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Instagram Use in Emerging Adults

by

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Honours Thesis

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### Abstract

Emerging adults are among the heaviest users of Instagram. Past literature shows that there is a lack of research on self-presentation, like-seeking behaviour, and motivations for using Instagram. The present study aims to understand emerging adults' use of Instagram, particularly in relation to their attachment styles with friends and dating partners. Participants in this study were 110 university students (92 females, 18 males) ranging from 18 to 22 years old in age. Participants completed a series of five online self-report questionnaires pertaining to their attachment style, Instagram use/frequency, Instagram motivations, like-seeking behaviour, and online self-presentation. Results showed that deceptive like-seeking positively predicted false self-presentation and this relationship was strengthened for individuals with anxious partner attachments. Main effects of attachment style were only significant for avoidant friend attachment predicting deceptive like-seeking, but not for other insecure attachments. Furthermore, motivation for using Instagram for coolness predicted higher deceptive like-seeking. Practical implications from this study can be used to educate and inform young people about their Instagram use and its relation to their peer relationships and online self-presentation.

### Instagram Use in Emerging Adults

The use of social networking sites (SNS) has greatly increased within the past decade, with approximately 90% of emerging adults engaging in at least one SNS (Perrin, 2015). In the past, researchers have studied both the positive and negative outcomes of SNSs, with adolescent and emerging adult populations. Adolescents and emerging adults make up a significant proportion of active daily SNS users, with many young people engaging in more than one SNS (Phua, Jin, & Kim, 2017). A significant number of these active young SNS users are college and university students (Brandtzaeg, 2012). Some positive outcomes associated with SNS use include, meeting new people, interacting with friends and family, and strengthening social bonds (Brandtzaeg, 2012; Phua et al., 2017). However, research has also shown that negative outcomes may result from SNS use and include, increased rates of online addiction, loneliness, and social comparison (Baek, Cho, & Kim, 2014; Chou & Edge, 2012; Monacis, de Palo, Griffiths, & Sinatra, 2017). Importantly, findings from previous literature on SNS use and outcomes have found that SNS use and engagement alone may not lead to more positive or negative outcomes, but rather motivations for using specific SNSs and how individuals use SNSs may lead to such outcomes (Sheldon & Bryant, 2016). Specifically, motivations that include using SNSs for coolness or for self-presentation and on-line behaviours that are deceptive are linked to lower ratings of life satisfaction and higher ratings of self-disclosure (Dumas, Maxwell-Smith, Davis, & Giulietti, 2017; Trub, 2017).

The purpose of this study is to investigate self-presentation on Instagram and its relation to attachment style to friends and dating partner among emerging adults. The goal is to examine how patterns of real life interactions relate to on-line behaviours. Additionally, this study aims to explore like-seeking behaviour that is relatively new to research and is apparent in SNSs, in

particular with Instagram. This study hopes to contribute information regarding the motivations of using Instagram as it is a popular SNS used by many emerging adults and is relevant to their daily lives, especially within a university setting. However, there is an evident gap in previous research conducted around the uses and motivations of SNSs, especially looking at Instagram. This study aims to address these gaps in research by including attachment style to friends and dating partner and its relation to online self-presentation of a real, ideal, and/or false self in a sample of emerging adults.

### **SNS and Instagram**

Instagram was created in 2010 and has increased in popularity with an average of over 500 million active daily users (Aslam, 2017). It has also been found that 18 to 29 year olds are of the heaviest users of the popular SNS (Aslam, 2017), with emerging adults falling into this age demographic. Instagram is a unique mobile application (or app) that gives users the choice to either make their personal profile public, for anyone to view, or private, where they have control over who follows them and can view their profile and posts. Instagram acts like a virtual photo album which can be appealing to some individuals, but may also have negative drawbacks such as greater social comparison, greater false self-presentation, and greater need for popularity (Brandtzaeg, 2012; Sheldon & Bryant, 2016; Tobin & Chulpaiboon, 2016).

### **Attachment Style in Emerging Adults**

An important aspect of social relationships both on and off line is the development of close, intimate relationships, which according to Erikson (1968) is a major developmental task in emerging adulthood. Across development, there appears to be a shift in attachment from parents, during infancy and childhood, to greater attachment to friends and peers, during early adolescence and into emerging adulthood (Chopik, Edelstein, & Fraley, 2013). Friends help

develop social skills used in peer interaction and in social bonding and may act as a safe haven for support, comfort, and reassurance over and above mothers and fathers in adolescence and emerging adulthood (Markiewicz, Lawford, Doyle, & Haggart, 2006; VanUitert & Galliher, 2012). Previous research has looked at the role of friends in the transition to college and found that best friends from high school were significantly important for participants within the first month of starting college. In general, remaining close to one's best friends from high school helped individuals ease into the transition to college, but as time progressed this relationship transferred over to new friends made in college. Making at least one friend in college aided in participants' academic, social, and emotional adjustment (Swenson, Nordstrom, & Hiester, 2008). Another developmental task that is of significance during emerging adulthood is the emergence and maintenance of dating relationships (Erikson, 1968). VanUitert and Galliher (2012) compared attachment styles to friends and a dating partner in a sample of undergraduate students ranging from 17 to 26 years old. They found that more than half of the participants who were currently in a dating relationship had convergent attachment styles to both their friends and their dating partner, with less than half of them having a secure attachment style to both. Although, when participants reported having divergent attachment styles to their friends and to their dating partner, more than half of them had a secure attachment to one and either an anxious or avoidant attachment to the other. The current study aims to focus on both attachment to friends and attachment to a dating partner as they are both significant to the social development of emerging adults. Furthermore, attachment to friends and dating partner will be explored in relation to self-presentation on Instagram.

### **Self-Presentation in Emerging Adults and Attachment Style**

Self-presentation is malleable and not static; it is constantly changing both on and off line. According to Michikyan, Dennis, and Subrahmanyam (2015), self-presentation is defined as the display of behaviour individuals use to present information about the self to others. Individuals look for feedback from others to assist in the formation of their self-concept and internalize certain attributes about themselves. In relation to self-presentation, self-concept is the cognitive focus of the real, ideal, and false self. The real self is characterized by authentic and internal attributes of an individual, whereas the ideal self can be characterized by both positive and/or negative attributes of an individual, and lastly, the false self is characterized by behaviour that is not true to an individual and can be expressed through deception, exploration, or for comparison/impression management.

With the increased use and popularity of SNSs it is important to assess how SNSs influence people's online self-presentation, especially in emerging adults as they make up a large number of active SNS users. Both adolescents and emerging adults more frequently post and share information online in comparison to middle-aged and older adults. (Aslam, 2017). SNSs provide a platform for individuals to gain necessary feedback from others in order to develop their sense of self, in particular to Instagram which predominantly focuses on enhancing self-presentation through posting pictures and videos. According to Gil-Or, Levi-Belz, and Turel (2015) *false* self-presentation may act as a gateway toward more problematic behaviours such as psychological problems and/or pathologies. Individuals at the most risk of severe consequences from engaging in false self-presentation are those whose self-presentation deviates greatly from their real self and/or for over a long period of time. The focus of this study aims to assess attachment style to close friends and dating partner as predictors of self-presentation on Instagram with a sample of emerging adults.

Individuals with an insecure attachment style may be more concerned about being accepted and/or rejected from their peers and may be more reactive to the feedback they receive from others (Gorrese & Ruggieri, 2013). A study looking at attachment style and Facebook use found individuals with a more anxious attachment style were more likely to seek positive feedback from others (Hart, Nailling, Bizer, & Collins, 2015). Individuals with an anxious attachment style are characterized as rating higher in anxiety and lower in avoidance, they tend to seek closeness from others and fear abandonment (Bartholomew & Horowitz, 1991). A study by Trub (2017) sampled a group of online bloggers and found that insecure attachment predicted online self-presentation and self-disclosure of an *ideal* self. Participants who rated higher on anxious and avoidant attachment were more likely to share personal information online, through their blogs, relating to both positive and negative attributes of the self, as opposed to offline with their family and friends. Furthermore, VanderDrift, Tyler, and Ma (2015) found that participants higher on anxious and avoidant attachment style to their dating partner were more likely to report higher levels of intimacy in their relationship when they perceived the presence of another couple as an incoming threat to their own relationship. Participants with an anxious attachment style were more likely to inflate the quality and intimacy of their relationship to possibly make up for any shortfalls in their actual relationship. Anxious individuals may show less authenticity in how they present themselves, and may be more likely to rate higher in false self-presentation (Gil-Or et al., 2015). In the present study, it is expected that individuals with anxious attachments will report higher ratings of false self-presentation on Instagram.

### **Motivations to use SNS in Emerging Adults**

Motivations to use SNSs may vary between each user and across different SNS platforms. According to Steijn (2014) emerging adults engage in SNSs to develop and maintain



existing, established relationships through socializing and interacting with their friends and dating partner online. Through a uses and gratifications lens, SNS users seek out certain types of online platforms to meet their different needs (Phua et al., 2017). A systematic review of the literature done on Facebook found that use of Facebook met two primary social needs: the need to belong and the need for self-presentation (Nadkarni & Hofmann, 2012). SNSs allow users to interact with their friends, family, and dating partner as well as share pictures and make posts regarding their personal and social lives. It is important to assess motivations for use in order to have a better understanding of what individuals do on specific SNSs, as some individuals may use SNSs differently on the same platform, or similarly across multiple platforms (Brandtzaeg, 2012). Sheldon and Bryant (2016) developed four main motivations for using Instagram which include: (1) surveillance and knowledge about others, (2) documentation, (3) coolness, and (4) creativity. It was found that documentation was distinct to Instagram in comparison to other SNSs like Facebook or Twitter. Furthermore, creativity was a new motivation that was not found in prior studies done on SNS motivation. Instagram's appeal for visual self-presentation allows users to express themselves creatively through photos and videos, as well as use filters to edit and enhance their posts, which may be particularly fitting for various artists to share and display their work to get more popularity and opportunities for self-promotion. Further findings from Sheldon and Bryant's (2016) study suggest that coolness was negatively associated with ratings of life satisfaction among some of the participants. Participants who rated higher on using Instagram for coolness spent more time editing their photos before uploading them to their profiles. Use of editing software and filters to enhance photos may be more appealing for some individuals to reinforce the degree of popularity and status they have with their peers by increasing the number of likes and followers they have on Instagram. An individual who may

score lower on ratings of life satisfaction may be more likely to enhance their self-presentation online, through engaging in more deceptive like-seeking behaviour, to make up for the discrepancy offline. The current study aims to expand on the findings developed by Sheldon and Bryant (2016) by examining motivations to use Instagram with aspects of like-seeking behaviour.

### **Instagram and Like-Seeking Behaviour in Emerging Adults**

To support varying motivations and goals for self-presentation online, individuals may make decisions to strategically enhance SNS connections. Instagram users receive attention and validation through likes from other people on their posts, this can include both people they know as well as people they do not know, including spam accounts which act like real accounts, but are created for the sole purpose of increasing likes. According to Dumas et al. (2017), like-seeking behaviour is defined as the degree of actions an individual partakes in to increase the number of likes they gain from others on their pictures and videos, which is prominent for Instagram. Common examples of like-seeking behaviour include: using a hashtag (#), using filters to enhance photos, uploading a post at a certain time of the day, and buying likes and/or followers from a third-party source. Findings from this study were that like-seeking behaviour could be categorized into two types, normative and deceptive. Normative like-seeking tended to be a more well-accepted and common way to gain more likes among Instagram users. For example, using hashtags and filters to get more likes on a post and enhance SNS connections. On the other hand, deceptive like-seeking tended to be a more dishonest way of gaining more likes, such as buying likes and/or followers online as well as using enhancing software to digitally alter photos. Research on like-seeking behaviour shows that lower peer belonging is a predictor of

deceptive (and normative) like-seeking behaviour. Individuals who rate higher on peer belonging rate higher on use of normative like-seeking, but not deceptive like-seeking.

Like-seeking is a common activity many Instagram users engage in and is important to study its relevance. Some individuals may have severe negative implications if they engage in more deceptive like-seeking including social repercussions if friends find out and monetary problems resulting from buying likes and/or followers often. The present study aims to determine if attachment style to friends and dating partner will be a possible predictor of like-seeking behaviour in a sample of emerging adults, as well as see how motivations for using Instagram relate to like-seeking. These findings are expected given that differences in attachment style may influence how individuals use and engage in SNSs. An individual with a secure attachment style may be less inclined to act deceptively online given that their perception of others as trustworthy and available may lead them to more genuine and authentic self-presentation. On the contrary, an individual with an insecure attachment style may be more motivated to engage in false self-presentation and act deceptively online to make up for their insecurities in their own offline relationships, as well as to increase the number of likes and followers they have to appear more liked and accepted by their peers, even if they have to purchase likes and/or followers. It is expected that deceptive like-seeking such as buying likes and/or followers from a third-party source will predict more false self-presentation. This relationship may be further moderated by an individual's attachment style, especially for insecure, anxious individuals such that they may perceive engaging in such behaviour as coming with fewer known risks when done online than offline (Gil-Or et al., 2015). Individuals who act deceptively may not feel as threatened online, compared to in real life, if someone calls them out for being "fake".

### **The Present Study**

Overall, contributions from previous research have predominantly focused on general SNS and Facebook use. However, over time, Instagram has increased in use and popularity. It is important to distinguish between research findings from Instagram separate from other SNSs given the photo-sharing nature of Instagram focused on gaining likes and followers. Instagram predominantly focuses on online self-presentation and promotion as opposed to developing and maintaining relationships (Dumas et al., 2017). The nature of Instagram varies from other SNS platforms, like Facebook and Twitter, where users post pictures and/or videos to their profile rather than compose written messages via status updates or tweets. Instagram will be the focus of the present study and its relation to online self-presentation and emerging adults' attachment style.

The present study aims to assess the relationship between attachment style to friends and dating partner and online self-presentation in emerging adults and include aspects of motivations for use on Instagram and like-seeking behaviour. It is first hypothesized that (H1) higher insecure attachment to friends/dating partner and higher deceptive like-seeking will positively relate to online false self-presentation. Secondly, it is hypothesized that (H2) individuals who rate higher on false self-presentation on Instagram will rate higher on deceptive like-seeking which may be moderated by their attachment style, in particular individuals with an anxious attachment style to friends/dating partners will have a stronger, positive, relationship between false self-presentation and deceptive like-seeking. Third, it is hypothesized that (H3) individuals who rate higher on motivations for using Instagram for coolness (e.g. "to become popular", "it is cool", "to self-promote", etc.) will rate higher on deceptive like-seeking. Lastly, it is hypothesized that (H4) individuals who post more photos and videos with friends and/or with their dating partner will rate higher on normative like-seeking behaviour.

Participants in this study will be emerging adults with an Instagram account. Upon signing up for the study, participants will be given a link to complete a series of five online self-report questionnaires. The questionnaires will be measuring the following variables: attachment style to friends and dating partner, Instagram use/frequency, motivations for using Instagram, like-seeking behaviour, and online self-presentation. Attachment style is operationally defined as attachment to friends and a dating partner, although participants are not required to be in a current dating relationship, they may answer for a hypothetical or past relationship. Frequency and use of Instagram is operationally defined as the number of times an individual checks Instagram and other related uses such as number of times they post in a month, and more specific to the type of posts they share (e.g., pictures with friends or with a dating partner). Motivations for using Instagram is operationally defined as the main reasons for using Instagram (Sheldon & Bryant, 2016). Like-seeking behaviour is operationally defined as the degree of actions an individual partakes in to increase the number of likes they gain from others on their posts (Dumas et al., 2017). Lastly, online self-presentation is operationally defined as the display of behaviour individuals use to present information about the self to others (Michikyan et al., 2015).

## **Method**

### **Participants**

Participants in this study were taken from a sample of undergraduate psychology students attending King's University College in London, Ontario. A total of 110 participants were included in this study, with 92 females and 18 males. Participants' age ranged from 18 to 22 years old, with a mean age of 19.28 ( $SD = 1.24$ ). Participants were required to have an Instagram account before proceeding with the study.

### **Materials**

**Demographics.** Participants were asked questions regarding their sex, age (e.g. 18-19, 20-21, or 22+), and current relationship status (e.g. single, single but was in a relationship in the past 12 months, or in a relationship).

**Experiences in Close Relationships - Relationship Structures Questionnaire (ECR-RS).** Attachment styles were measured using the Experiences in Close Relationships-Relationship Structures questionnaire (ECR-RS) developed by Fraley, Heffernan, Vicary, and Brumbaugh (2011). Participants rated 18 statements using a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*) with 9 statements related to their attachment to a close friend and 9 statements related to their attachment to a dating partner. Participants did not have to be in a relationship to answer these questions, but could answer on behalf of a past or hypothetical relationship. The original questionnaire also included attachment to mother and attachment to father, but were omitted from this study. Sample questions for friend attachment is “I find it easy to depend on my friend” and partner attachment is “It helps to turn to my partner in times of need”. Eight items were reverse scored on the avoidant subscale for both friend and partner attachments (‘I usually discuss my problems and concerns with my friend/partner’; ‘I talk things over with my friend/partner’; ‘It helps to turn to my friend/partner in times of need’; ‘I find it easy to depend on my friend/partner’). Higher scores indicate high ratings of avoidant attachment and lower scores indicate low ratings of avoidant attachment. Participants’ scores were averaged and differentiated between high and low ratings of insecure attachment styles categorized by anxiety and avoidance to friends and dating partners and computed into summary scores for each subscale. The Cronbach’s alpha value for this measure was .84.

**Instagram Use.** Instagram use and frequency were measured using a self-report measure adapted by the researcher (refer to Appendix A). Participants rated 8 statements using a 6-point

scale of varying degrees, with the exclusion of one statement using a 2-point scale. Questions 2 through 6 were taken from a study by Dumas, Maxwell-Smith, Davis, and Giulietti (2017) where the authors left them open-ended whereas participants were given a scale for each in this study. A sample question from this measure is “What is the average number of posts you upload to Instagram in a month?”. The Cronbach’s alpha value for this measure was .72.

**Motives for Instagram Use Questionnaire.** Motivations for using Instagram were measured using the Motives for Instagram Use questionnaire developed by Sheldon and Bryant (2016). The scale is made up of four subscales (surveillance/knowledge about others, documentation, coolness, and creativity) with a total of 20 items, using a 5-point scale (1 = *never*; 5 = *always*). Participants’ scores were averaged and computed into summary scores for each subscale. An example item from the surveillance/knowledge about others subscale is “To interact with my friends” ( $\alpha = .77$ ). An example item from the documentation subscale is “To remember special events” ( $\alpha = .84$ ). An example item from the coolness subscale is “To become popular” ( $\alpha = .80$ ). Lastly, an example item from the creativity subscale is “To create art” ( $\alpha = .70$ ). An additional 4 items were created by the researcher regarding dating behaviour and friends (refer to Appendix B). Example items created by the researcher are “To show off my boyfriend/girlfriend” and “To feel better about and/or strengthen my friendships” ( $\alpha = .75$ ).

**Instagram Like-Seeking Behaviour.** Like-seeking behaviour on Instagram was measured using a scale developed by Dumas et al., (2017). Participants rated 11 statements using a 3-point scale (1 = *never*; 3 = *multiple times*). Participants’ responses were distinguished between two categories, normative like-seeking and deceptive like-seeking. Participants’ scores were averaged and computed into summary scores for each subscale. A sample item of

normative like-seeking is “used a hashtag” ( $\alpha = .65$ ) and a sample item of deceptive like-seeking is “purchased likes” ( $\alpha = .57$ ).

**Self-Presentation on Facebook Questionnaire (SPFBQ).** Self-presentation on Instagram was measured using the SPFBQ developed by Michikyan, Dennis, and Subrahmanyam (2015). The original scale was made in relation to Facebook self-presentation, but was modified for Instagram in this study. For example, questions that included the word “Facebook” were replaced with “Instagram”. The scale assessed aspects of participants’ real, ideal, and false self-presentation online. The scale is made up of five subscales (real self, ideal self, false self-deception, false self-exploration, and false self-compare/impress) with a total of 17 statements, using a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). Participants’ scores were averaged and computed into summary scores for each subscale. Examples of statements include, “Who I am online is similar to who I am offline (real self subscale)” ( $\alpha = .73$ ), “I post things on my (Instagram) to show aspects of who I want to be (ideal self subscale)” ( $\alpha = .75$ ), “I sometimes try to be someone other than my true self on (Instagram) (false self-deception subscale)” ( $\alpha = .79$ ), “On (Instagram), I can try out many aspects of who I am much more than I can in real life (false self-exploration)” ( $\alpha = .57$ ), and “I compare myself to others on (Instagram) (false self-compare/impress)” ( $\alpha = .71$ ).

### **Procedure**

After receiving ethical approval from the King’s Ethics Review Board, participants from Psychology 1000 classes were recruited through the SONA website. Participants were also recruited from additional psychology classes at King’s via the researcher visiting second year classrooms. Participants who signed up for the study were contacted by the thesis student via email and were redirected to an online link in order to access the study and complete the



questionnaires. Participants were asked to read through the letter of information and consent form online. Participants checked a box in agreement to the ‘Terms & Conditions’ of the study regarding their consent to carry on in the study. Participants were asked to complete a series of five self-report questionnaires, including a demographic form, that took less than one hour to complete. The questionnaires were presented in the following order, from general to more specific, the ECR-RS, Instagram use, Motives for Instagram Use questionnaire, Instagram like-seeking questionnaire, and the SPFBQ. Upon completion of the five questionnaires, participants received a debriefing form to inform them of the overall purpose and aim of the study and had to click a button in order to conclude the study and have their response recorded. Participants from Psychology 1000 classes received 2.5% bonus marks for completing a related assignment. Participants from additional psychology classes at King’s received a \$5 Tim Horton’s gift card upon completion of the study.

## **Results**

### **Descriptive and Preliminary Analysis**

**Frequency of Instagram use and like-seeking behaviour.** Frequency analyses were run to determine the percent of student self-reports of Instagram use and like-seeking behaviour, results are found in Table 1. Instagram use reports concluded 67.3% of students had a private account on Instagram, 16.4% reported having checked Instagram at least 25 times in one day, and 44.5% reported having 500 or more followers on Instagram. Like-seeking behaviour reports concluded that 89.1% of students have used a filter on one of their posts at least once, 78.2% reported having used a hashtag (#) at least once, 55.5% reported having shared posts on multiple social network sites (e.g. Facebook, Twitter) at least once, 44.5% reported having used software to modify their physical appearance in a post at least once, with 9.9% reported having purchased

likes at least once, and 8.2% reported having purchased followers at least once. When combining the two lowest items, it was found that 11.8% reported having either purchased likes *or* followers at least once, while 8.2% have done both.

**Frequency of Instagram Motivations.** Frequency of participants' motivations for using Instagram were computed and taken from a 4.00 cut-off, only including responses of "often" or "always". A summary of frequencies regarding participants' motivations is displayed in a bar graph in Figure 1. Instagram motivation reports concluded 35.4% of students used Instagram for the purpose of surveillance and knowledge about others, 25.4% reported having used Instagram for documentation purposes, 10.9% reported having used Instagram for coolness purposes, 10% reported having used Instagram for creativity purposes, and 3.6% reported having used Instagram for relationship purposes.

Table 1  
*Frequencies of Instagram Use and Like-Seeking Behaviour*

Activity	Percentage
Had a private account on Instagram	67.3%
Checked Instagram at least 25 times in a day	16.4%
Had 500 or more followers on Instagram	44.5%
Used a filter at least once	89.1%
Used a hashtag (#) at least once	78.2%
Shared posts on multiple social network sites (e.g. Facebook, Twitter)	55.5%
Used software to modify physical appearance at least once	44.5%
Purchased likes at least once	9.9%
Purchased followers at least once	8.2%

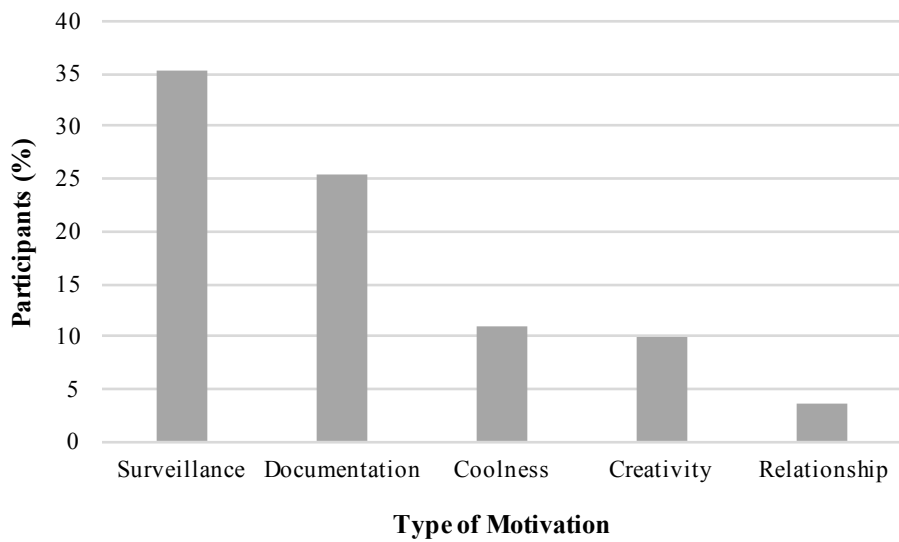


Figure 1. Participants' frequency of different motivation types for using Instagram.

### Correlations Among Variables

Correlations were computed among the variables of interest and are presented in Table 2. Results indicate many variables were positively and significantly correlated. Avoidant friend attachment was significantly positively correlated with anxious friend attachment ( $r = .33, p < .05$ ) and avoidant partner attachment ( $r = .24, p < .05$ ), but did not significantly correlate with anxious partner attachment. Similarly, anxious friend attachment significantly positively correlated with anxious partner attachment ( $r = .38, p < .01$ ), but did not significantly correlate with avoidant friend attachment. Lastly, avoidant partner attachment significantly positively correlated with anxious partner attachment ( $r = .55, p < .01$ ). These correlations suggest only moderate correlations between anxious and avoidant attachment styles to friends and dating partners. Furthermore, normative and deceptive like-seeking were not significantly correlated with attachment style.

Additionally, correlations were computed between motivation, like-seeking, and false self-presentation and are presented in Table 3. Motivation for using Instagram for coolness was significantly positively correlated with both normative like-seeking ( $r = .34, p < .01$ ), deceptive like-seeking ( $r = .28, p < .01$ ), and across all three subscales of false self-presentation: deception ( $r = .28, p < .01$ ), exploration ( $r = .32, p < .01$ ), and comparison ( $r = .34, p < .01$ ). Normative like-seeking was significantly positively correlated with deceptive like-seeking ( $r = .25, p < .01$ ), false self-presentation deception subscale ( $r = .21, p < .05$ ) and comparison subscale ( $r = .35, p < .01$ ), but not significantly correlated with false self-presentation exploration subscale. Deceptive like-seeking was significantly positively correlated with all three false self-presentation subscales: deception ( $r = .38, p < .01$ ), exploration ( $r = .22, p < .05$ ), and comparison ( $r = .23, p < .05$ ). Lastly, all three false self-presentation subscales were significantly positively correlated

Table 2  
*Correlations Between Attachment Style, Like-Seeking, and False Self-Presentation*

		1	2	3	4	5	6	7	8	9
1	Friend Avoidant	-								
2	Friend Anxious	.33*	-							
3	Partner Avoidant	.24*	.15	-						
4	Partner Anxious	.10	.38**	.55**	-					
5	Normative LS	-.08	.08	-.04	.24*	-				
6	Deceptive LS	.17	.03	.14	.12	.25**	-			
7	False SP- Deception	.03	.13	.29**	.31**	.21*	.38**	-		
8	False SP- Exploration	.05	-.01	.06	.09	.13	.22*	.39**	-	
9	False SP- Comparison	-.14	.04	.07	.17	.35**	.23*	.44**	.29**	-

Note. LS= Like-seeking, SP= Self-presentation, \* $p < .05$ , \*\* $p < .01$

Table 3  
*Correlations Between Motivation, Like-Seeking, and False Self-Presentation*

		1	2	3	4	5	6
1	Coolness	-					
2	Normative LS	.34**	-				
3	Deceptive LS	.28**	.25**	-			
4	False SP- Deception	.28**	.21*	.38**	-		
5	False SP- Exploration	.32**	.13	.22*	.39**	-	
6	False SP- Comparison	.34**	.35**	.23*	.44**	.29**	-

Note. LS= Like-seeking, SP= Self-presentation, \* $p < .05$ , \*\* $p < .01$

Table 4  
*Correlations Between Motivations, Like-Seeking, and Attachment Style*

		1	2	3	4	5	6	7	8	9	10
1	Surveillance	-									
2	Documentation	.61**	-								
3	Coolness	.40**	.42**	-							
4	Creativity	.13	.29**	.44**	-						
5	Normative LS	.28**	.40**	.34**	.28**	-					
6	Deceptive LS	.22*	.22*	.28**	.37**	.25**	-				
7	Friend Avoidant	-.40**	-.47**	-.15	.05	-.08	.17	-			
8	Friend Anxious	-.09	-.10	-.07	-.14	.08	.03	.33*	-		
9	Partner Avoidant	-.10	-.25**	.02	-.05	-.04	.14	.24*	.15	-	
10	Partner Anxious	.06	.03	.01	-.02	.24*	.12	.10	.38**	.55**	-

Note. LS= Like-seeking, \* $p < .05$ , \*\* $p < .01$

with each other. False self-presentation deception subscale was significantly positively correlated with false self-presentation exploration subscale ( $r = .39, p < .01$ ) and false self-presentation comparison subscale ( $r = .44, p < .01$ ) and false self-presentation exploration subscale was significantly positively correlated with false self-presentation comparison subscale ( $r = .29, p < .01$ ).

Lastly, correlations were also computed between motivations, like-seeking, and attachment style and are presented in Table 4. Surveillance motivation was significantly negatively correlated with avoidant friend attachment ( $r = -.40, p < .01$ ), but was not significantly correlated with anxious friend attachment or insecure partner attachment. Documentation motivation was significantly negatively correlated with both avoidant friend attachment ( $r = -.47, p < .01$ ) and avoidant partner attachment ( $r = -.25, p < .01$ ), but was not significantly correlated with anxious attachment styles. Coolness and creativity motivations were not significantly correlated with any of the attachment styles. Furthermore, many of the motivations were significantly positively correlated with one another as shown in Table 4, as well as were significantly positively correlated with both normative and deceptive like-seeking.

### **Analytic Plan for Hypothesis Testing**

The hypotheses of the current study were tested using hierarchical multiple regression analysis in SPSS. In all of the regression analyses age and gender were entered as control variables in step one, specific predictor variables were entered in step two, and interaction terms to test for moderating effects were entered in step three. The first hierarchical regression was conducted to determine whether attachment styles to friends and dating partners predicted deceptive like-seeking. A second hierarchical regression was conducted to determine whether deceptive like-seeking and attachment predicted false self-presentation (exploration). A third

hierarchical regression was conducted to determine whether deceptive like-seeking and attachment predicted false self-presentation (comparison). A fourth hierarchical regression was conducted to determine whether deceptive like-seeking and attachment predicted false self-presentation (deception). Lastly, a fifth hierarchical regression was conducted to determine whether motivation for using Instagram for coolness predicted deceptive like-seeking.

All relevant predictor variables were centred following recommendations of Aiken and West (1991). To test for moderation, variables were centred and interaction terms were created between anxious and avoidant attachment styles to friends, anxious and avoidant attachment styles to dating partner, and deceptive like-seeking. Hierarchical regressions were conducted to determine if anxious and avoidant attachment style to friends and to dating partners moderated the relationship between deceptive like-seeking and false self-presentation across the three subscales (deception, comparison, and exploration).

### **Hypothesis Testing**

#### **Predicting deceptive like-seeking from attachment to friends and dating partner.**

The first regression analysis was computed to determine if deceptive like-seeking could be predicted from attachment to friends and dating partner while controlling for age and gender. This model was significant for avoidant friend attachment,  $F(4, 105) = 2.50, p < .05$  and accounted for 8.7% of the variance in deceptive like-seeking, suggesting that individuals with more avoidant attachment styles to friends reported higher deceptive like-seeking (see Table 5, regression 1). The model was not significant for anxious friend attachment or anxious and avoidant partner attachments. Results partially supported the first hypothesis that attachment style would positively relate to more deceptive like-seeking.

Table 5

*Regression 1: Predicting Deceptive Like-Seeking from Attachment to Friends and Dating Partner*

<b>Variable</b>	<b>Beta</b>	<b>SE</b>	<b>t</b>
Age	.12	.03	1.29
Gender	.17	.09	1.80
Friend Avoidant	.22	.04	2.13*
Friend Anxious	-.05	.02	-.51
Partner Avoidant	.13	.05	1.09
Partner Anxious	.02	.03	.16

*Regression 2: Predicting False Self-Presentation (Exploration) from Deceptive Like-Seeking and Attachment to Friends and Dating Partner*

<b>Variable</b>	<b>Beta</b>	<b>SE</b>	<b>t</b>
Age	-.12	.06	-1.23
Gender	-.12	.19	-1.21
DLS	.27	.20	2.75**
Friend Avoidant	.02	.08	.23
Friend Anxious	-.07	.05	-.69
Partner Avoidant	-.12	.09	-1.017
Partner Anxious	.18	.05	1.43

*Regression 3: Predicting False Self-Presentation (Comparison) from Deceptive Like-Seeking and Attachment to Friends and Dating Partner*

<b>Variable</b>	<b>Beta</b>	<b>SE</b>	<b>t</b>
Age	-.01	.07	-.09
Gender	.13	.23	1.38
DLS	.24	.25	2.43*
Friend Avoidant	-.20	.10	-1.85
Friend Anxious	.04	.07	.40
Partner Avoidant	-.00	.12	-.02
Partner Anxious	.14	.07	1.12

*Regression 4: Predicting False Self-Presentation (Deception) from Attachment to Friends and Dating Partner and Deceptive Like-Seeking*

<b>Variable</b>	<b>Beta</b>	<b>SE</b>	<b>t</b>
Age	-.01	.06	-.08
Gender	-.04	.19	-.38
Friend Avoidant	-.13	.07	-1.34
Friend Anxious	.07	.05	.73
Partner Avoidant	.13	.09	1.17
Partner Anxious	.20	.05	1.70
DLS	.39	.18	4.26***
DLSXFriendAvoidant	-.02	.15	-.15
DLSXFriendAnxious	-.20	.14	-2.04*
DLSXPartnerAvoidant	-.23	.28	-1.73
DLSXPartnerAnxious	.30	.16	2.07*

*Regression 5: Predicting Deceptive Like-Seeking from Motivation to Use Instagram for Coolness*

<b>Variable</b>	<b>Beta</b>	<b>SE</b>	<b>t</b>
Age	.12	.03	1.29
Gender	.17	.09	1.80
Motivation- Coolness	.26	.04	2.89**

Note. DLS= Deceptive Like-seeking, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



**Predicting false self-presentation from deceptive like-seeking and attachment to friends and dating partner.** The second regression analysis was computed to determine if false self-presentation (exploration) could be predicted from deceptive like-seeking and attachment (Table 5, regression 2). This model was significant,  $F(7, 102) = 1.92, p < .01$ , and accounted for 11.6% of the variance in false self-presentation. Although, the model for attachment to friends and dating partner were not significant. The third regression analysis was computed to determine if false self-presentation (comparison) could be predicted from deceptive like-seeking and attachment (Table 5, regression 3). This model was significant,  $F(7, 102) = 1.83, p < .01$ , and accounted for 11.1% of the variance in false self-presentation. However, the model for attachment to friends and dating partner were not significant. Interaction terms between attachment and deceptive like-seeking were added in the above regressions, but were not significant and were subsequently removed from the final model.

The fourth regression analysis was computed to determine if false self-presentation (deception) could be predicted from deceptive like-seeking and attachment (Table 5, regression 4). This model was significant,  $F(7, 102) = 4.99, p < .001$ , and accounted for 25.5% of the variance in false self-presentation. Deceptive like-seeking predicted more false self-presentation for each subscale. Attachment to friend and dating partner were not significant predictors. In the final step of the regression, interaction terms were entered to determine if attachment to friends and dating partner moderated the relationship between deceptive like-seeking and false self-presentation (deception) (Table 5, regression 4). Results show that the interaction between deceptive like-seeking and anxious attachment style was a significant predictor of false self-presentation on the deception subscale. False self-presentation was negatively predicted by the interaction between deceptive like-seeking and anxious friend attachment ( $b = -.20, p < .05$ ) and

positively predicted by the interaction between deceptive like-seeking and anxious partner attachment ( $b = .30, p < .05$ ). Both interactions indicate that anxious attachment style moderated the relationship between deceptive like-seeking and false self-presentation.

To decipher the overall pattern of each interaction, separate regression lines were computed and plotted for individuals one standard deviation above (+1 *SD*) and one standard deviation below (-1 *SD*) the mean of the predictor. The interactions were graphed and can be seen in Figures 2 and 3. In Figure 2, when both anxious partner attachment and deceptive like-seeking were high, ratings of false self-presentation were also high. When anxious partner attachment was low, no differences in false self-presentation on the deception subscale were found regardless of low or high ratings of deceptive like-seeking. This interaction provides support for the second hypothesis indicating that anxious attachment style can strengthen the relationship between more deceptive like-seeking and more false self-presentation. On the contrary, in Figure 3, when deceptive like-seeking was high, attachment style did not differ on ratings of online false self-presentation. Although, when deceptive like-seeking was low, high anxious friend attachment showed more false self-presentation than low anxious friend attachment. This interaction provides support for the moderation hypothesis, indicating that higher anxious friend attachment predicted more false self-presentation, but only when deceptive like-seeking was low.

#### **Predicting deceptive like-seeking from motivation to use Instagram for coolness.**

The last regression analysis was computed to determine if deceptive like-seeking could be predicted from motivation to use Instagram for coolness. This model was significant,  $F(3, 106) = 4.66, p = .005$ , and accounted for 11.7% of the variance in deceptive like-seeking. As shown in



Figure 2. Interaction between deceptive like-seeking behaviour and anxious partner attachment on false self-presentation (deception subscale).

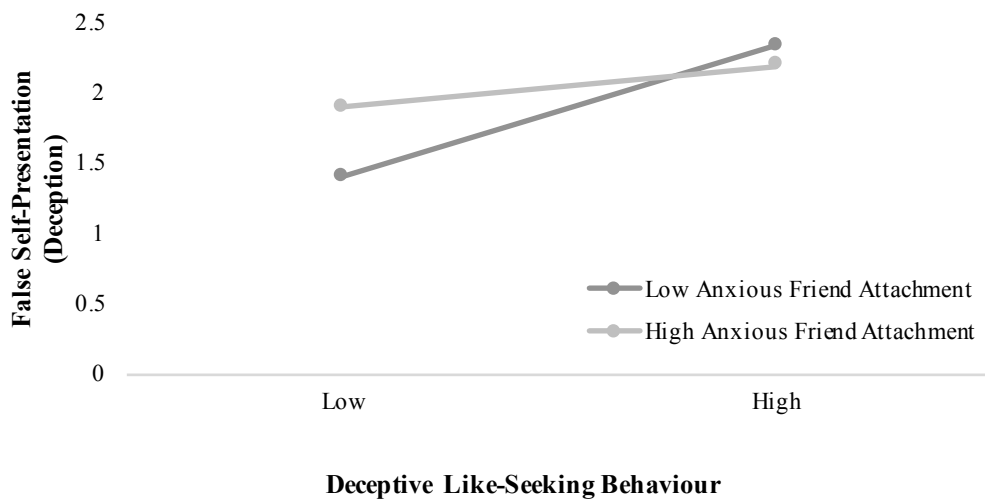


Figure 3. Interaction between deceptive like-seeking behaviour and anxious friend attachment on false self-presentation (deception subscale).

Table 5 regression 5, motivation to use Instagram for coolness predicted higher rates of deceptive like-seeking supporting the third hypothesis.

**Predicting like-seeking behaviour from Instagram use and frequency.** Lastly, it was hypothesized that individuals who post more photos and videos with friends and/or with their dating partner would rate higher on normative like-seeking behaviour. After conducting correlational analyses, this hypothesis was not supported, but other significant positive correlations were found between higher ratings of checking and posting on Instagram with like-seeking behaviour. Significant positive correlations were found for normative like-seeking and frequency of checking Instagram in a day ( $r = .20, p < .05$ ) and uploading posts in a month ( $r = .20, p < .05$ ). Significant positive correlations were also found for deceptive like-seeking and frequency of checking Instagram in a day ( $r = .27, p < .01$ ) and uploading posts in a month ( $r = .26, p < .01$ ). To summarize, more frequent users of Instagram engaged in more like-seeking behaviour.

### **Discussion**

Instagram use among emerging adults was explored in the present study. The majority of students in the sample had a private account, with one-third of students who had a public account. Nearly half of the sample had over 500 followers on Instagram and almost one-fifth reported checking the app at least 25 times a day. Almost all participants reported engaging in like-seeking behaviours and approximately 12% of the sample had bought likes *or* followers. It was hypothesized that insecure attachment and higher ratings of deceptive like-seeking would positively predict false self-presentation on Instagram. Research findings from this study partially supported the hypothesis, indicating that deceptive like-seeking was a significant predictor of higher false self-presentation, however main effects of attachment style were only

significant for avoidant friend attachment predicting deceptive like-seeking, but not for other insecure attachments. Attachment style was hypothesized to moderate the relationship between higher deceptive like-seeking and higher false self-presentation, this relationship was strengthened for anxious partner attachment only. Furthermore, motivation for using Instagram for coolness predicted higher deceptive like-seeking and more frequent users of Instagram rated higher on both normative and deceptive like-seeking.

**The relationship between deceptive like-seeking and attachment style.** Results revealed that there was a significant positive correlation between deceptive like-seeking and avoidant friend attachment, but not for anxious friend attachment or insecure partner attachments, which partially supported the first hypothesis that insecure attachment would predict more deceptive like-seeking. Results support previous literature in that individuals with avoidant attachment may engage in more false and deceptive behaviour online as a way to protect themselves from disclosing personal and intimate information (Gil-Or et al., 2015). For example, individuals with an avoidant attachment to friends value their independence and may feel more guarded about posting personal information on Instagram where their friends or peers may see. Avoidant individuals may post more false information or engage in more deceptive like-seeking behaviour because they may not trust their friends. Previous research has noted that, individuals higher in avoidant attachment rate lower on having many friends, maintaining relationships with peers, and being emotionally involved (Gil-Or et al., 2015). In addition, individuals who rated lower on ratings of peer belonging engaged in more deceptive like-seeking, suggesting that when individuals lack security within their peer groups they may turn to seeking it out via acting deceptively online (Dumas et al., 2017). In the present study, individuals with an avoidant attachment style may have engaged in more deceptive like-seeking as a way to

distance themselves from their followers on Instagram, such as peers and friends, by either purchasing likes and followers from fake accounts or liking other people's posts who they do not know personally in order to keep up a front online. Individuals with an avoidant friend attachment may have fewer friends and may want to form less close relationships. These individuals may seek out purchasing likes and followers to increase their popularity and status on Instagram while maintaining their independence and less reliance on their friends as a means of getting likes.

**Deceptive like-seeking predicting false self-presentation.** Results revealed attachment style was not a significant predictor of false self-presentation on the exploration and comparison subscales. Results are not in line with previous literature that found more insecurely attached individuals rated higher on false self-presentation on Facebook (Gil-Or et al., 2015). The discrepancy in findings may be due to the differences in measures used in this study compared to the study by Gil-Or et al., (2015) which used a more general false self-presentation questionnaire that did not differentiate between categories of a false self, unlike this study which differentiated false self-presentation into three categories. However, results revealed deceptive like-seeking was a significant predictor of false self-presentation across all three subscales (deception, comparison, and exploration), which supported the first hypothesis. As mentioned, like-seeking behaviour is a relatively new concept, therefore research is limited. This study is the first to examine the relationship between like-seeking and self-presentation. In this study, a small number of participants admitted to purchasing likes (9.9%) and purchasing followers (8.2%) at least once. Although, 44.5% admitted to using software to modify their physical appearance at least once which supports previous research conducted on self-presentation, in particular to presentation of selfies, or portraits of the self from a mobile device or camera (Chae, 2017). Chae

(2017) found that young individuals engaged in more selfie-taking and selfie-editing, which is defined as enhancing pictures of the self by using computer software or mobile apps to modify one's physical appearance. It is a way for young people to give themselves a virtual makeover. Findings revealed that greater selfie-editing was not associated with feelings of dissatisfaction with one's self, but rather wanting to look better than others or at a similar level as their peers for comparison on Instagram (Chae, 2017). In the present study, individuals who admitted to using software to modify their physical appearance may do so as a way to compare themselves with others on Instagram including their friends and peers.

Likewise, Chua and Chang (2016), found that in a group of female adolescents, likes and followers on Instagram were used as a way to gain peer approval around their physical beauty. Online self-presentation emphasizes gaining the approval of a desired audience, such as one's followers on Instagram, through displaying one's best self through their photos. In the present study, the relationship between deceptive like-seeking and false self-presentation may be explained by some individuals seeking attention, validation, and recognition on Instagram and may turn to purchasing likes and followers on their accounts or using software and apps to modify or enhance their physical appearance.

**Attachment style moderating the relationship between deceptive like-seeking and false self-presentation.** The present study showed that attachment style differed between friends and a dating partner which is in line with previous research that emerging adults may have divergent attachments to friends and a dating partner where one relationship can be more secure than the other (VanUitert & Galliher, 2012). Furthermore, Caron, Lafontaine, Bureau, Levesque, and Johnson (2012) found distinct patterns of attachment towards parents, friends, and dating

partners in a sample of emerging adults, supporting the belief that there may be variability in attachment types rather than one, general attachment orientation in adult relationships.

Results revealed attachment style was a significant moderator, in particular anxious attachment style, for the relationship between deceptive like-seeking and false self-presentation on the deception subscale, which supported the second hypothesis. The relationship between high anxious partner attachment and high false self-presentation is in line with previous research. Individuals with an anxious partner attachment may crave more attention online and may turn to more deceptive ways to gain positive feedback from others (Hart et al., 2015). They may also inflate the quality and intimacy of their relationships online to make up for discrepancies or insecurities experienced in real life (VanderDrift et al., 2015). In the present study, high anxious attachment to dating partners only moderated the relationship for higher deceptive like-seeking and higher false self-presentation on the deception subscale, but not for anxious attachment to friends. In dating relationships, individuals with higher anxious partner attachment may feel more inclined to post information that is not true about themselves, which may include aspects of their relationships. They may also act like a completely different person online compared to offline so that other people may perceive them and their dating relationship in a more positive way. In comparison to secure individuals, who may feel less pressure to post false information on Instagram because their perception of others as trustworthy and available may encourage them to present a more real and authentic self.

Interestingly, results also revealed high anxious friend attachment and high false self-presentation occurred only when deceptive like-seeking was low which was unexpected in this study. Previous literature suggests that friends are more prominent figures who may act as secure bases and safe havens for young people compared to their mothers or fathers (Markiewicz et al.,



2006). Findings from this study suggest that individuals may engage in less deceptive like-seeking if they know their friends may be aware of who follows them or likes their posts on Instagram. Individuals with anxious friend attachments may be particularly worried or preoccupied about how their friends may react to deceptive behaviour. Some individuals may turn to posting more false photos rather than purchasing likes and followers to avoid social repercussions from their friends. When deceptive like-seeking was low, individuals with high anxious friend attachment engaged in higher false, deceptive, self-presentation which may be a way for anxious individuals to feel secure in their friendships if they know that what they post online will be recognized and positively validated by their friends even if it is not true. The moderating relationship also showed that low friend anxious attachment seemed to relate to higher false self-presentation as deceptive like-seeking increased. Although unexpected, it may be that individuals who feel secure in their friendships have less concern about being “caught” engaging in deceptive on-line behaviours.

**Motivation to use Instagram for coolness predicting deceptive like-seeking.** Results revealed that motivation to use Instagram for coolness was a significant positive predictor of deceptive like-seeking, which supported the third hypothesis. Moreover, significant positive correlations were found between deceptive like-seeking and other Instagram motivations such as surveillance, documentation, and creativity. Instagram users were motivated to engage in the SNS for various purposes which all associated with like-seeking behaviour. Results support previous studies examining motivations for using Instagram. Sheldon and Bryant (2016) found that individuals who rated higher on using Instagram for coolness, spent more time editing their photos before uploading them. Being motivated to use Instagram for coolness is related to aspects like popularity, self-promotion, and providing visual updates for friends and followers.

As mentioned earlier, individuals may find it more appealing to modify and enhance their photos through use of software and filters to gain more likes and followers. Individuals who are highly motivated to use Instagram for coolness may not personally care about the authenticity of the content they are posting, but may be more concerned with the aesthetic and popularity aspects of Instagram, therefore they may turn to more deceptive ways of gaining likes and/or followers.

**The relationship between Instagram use and frequency and like-seeking behaviour.**

Results revealed that there was no significant correlation between posting more pictures with friends or with a dating partner and engaging in more normative like-seeking behaviour which did not support the fourth hypothesis. However, significant positive correlations were found between higher frequencies of checking and posting on Instagram with both normative and deceptive like-seeking behaviour. Individuals who used Instagram more often engaged in more like-seeking. In line with uses and gratifications theory, individuals are more likely to use a specific type of media if it serves to satisfy their informational, social, and leisurely needs (Phua et al., 2017). More active and frequent users of Instagram may engage in more like-seeking behaviour because it serves their needs for social interaction, displaying information about themselves, and receiving information from others.

**General Conclusions**

Findings from the present study add to the growing body of literature on self-presentation and motivations for using Instagram, as well as contributing to new research assessing like-seeking behaviour. Deceptive like-seeking has been identified as a significant predictor of false self-presentation, with anxiously attached individuals engaging in more false self-presentation on Instagram. In line with previous research, anxious individuals have been found to engage in less authentic and more deceptive behaviour online and this can have negative implications for their

mental health and well-being such as greater risk for psychological problems and having less secure close peer relationships.

### **Study Limitations**

Some limitations in this study include the correlational design and its inability to determine causality between the variables examined, an experimental or longitudinal design would improve the ability to determine causality between the variables examined. Future studies could also include a way to track and manipulate how individuals engage on Instagram to increase the accuracy of data collected compared to self-report questionnaires which may be inaccurate due to social desirability of participants to answer in a more favourable way. Also, only a small number of participants engaged in deceptive like-seeking behaviour such as purchasing likes/followers in this study. A larger sample size would be ideal to get a higher number of individuals who have engaged in deceptive like-seeking and hence a better assessment of the relationships between the variables examined. Moreover, substantial variance was found for the reliability of some of the measures used, in particular for like-seeking behaviour and some subscales of online self-presentation, which may limit the overall conclusions and significant correlations found in this study. Future studies may choose more specific questionnaires and items to include in order to get stronger reliability on test items, as well as adapt and create own measures more reflective of the variables of interest. Additionally, the questionnaire used in this study to measure attachment style to dating partners allowed participants to answer for a past or hypothetical relationship if they were not currently in one, reliability and accuracy of answers could be skewed and future studies should further analyze the differences between those who were in a relationship and those who were not in examining their attachment styles.

**Future Research**

Like-seeking behaviour is a relatively new concept in research and can be expanded on in a variety of ways. Findings from this study showed 44.5% of participants had reported altering or enhancing their physical appearance using software at least one time. Further research could look at the role of social comparison and competition and its relationship with deceptive like-seeking and false self-presentation on Instagram. Also, focusing on the role of selfie-taking and self-presentation on Instagram and its relationship with deceptive like-seeking. Furthermore, it is known that some young people may use their Instagram accounts for business and self-promotion purposes in order to advertise certain brands or products. Future research could include and examine the motivation for using Instagram for business and monetary purposes and its relationship with like-seeking behaviour, in particular with deceptive like-seeking and purchasing likes to get noticed by businesses and companies. Finally, future research could broaden the sample to include younger populations such as adolescents because they are also known to be frequent users of Instagram and may be more prone to act deceptively online including more deceptive like-seeking. Likewise, future research could also examine emerging adults outside of a university context and how they engage on Instagram in order to attain a more generalizable sample.

**Practical Implications**

Research from this study can be helpful for many young people, as they are dominant active Instagram users, in understanding how their peer relationships, motivations, and engagement on Instagram contributes to their online self-presentation. Practical implications of this study can be used to educate and inform young people about how their engagement on SNSs, like Instagram, may be related to their relationships with friends and dating partners. The

role of SNSs on the health and well-being of young people has been a significant concern for mental health research. It is important to increase young people's knowledge and awareness of the positive and negative consequences of using Instagram and how it contributes to their self-concept and self-presentation. Engaging in more deceptive and false behaviour online can have negative outcomes in real life and it is important to be aware of how false information can be presented on Instagram and that what is presented online may not necessarily be authentic and an appropriate means of comparison.

### **Summary**

The focus of this study was on how emerging adults used Instagram and how attachment style to friends and dating partners influenced their online behaviour and self-presentation. Major conclusions from this study were that deceptive like-seeking positively predicted false self-presentation on Instagram and anxiously attached individuals engaged in more deceptive behaviour online. It was also found that individuals engaged in more deceptive like-seeking when they were motivated to use it for coolness as well as if they were more frequent users of the SNS. In line with previous research, engaging in less authentic behaviour online can have more negative implications on an individual's mental health and close relationships. This study is unique as studies on Instagram have been seldom researched in the past and contributed to the gaps in previous research by examining the relationship between emerging adults' attachment styles, frequency and use of Instagram, motivations, like-seeking behaviour, and online self-presentation on Instagram. Identifying emerging adults' motivations for using Instagram as well as the type of content they present on Instagram is important to understand as the SNS continues to increase in popularity and demand.

## References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Aslam, S. (2017). *Instagram by the numbers: Stats, demographics & fun facts*. Retrieved from <https://www.omnicoreagency.com/instagram-statistics/>
- Baek, Y. M., Cho, Y., & Kim, H. (2014). Attachment style and its influence on the activities, motives, and consequences of SNS use. *Journal of Broadcasting & Electronic Media*, 58(4), 522-541.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1080/08838151.2014.966362>
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61(2), 226-244.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1037/0022-3514.61.2.226>
- Brandtzæg, P. B. (2012). Social networking sites: Their users and social implications—A longitudinal study. *Journal of Computer-Mediated Communication*, 17(4), 467-488.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1111/j.1083-6101.2012.01580.x>
- Caron, A., Lafontaine, M., Bureau, J., Levesque, C., & Johnson, S. M. (2012). Comparisons of close relationships: An evaluation of relationship quality and patterns of attachment to parents, friends, and romantic partners in young adults. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 44(4), 245-256.  
<http://dx.doi.org.proxy1.lib.uwo.ca/10.1037/a0028013>
- Chae, J. (2017). Virtual makeover: Selfie-taking and social media use increase selfie-editing frequency through social comparison. *Computers in Human Behavior*, 66, 370-376.  
<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.chb.2016.10.007>

- Chopik, W. J., Edelstein, R. S., & Fraley, R. C. (2013). From the cradle to the grave: Age differences in attachment from early adulthood to old age. *Journal of Personality, 81*(2), 171-183. doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1111/j.1467-6494.2012.00793.x>
- Chou, H. G., & Edge, N. (2012). "They are happier and having better lives than I am": The impact of using Facebook on perceptions of others' lives. *Cyberpsychology, Behavior, and Social Networking, 15*(2), 117-120.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1089/cyber.2011.0324>
- Chua, T. H. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage girls' engagement in self-presentation and peer comparison on social media. *Computers in Human Behavior, 55*, 190-197.  
<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.chb.2015.09.011>
- Dumas, T. M., Maxwell-Smith, M., Davis, J. P., & Giulietti, P. A. (2017). Lying or longing for likes? Narcissism, peer belonging, loneliness and normative versus deceptive like-seeking on Instagram in emerging adulthood. *Computers in Human Behavior, 71*, 1-10.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.chb.2017.01.037>
- Erikson, E. H. (1968). *Identity: Youth and crisis*. Norton & Co., Oxford. Retrieved from  
<https://www-lib-uwo-ca.proxy1.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=http://search.proquest.com.proxy1.lib.uwo.ca/docview/615567168?accountid=15115>
- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship structures questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment, 23*(3), 615-625.  
<http://dx.doi.org.proxy1.lib.uwo.ca/10.1037/a0022898>

- Gil-Or, O., Levi-Belz, Y., & Turel, O. (2015). The “Facebook-self”: Characteristics and psychological predictors of false self-presentation on Facebook. *Frontiers in Psychology, 6*, 10. Retrieved from <https://www-lib-uwo-ca.proxy1.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=http://search.proquest.com.proxy1.lib.uwo.ca/docview/1813634481?accountid=15115>
- Gorrese, A., & Ruggieri, R. (2013). Peer attachment and self-esteem: A meta-analytic review. *Personality and Individual Differences, 55*(5), 559-568.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.paid.2013.04.025>
- Hart, J., Nailling, E., Bizer, G. Y., & Collins, C. K. (2015). Attachment theory as a framework for explaining engagement with Facebook. *Personality and Individual Differences, 77*, 33-40. doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.paid.2014.12.016>
- Markiewicz, D., Lawford, H., Doyle, A. B., & Haggart, N. (2006). Developmental differences in adolescents' and young adults' use of mothers, fathers, best friends, and romantic partners to fulfill attachment needs. *Journal of Youth and Adolescence, 35*(1), 127-140.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1007/s10964-005-9014-5>
- Michikyan, M., Dennis, J., & Subrahmanyam, K. (2015). Can you guess who I am? Real, ideal, and false self-presentation on Facebook among emerging adults. *Emerging Adulthood, 3*(1), 55-64.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1177/2167696814532442>
- Monacis, L., De Palo, V., Griffiths, M. D., & Sinatra, M. (2017). Social networking addiction, attachment style, and validation of the Italian version of the Bergen social media addiction scale. *Journal of Behavioral Addictions, 6*(2), 178-186.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1556/2006.6.2017.023>



- Nadkarni, A., & Hofmann, S. G. (2012). Why do people use Facebook? *Personality and Individual Differences, 52*(3), 243-249.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.paid.2011.11.007>
- Perrin, A. (2015). Social media usage: 2005-2015. *Pew Internet & American Life Project*.  
Retrieved from: <http://www.pewinternet.org/2015/10/08/social-networking-usage-2005-2015/>
- Phua, J., Jin, S. V., & Kim, J. (2017). Uses and gratifications of social networking sites for bridging and bonding social capital: A comparison of Facebook, Twitter, Instagram, and Snapchat. *Computers in Human Behavior, 72*, 115-122.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.chb.2017.02.041>
- Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. *Computers in Human Behavior, 58*, 89-97.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1016/j.chb.2015.12.059>
- Steijn, W. (2014). A developmental perspective regarding the behaviour of adolescents, young adults, and adults on social network sites. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 8*(2), article 5. doi:<http://dx.doi.org/10.5817/CP2014-2-5>
- Swenson, L. M., Nordstrom, A., & Hiester, M. (2008). The role of peer relationships in adjustment to college. *Journal of College Student Development, 49*(6), 551-567.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1353/csd.0.0038>
- Tobin, S. J., & Chulpaiboon, P. (2016). The role of social connection in satisfaction with Instagram photographs. *Translational Issues in Psychological Science, 2*(3), 303-312.  
doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1037/tps0000084>

- Trub, L. (2017). A portrait of the self in the digital age: Attachment, splitting, and self-concealment in online and offline self-presentation. *Psychoanalytic Psychology, 34*(1), 78-86. doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1037/pap0000123>
- VanderDrift, L. E., Tyler, J. M., & Ma, L. (2015). Self-presentation of romantic relationships: Audience, attachment, and the self-presentation of relationship intimacy. *Self and Identity, 14*(4), 453-463. doi:<http://dx.doi.org.proxy1.lib.uwo.ca/10.1080/15298868.2015.1009939>
- VanUitert, V. J., & Galliher, R. V. (2012). Attachment style convergence and divergence across college students' friendships and romantic relationships. *Psi Chi Journal of Psychological Research, 17*(1), 35-44.

Appendix A

*Instructions:* The following statements relate to Instagram use and frequency of use. For each statement, please indicate your response in the space provided as accurately as you can. Please use the appropriate scale for each, where (<) symbolizes less than.

1. Is your Instagram account private, where only you can approve of who can see your posts and follow you? \_\_\_\_\_  
 1                      2  
 Yes                      No
2. What is the average number of times you check Instagram in a day? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 < 5                      5 < 10                      10 < 15                      15 < 20                      20 < 25                      25+
3. What is the average number of posts you upload to Instagram in a month? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 < 5                      5 < 10                      10 < 15                      15 < 20                      20 < 25                      25+
4. How many followers do you currently have? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 < 100                      100 < 200                      200 < 300                      300 < 400                      400 < 500                      500+
5. What is the average number of likes you have received on your posts? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 < 50                      50 < 100                      100 < 150                      150 < 200                      200 < 250                      250+
6. What is the highest number of likes you have received on a post? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 < 50                      50 < 100                      100 < 150                      150 < 200                      200 < 250                      250+
7. What is the average number of posts you have uploaded with you and your friends in a month? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 Zero                      One                      Two                      Three                      Four                      Five or more
8. What is the average number of posts you have uploaded with you and your romantic partner in a month? \_\_\_\_\_  
 1                      2                      3                      4                      5                      6  
 Zero                      One                      Two                      Three                      Four                      Five or more

Appendix B

*Instructions:* Listed below are statements that a person might use to describe their motivations for using Instagram. For each statement, please indicate your response in the space provided, using the following scale:

- 1 - Never
- 2 - Rarely
- 3 - Sometimes
- 4 - Often
- 5 - Always

Subscale 1: Surveillance/knowledge about others

- 1. To interact with my friends. \_\_\_\_\_
- 2. To see “visual status updates” of my friends. \_\_\_\_\_
- 3. It is fun. \_\_\_\_\_
- 4. To follow my friends. \_\_\_\_\_
- 5. To see what other people share. \_\_\_\_\_
- 6. To “like” my followers’ photos. \_\_\_\_\_
- 7. To creep through other people’s posts. \_\_\_\_\_

Subscale 2: Documentation

- 8. To depict my life through photos. \_\_\_\_\_
- 9. To remember special events. \_\_\_\_\_
- 10. To share my life with other people. \_\_\_\_\_
- 11. To document the world around me. \_\_\_\_\_
- 12. To commemorate an event. \_\_\_\_\_
- 13. To remember something important. \_\_\_\_\_

Subscale 3: Coolness

- 14. To become popular. \_\_\_\_\_
- 15. It is cool. \_\_\_\_\_
- 16. To self-promote. \_\_\_\_\_
- 17. To provide “visual status updates” for my friends. \_\_\_\_\_

Subscale 4: Creativity

- 18. To find people with whom I have common interests. \_\_\_\_\_
- 19. To create art. \_\_\_\_\_
- 20. To show off my photography skills. \_\_\_\_\_

Additional motivations related to dating behaviour and friends (created by the researcher)

- 21. To show off my boyfriend or girlfriend. \_\_\_\_\_
- 22. To feel better about and/or strengthen my dating relationship. \_\_\_\_\_
- 23. To show off my friends. \_\_\_\_\_
- 24. To feel better about and/or strengthen my friendships. \_\_\_\_\_