance was different	<b>BUT</b>	Other teenagers like their physical appearance the way it is	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
23.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel they are old enough to get and keep a paying job	<b>BUT</b>	Other teenagers do not feel that they are old enough, yet, to really handle a job well	<input type="checkbox"/>	<input type="checkbox"/>
24.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that people their age will be romantically attracted to them	<b>BUT</b>	Other teenagers worry about whether people their age will be attracted to them	<input type="checkbox"/>	<input type="checkbox"/>
25.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel really good about the way they act	<b>BUT</b>	Other teenagers <i>don't</i> feel that good about the way they often act	<input type="checkbox"/>	<input type="checkbox"/>
26.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers <i>do</i> know what it takes to develop a close friendship with a peer	<b>BUT</b>	Other teenagers <i>don't</i> know what to do to form a close friendship with a peer	<input type="checkbox"/>	<input type="checkbox"/>
27.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are happy with themselves most of the time	<b>BUT</b>	Other teenagers are often not happy with themselves	<input type="checkbox"/>	<input type="checkbox"/>
28.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers have trouble figuring out the answers in school	<b>BUT</b>	Other teenagers almost always can figure out the answers	<input type="checkbox"/>	<input type="checkbox"/>
29.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers understand how to get peers to accept them	<b>BUT</b>	Other teenagers <i>don't</i> understand how to get peers to accept them	<input type="checkbox"/>	<input type="checkbox"/>
30.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers <i>don't</i> do well at new outdoor games	<b>BUT</b>	Other teenagers are good at new games right away	<input type="checkbox"/>	<input type="checkbox"/>
31.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers think that they are good looking	<b>BUT</b>	Other teenagers think that they are not very good looking	<input type="checkbox"/>	<input type="checkbox"/>
32.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel like they could do better at work they do for pay	<b>BUT</b>	Other teenagers feel that they are doing really well at work they do for pay	<input type="checkbox"/>	<input type="checkbox"/>
33.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they are fun and interesting on a date	<b>BUT</b>	Other teenagers wonder about how fun and interesting they are on a date	<input type="checkbox"/>	<input type="checkbox"/>
34.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers do things they know they shouldn't do	<b>BUT</b>	Other teenagers hardly ever do things they know they shouldn't do	<input type="checkbox"/>	<input type="checkbox"/>

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
35.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers find it hard to make friends they can really trust	<b>BUT</b>	Other teenagers <i>are</i> able to make close friends they can really trust	<input type="checkbox"/>	<input type="checkbox"/>
36.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers like the kind of person they are	<b>BUT</b>	Other teenagers often wish they were someone else	<input type="checkbox"/>	<input type="checkbox"/>
37.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they are pretty intelligent	<b>BUT</b>	Other teenagers question whether they are intelligent	<input type="checkbox"/>	<input type="checkbox"/>
38.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers know how to become popular	<b>BUT</b>	Other teenagers do not know how to become popular	<input type="checkbox"/>	<input type="checkbox"/>
39.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers do not feel that they are very athletic	<b>BUT</b>	Other teenagers feel that they <i>are</i> very athletic	<input type="checkbox"/>	<input type="checkbox"/>
40.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers really like their looks	<b>BUT</b>	Other teenagers wish they looked different	<input type="checkbox"/>	<input type="checkbox"/>
41.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers feel that they are really able to handle the work on a paying job	<b>BUT</b>	Other teenagers wonder if they are really doing as good a job at work as they should be doing	<input type="checkbox"/>	<input type="checkbox"/>
42.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers usually <i>don't</i> go out with people they would really like to date	<b>BUT</b>	Other teenagers <i>do</i> go out with people they really want to date	<input type="checkbox"/>	<input type="checkbox"/>
43.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers usually act the way they know they are supposed to	<b>BUT</b>	Other teenagers often don't act the way they are supposed to	<input type="checkbox"/>	<input type="checkbox"/>
44.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers <i>don't</i> understand what they should do to have a friend close enough to share personal thoughts with	<b>BUT</b>	Other teenagers <i>do</i> understand what to do to have a close friend with whom they can share personal thoughts.	<input type="checkbox"/>	<input type="checkbox"/>
45.	<input type="checkbox"/>	<input type="checkbox"/>	Some teenagers are very happy being the way they are	<b>BUT</b>	Other teenagers often wish they were different	<input type="checkbox"/>	<input type="checkbox"/>

Susan Harter, Ph.D., University of Denver, 2012

Questions about your Instagram use

Female  Male  Age \_\_\_\_\_

**Please answer the following questions carefully by choosing which answer fits best for you.**

**1. Do you have an Instagram account?**

YES \_\_\_\_\_ NO \_\_\_\_\_

(If you answered 'NO' to this question, you're finished. Please hand in your survey)

**2. Is your Instagram account private?**

YES \_\_\_\_\_ NO \_\_\_\_\_

**3. How many followers do you have on Instagram?**

0 - 20

20 - 50

50 - 100

100 - 150

150 - 200

200 +

**4. Who do you follow on Instagram (Select all that apply)?**

Close friends

Facebook friends

School friends

People I have met online

Accounts that I am interested in (Fashion, Sports, Funny accounts)

Strangers

Family

Other: \_\_\_\_\_

**4. a)** If you follow accounts that you are interested in (Fashion, Sports, Funny accounts), which ones are they?

---

---

**5. Who are your followers on Instagram (select all that apply)?**

Close friends

Facebook friends

School friends

Friends I have met online

Random people or accounts

Strangers

Family

Other: \_\_\_\_\_

**6. How often do you post pictures on Instagram?**

Less than once a day

Once a day

Multiple times a day

Once a week

Multiple times a week

Once a month

Multiple times a month

**7. How often do you view other peoples' posts?**

- Less than once a day
- Once a day
- Multiple times a day
- Once a week
- Multiple times a week
- Once a month
- Multiple times a month

**8. When I post pictures of myself, I am most likely to post:**

- A selfie
- Me with friends
- Me with my family
- #TBT (Throwback Thursday)
- Me doing something I love (Playing a sport, hiking, cooking)
  
- I would never post a picture of myself
- Other: \_\_\_\_\_

**8. a) When I post pictures of other people, I am most likely to post:**

- Pictures of my family
- Pictures of my friends
- Pictures of people I don't know (Explain:)  
\_\_\_\_\_
- Other: \_\_\_\_\_
- I don't post pictures of other people

**9. What kinds of pictures are you most likely to post on Instagram? Rank these categories from 1-7 (1 = most likely, 7 = least likely).**

- Pictures of the environment (eg. Mountains, buildings, sunsets)
- Selfies
- Me doing something I love (eg. Playing a sport, hiking, cooking etc.)
- Pets
- Friends
- Family
- Other: \_\_\_\_\_

**10. What kind of pictures do your friends usually post on Instagram? Number these categories from 1-7 (1 = most likely, 7 = least likely).**

- Pictures of the environment (eg. Mountains, buildings, sunsets)
- Selfies
- Them doing something I love (eg. Playing a sport, hiking, cooking etc.)
- Pets
- Friends
- Family
- Other: \_\_\_\_\_

**11. What do you like most about other people's Instagram posts?**

- I get to see what my friends are doing
- I get to see who my friends are with
- I get inspired by other people's pictures
- I get to see where my friends are
- Other: \_\_\_\_\_

**12. How important is it to you that your Instagram pictures get 'likes'?**

Not at all important      Somewhat important      Very important  
1                              2                              3                              4                              5

**13. Have you ever deleted one of your Instagram pictures because it did not get many 'likes'?**

YES \_\_\_\_\_ NO \_\_\_\_\_

**14. If you have deleted a picture that did not get many likes, what was the reason?**

- It obviously wasn't a very good picture
- I felt silly that I posted it
- People might think I was stupid for posting it
- I do not know why I deleted it
- I have never deleted a picture because it didn't get many likes
- Other: \_\_\_\_\_

**15. How often do you "like" your friend's Instagram photos?**

- I like every photo that my friends post regardless of what it is
- I like the photo if I am in it
- I like my friend's photos only if they like mine
- I like the photo only if I think it is a nice picture
- I never like other people's photos
- Other: \_\_\_\_\_



Read each statement carefully and rate how true it is for you. As a reminder, everything you write is completely confidential so please answer as honestly as you can when responding.

**16. Using Instagram has made me more aware of the way I look**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**17. Using Instagram has made me more critical about my body**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**18. My friends post pictures on Instagram and make sure everyone is included or tagged**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**19. Using Instagram makes me more concerned with what I look like in pictures**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**20. When I see pictures of myself on Instagram I feel bad about how I look**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**21. My friends post pictures on Instagram to show off**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**22. My friends post pictures on Instagram to make people feel jealous**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**23. When I see pictures of myself on Instagram I feel better about how I look**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**24. Using Instagram has made me feel better about the way I look**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**25. When I see pictures of myself on Instagram I feel bad about my body**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**26. My friends post pictures on Instagram to exclude other people**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**27. When I see pictures of myself on Instagram I feel better about my body**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**28. When I see pictures of myself on Instagram I wish I could change something**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**29. When I see pictures of my friends and me on Instagram I feel closer with my friends**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**30. Using Instagram has made me feel more connected with my friends**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**31. When I see pictures of my friends on Instagram I feel bad about how I look**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**32. When I see pictures of my friends on Instagram I feel bad about my body**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**33. Using Instagram has made me want to lose weight**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**34. Using Instagram has made me want to work out more**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

**35. I compare myself with other people on Instagram**

Not true at all	Not very true	Neutral	Somewhat true	Very true
1	2	3	4	5

