

國立政治大學國際傳播英語碩士學位學程

International Master's Program in
International Communication Studies
College of Communication
National Chengchi University

碩士論文

Master's Thesis

Instagram 限時動態使用與心理影響研究
Decoding the Popularity of Instagram Stories:
Examining the Antecedents and Consequences of
Engagement with Instagram Stories

Student: 盧佳岱 Evelyn Jia-Dai Lu

Advisor: 林芝璇 Elaine Jhieh-Syuan Lin, Ph.D.

中華民國 109 年 1 月

January 2020

Instagram 限時動態使用與心理影響研究
Decoding the Popularity of Instagram Stories:
Examining the Antecedents and Consequences of
Engagement with Instagram Stories

研究生：盧佳岱

Student: Evelyn Jia-Dai Lu

指導教授：林芝璇

Advisor: Elaine Jhih-Syuan Lin



In Partial Fulfillment of the Requirement
For the degree of Master of Arts

中華民國 109 年 1 月

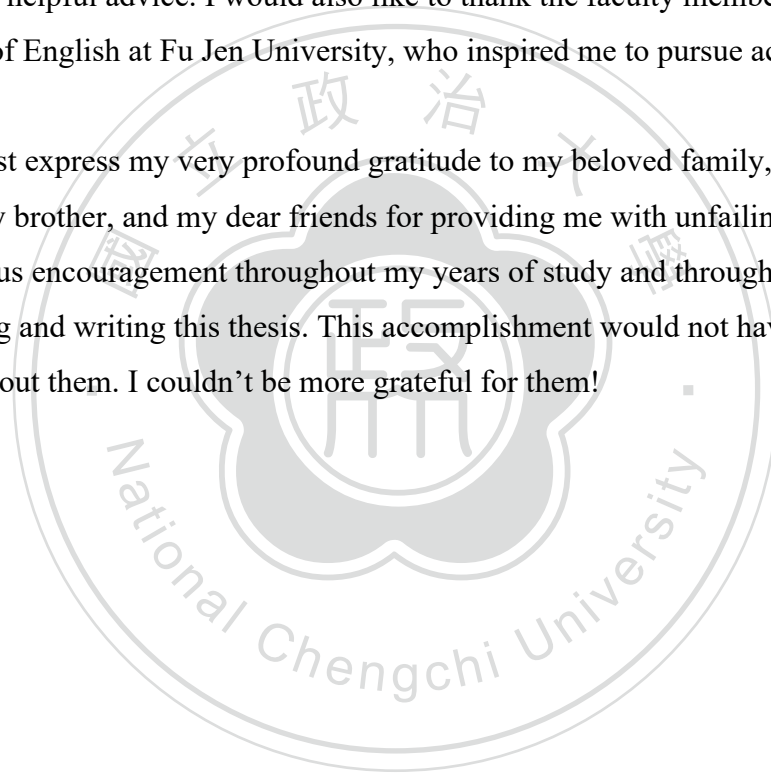
January 2020

ACKNOWLEDGEMENT

If high school is enlightenment, college is inspiration, then graduate school is life. And it's indeed such a perfect ending of my education that I am so grateful for everything.

I would like to express my deepest gratitude to my advisor, Dr. Elaine Jhih-Syuan Lin, who advanced my understanding of the research field to another level and who made the academic world more approachable. I would not have made it without her persistent support. I would also like to extend my sincere appreciation to the committee members, Dr. Tsung-Jen Shih and Dr. Szu-Wei Chen for the constructive feedback and helpful advice. I would also like to thank the faculty members of Department of English at Fu Jen University, who inspired me to pursue academic goals.

Finally, I must express my very profound gratitude to my beloved family, my dad, my mom, and my brother, and my dear friends for providing me with unfailing support and continuous encouragement throughout my years of study and through the journey of researching and writing this thesis. This accomplishment would not have been possible without them. I couldn't be more grateful for them!



ABSTRACT

Considering the popularity of Instagram Stories among young adults, this research examines why and how Millennials consume, contribute, and create content on Instagram Stories and how their engagement levels are related to emotions and social media dependency. First, a pretest was conducted to generate a list of motivation items for understanding the drivers behind Instagram Stories usage. Second, a sample of 296 U.S. Millennials was surveyed to investigate users' motivations for using Instagram Stories as well as how the different uses influence psychological outcomes. The findings suggest that eight types of motivations emerged from the data: exploration, recognition seeking, perceived functionality, entertainment, social sharing, interaction, novelty, and surveillance. Specifically, entertainment and perceived functionality are related to consumption of Instagram Stories, social sharing and interaction are associated with both contribution and creation on it, and recognition seeking and novelty are linked to Instagram Stories creation. Besides, the results also reveal that the positive relationship between engagement and social media dependency is mediated by both positive and negative emotions. Even though positive emotions are found to be more prevalent during Instagram Stories use than negative emotions, the relationship between negative emotions and social media dependency is found to be stronger than that between positive emotions and social media dependency. Implications and limitations of this research are discussed.

Keywords: *communication technology, Instagram Stories, uses and gratifications, engagement, positive emotions, social media dependency*

TABLE OF CONTENTS

1. Introduction	1
2. Literature Review	4
2.1. Image-sharing SNSs	4
2.2. Instagram Stories	5
2.3. Uses and Gratifications and SNS Motivations	7
2.4. Engagement	10
2.4.1. Conceptualization of Engagement	10
2.4.2. Social Media Engagement	12
2.5. Psychological Consequences of Social Media Engagement	15
2.5.1. Emotional Outcomes of Social Media Use	15
2.5.2. Social Media Dependency	20
2.5.3. Engagement and Social Media Dependency	21
2.5.4. The Mediating Role of Emotions	23
3. Methodology	27
3.1. Overview of the Research	27
3.2. Pretest: Exploratory Stage	28
3.2.1. Participants	28
3.2.2. Procedure	29
3.2.3. Results	30
3.3. Main Study: Survey	33
3.3.1. Participants and Procedure	33
3.3.2. Measures	34
3.3.2.1. Motivations for Using Instagram Stories	34
3.3.2.2. Instagram Stories Engagement	35
3.3.2.3. Emotional Outcomes	36
3.3.2.4. Social Media Dependency	36
4. Results	38
4.1. Descriptive Analysis	38
4.2. Factor Analysis	41
4.3. Regression Analysis	45

4.4. Mediation Analysis	47
5. Discussion and Conclusion	50
5.1. The Typology of Motivations for Instagram Stories Use	50
5.2. The Relationship between Motives and Engagement	53
5.3. Engagement with Instagram Stories and the Resulting Emotional Outcomes..	55
5.4. Engagement, Positive Emotions, and Social Media Dependency.....	52
5.5. Research Contributions	58
5.6. Limitations and Future Research.....	59
5.7. Conclusion.....	60
References	62
Appendices	72
Appendix A. Pretest Questionnaire.....	72
Appendix B. Survey Questionnaire.....	76



LIST OF TABLES AND FIGURES

TABLES

Table 1. Sample Demographic Characteristics	29
Table 2. Frequency of Using Instagram Stories	30
Table 3. The List of Newly Coded 48 Items Based on the Results of the Pretest	30
Table 4. The List of Motivations Derived from the U&G Literature	32
Table 5. Motivation Items for using Instagram Stories.....	34
Table 6. Sample Demographics	38
Table 7. Descriptive Statistics of Motivations for Using Instagram Stories	39
Table 8. Descriptive for Engagement with Instagram Stories	40
Table 9. Descriptive for emotional outcomes of Instagram Stories use.....	41
Table 10. Descriptive for Social Media Dependency	41
Table 11. Summary of Exploratory Factor Analysis Results for Motivations.....	44
Table 12. Summary of Regression Results of Motivations Predicting Engagement ...	46
Table 13. Summary of Regression Results of Engagement Predicting Emotions	47
Table 14. Standardized Effects of Engagement on Social Media Dependency	48

FIGURES

Figure 1. Tested simple mediation model	49
---	----

CHAPTER 1

INTRODUCTION

Over the past decade, social networking sites (SNSs) have been the game changer for interpersonal communication, partially replacing previous modes of social interaction and the ways people acquire information (Ku, Chu, & Tseng, 2013). With the prevalence of social media, people are able to connect with brands, organizations, and one another on different social media platforms by sharing thoughts, communicating and interacting in various ways such as instant messages, posts and images. As of 2019, 72% of Americans use social media. While YouTube and Facebook dominated the social media world with 73 percent and 69 percent of U.S. adults using them, Instagram (37 percent), Pinterest (28 percent), LinkedIn (27 percent), Snapchat (24 percent), and Twitter (22 percent) held the smaller shares (Pew, 2019). It is observed that social media has become one of the most important communication tools among people in the U.S. Specifically, as user-generated platforms like YouTube and Instagram thrive among young people, it is foreseeable that such social media platforms will become the future trend.

Since user-generated platforms, encompassing blogs, wikis, picture-sharing, video-sharing, social-networking, and other websites essentially changed the world of entertainment, communication, and information (Shao, 2009), and that social media use is associated with both positive and negative emotions (Weinstein, 2018), the rapid growth of image-sharing social networking sites (SNSs) such as Instagram, Snapchat and Pinterest have attracted attention from researchers and practitioners (Kim, Seely, & Jung, 2017; Nedraa, Hadhrib, & Mezranic, 2019; Oeldorf-Hirsch & Sundar, 2016; Punyanunt-Carter, De La Cruz, & Wrench, 2017; Yang, 2016). Given that there is no established standard definition for image-sharing SNSs, Mull and Lee (2014) distinguished its features from other SNSs: “Image-sharing SNSs share the same basic meaning, but instead of sharing textual information within their social network, users share images or pictorial information” (p. 192). To date, sharing pictorial information on SNSs not only becomes one of the most popular online activities (Duggan, 2013; Kim, Lee, Lee, Sung, & Choi, 2016; Kim, Sung, Lee, Choi, & Sung, 2016) but also plays an important role in general SNS use (Lee, Lee, Moon, & Sung, 2015). With more and more Internet users utilizing images to express and

present themselves other than texts, the growing phenomenon of SNS use reflects the implication that “pictures speak louder than words” (Lee et al., 2015, p. 552) and the fact that the importance of image-related SNSs for self-expression and impression management is increasing (Lee et al., 2015).

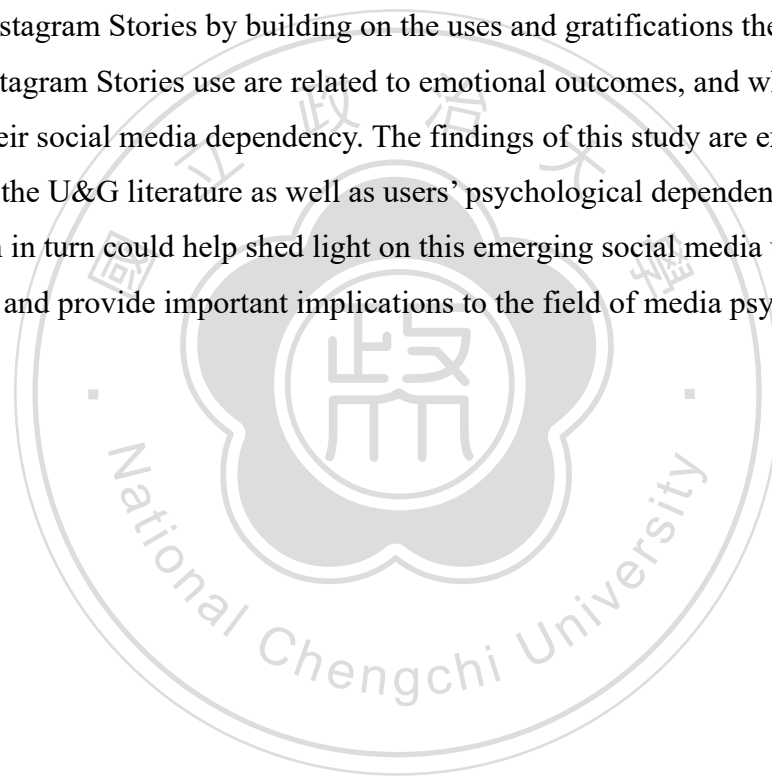
Amongst these image-based SNSs, Instagram is significantly ahead of any other platforms, growing nearly 5 percent from quarter to quarter worldwide (Southern, 2018). As of 2020, Instagram has developed a global community of over 1 billion monthly active users and 500 million daily actives (Instagram, 2020), while teens and young Millennials (41 percent of Instagrammers are 24 years of age or younger) are its main users (Clement, 2019). The trend is even more evident after Instagram introduced Stories in 2016, a feature that allows users to share ephemeral photos and/or videos with the lifespan of 24 hours. The introduction of Stories has not only gradually changed and enhanced the visual nature of the platform, but also ensured the continued growth of Instagram.

Prior research suggests that image-based social media content has different consequences for viewers’ mood compared to text-based social media content (Johnson & Knobloch-Westernwick, 2016). However, the extant research has focused less on image-based Instagram than on other social media platforms (e.g., Facebook) (De Vries, Möller, Wieringa, Eigenraam, & Hamelink, 2018). Even though previous studies have examined the motivational factors that drive Instagram usage (Lee et al., 2015; O’Donnell, 2018), and evaluated motivations, activities, use intentions, and attitudes regarding Instagram (Lup, Trub, & Rosenthal, 2015; Sheldon & Bryant, 2016), the antecedents and consequences of the usage of the relatively new feature on Instagram, Instagram Stories, is still understudied.

As there has been concerns about the negative effects of Instagram use on mental health and well-being due to edited pictures (e.g., body images) that might set unrealistic expectations and generate feelings of insufficiency and inferiority (MacMillan, 2017), Instagram Stories seems to become the counterweight to the “perfect” aesthetics initially prevailing on Instagram (Lorenz, 2019). However, with the mobile-native vertical format of Stories, in which the content viewing matches users’ behaviors as most of them hold phones vertically, and the full-screen visual aspect of the feature, it is possible that users spend a lot of time and can be hooked on Instagram Stories as they become psychologically reliant on it, and can hardly resist

the urge to check Stories (Clark, 2019; Wagner, 2018). Therefore, given the popularity of Instagram among young adults and the centrality of Instagram is images rather than texts, it is important for researchers and practitioners to understand not only why they use Instagram in general, but also how they engage with the popular Instagram feature: Instagram Stories, the effects of such engagement on emotions (Duggan, 2015; Newcom, 2016), and how the utility of Instagram and resulting emotions can induce people to engage in excessive and addictive use (Kircaburun & Griffiths, 2018).

In order to provide a holistic view on the growing phenomenon and shed light on what makes Instagram appealing to people, this study aims to advance the current understanding of how and why Millennial users consume, contribute to, and create content on Instagram Stories by building on the uses and gratifications theory (U&G), how their Instagram Stories use are related to emotional outcomes, and what influences their social media dependency. The findings of this study are expected to contribute to the U&G literature as well as users' psychological dependency on social media, which in turn could help shed light on this emerging social media use phenomenon and provide important implications to the field of media psychology.



CHAPTER 2

LITERATURE REVIEW

2.1. Image-sharing SNSs

As the trend of using photos as a communication means increases, image-sharing SNSs have gained in popularity for their ability to increase people's perceived closeness (Riviere, 2005) and provide additional cues that reduce miscommunication (Vaterlaus, Barnett, Roche, & Young, 2016). These cues involve nonverbal cues, hints to physical setting, and text overlays (e.g., basic text, emoticons, emojis) that give additional meanings to the photos. Among the image-based social networks, Instagram is the most popular platform with 1 billion monthly active users, followed by Snapchat with 314 million users, and Pinterest with 300 million users (Statista, 2019b).

As one of the first image-based SNSs, Pinterest is a pinboard-style platform filled with imagery of brands, clothing, food and recipes, places, and art (Phillips, Miller, & McQuarrie, 2014). Pinterest users can upload, save, collect and manage any web image or personal digital image, known as "pin," and then they can organize them into themes such as fashion, styles, home projects on pinboards (Mull & Lee, 2014). With a different focus, Snapchat is a photo-sharing social network website that allows its users to interact with others through pictures and messages that are usually available for a short time before they disappear (i.e., snaps). Snapchat's 24-hour lasting images or videos present the popular feature of "Stories," where users can view their own "Story" and "Stories" from people they follow. With information being less permanent, users are more likely to share content and information that is more personal and representative of the "true" self (Punyanunt-Carter et al., 2017). In that sense, Stories becomes more and more popular and trendy in the social networking world that other platforms such as Instagram, WhatsApp, and Facebook started to acquire the feature of "Stories."

As a result, Instagram Stories has surpassed all the other social networks featuring Stories (Richter, 2019). Specifically, Instagram Stories has developed to become a major platform for self-expression and casual sharing for more than 500 million daily active Stories users worldwide, up from 400 million global daily actives

in June 2018 (Instagram, 2018; Statista, 2019a), acquiring such wild popularity that has eclipsed Snapchat's entire user base (Southern, 2018). Besides, Instagram's ease of use and aesthetic trigger users' posting more on Instagram than on Snapchat or other platforms (Herron, 2018).

2.2. Instagram Stories

Launched in 2010 and acquired by Facebook in 2012, Instagram is the most popular image-related SNS, allowing its users to take and share photos and videos as well as to modify final images and create the desired visual style through applying filters. As Instagram interconnects with an abundance of SNSs (e.g., Facebook, Twitter, Tumblr, and Flickr), users are able to share the resulting images or videos not only on Instagram but also on other social media platforms. In addition, Instagram encourages its users to interact with one another through pressing the "Like" button, commenting, or adding hashtags (#) to their photos or videos, which not only helps Instagrammers organize the images with tags and location information, but also enables others to view them more easily in spite of unfollowing them, and browse other users' content by tags and locations as well as viewing trending content. As for the privacy settings, Instagram enables its users to choose whether they want their personal information to be shared publicly or with pre-approved followers.

In August 2016, Instagram introduced Stories. Similar to Snapchat, Instagram Stories allows users to edit and share videos and/or photos in real time with the following features (Read, 2018):

1. video styles involving normal, boomerang (looping back and forth), superzoom, rewind (reversing), hands-free, and stop-motion styles;
2. face filters, which can add small icons such as bunny ears to change the look;
3. colored background or "peek-a-boo" effects;
4. drawings and handwritings;
5. texts with different sizes, fonts (ranging from classic, modern, neon, typewriter and strong), and taggings;
6. stickers including location stickers, hashtag stickers, GIFs, polls (A/B poll, emoji slider poll), and questions stickers (i.e., AMA; ask me anything);
7. links; and

8. reposting them with the lifespan of 24 hours in a slideshow format.

The ephemeral nature of posts originally derived from Snapchat has been shown to “afford greater privacy for users” and also “seemed to influence the kinds of photos participants decided to share” (Bayer, Ellison, Schoenebeck, & Falk, 2016, p. 596). The time limit may in turn increase the affective response to given messages due to their perceived scarcity (Lynn, 1991) and users’ curiosity as they fear of missing out (FOMO) (Bug & Helwig, 2020). Similar to reactions on Facebook posts and comments, Stories enables its users to convey their feelings and respond to Stories of people they follow through reactions such as laughing, clapping hands, wow, love, sad, fire/lit, celebration, and perfect excepting words, photos and videos (Mendiratta, 2019). If users want to comment on Stories they view, they can only reply to the Stories through private one-to-one messaging via Instagram Direct where only the owners of the Stories can access. By following the privacy settings of users’ accounts, Stories can be visible only to certain followers and can even be hidden from those that the users do not want to share Stories with (Instagram, 2016). Also, users can edit the Close Friends List, which allows them to share Instagram Stories with friends/followers they have added to the list without notifying others, all of which may decrease users’ privacy concerns and increase their willingness and desire to using Instagram Stories.

Considering the original purpose of Instagram is enabling its users to share their life stories through images, research has demonstrated that Instagram plays an important role in user’s self-presentation and impression management. For example, compared to using Facebook, Instagrammers utilize Instagram to show personal identity rather than build and confirm relational identity; that is, Instagram is more consistent with one’s personal identity rather than their relational identity (Marcus, 2015). Additionally, previous research has suggested that social interaction is one of the main motivations for Instagram use (e.g., Geurin-Eagleman & Burch, 2016; Pittman & Reich, 2016; Ridgway & Clayton, 2016), which is aligned with the findings of Whiting and Williams’ (2013) study that social interaction is the most important motivations for SNS users. Hence, despite self-expression as the primary motivation of using Instagram, another important motivation is social interaction (Kim et al., 2017), In line with that view, self-promotion is found to be a main feature exhibited on Instagram (Marcus, 2015).

However, previous studies on motivations for social media use and emotional consequences mainly focused on Facebook users (e.g., Lin & Utz, 2015; Sagioglou & Greitemeyer, 2014; Wise, Alhabash, & Park, 2010), leaving the psychological mechanism underlying Instagram usage understudied (e.g., Lee et al., 2015; Lup et al., 2015; Sheldon & Bryant, 2016). Extant research (e.g., Lee et al., 2015; Sheldon & Bryant, 2016) has found that Instagram uses are driven by needs for social interaction, archiving, self-expression, escapism, and peeking, which are associated with different psychological and social circumstances. Considering that little research has been conducted to evaluate users' motivations and emotional outcomes relative to the use of Instagram Stories, the literature on uses and gratifications theory with a focus on its application to social media research is discussed next.

2.3. Uses and Gratifications and SNS Motivations

Uses and Gratifications Theory (U&G; Katz, Blumler, & Gurevitch, 1974) is a theoretical framework explaining how and why individuals actively seek out and use different media to fulfill their specific needs and wants. The fundamental concept of U&G is that individuals obtain gratifications through media usage, and their motivations for engaging with different media are influenced by individual differences.

Emerging in the 1940's, the U&G theory was introduced by psychologist Herta Herzog (1944), who used the term gratifications to describe specific dimensions of satisfaction reported by daytime radio serial listeners. Following the trend, Berelson (1949) studied reader motives and gratifications on the functions of newspaper reading. This line of research was further developed by Katz (1959) as the U&G model to understand people's motivations for utilizing certain types of mass media for fulfilling specific needs or desires. Subsequently, researchers became interested in why audiences engaged in various forms of media behaviors, such as listening to the radio and watching TV (McQuail, Blumler, & Brown, 1972; Mendelsohn, 1964; Wimmer & Dominick, 1994). Based on the tenets of U&G research, users are goal-directed in their media selection behavior and actively involved in media usage. The theory has become increasingly relevant in studies of audience behavior in relation to their media choice. While Katz et al. (1974) identified and categorized U&G into eight types: passing time, companionship, escape,

enjoyment, social interaction, relaxation, information, and excitement; McQuail (1983) suggested four general gratifications obtained from using mass media are entertainment, information, personal identity, and social interaction. Such typology has been widely used as the classification for media use in the literature (Mersey, Malthouse, & Calder, 2010; Shao, 2009).

With the advent of the Internet and social media, researchers posit that U&G is applicable and can provide important insights into audience behavior for Internet and social media research (Ruggiero, 2000). Since then, U&G has been applied to study the use of various digital media related to communication technology, discovering a number of individual motivations with regard to different digital media platforms (Kaye & Johnson, 2002; Papacharissi & Rubin, 2000), such as Internet (Charney & Greenberg, 2001), Facebook (Krause, North, & Heritage, 2014; Smock, Ellison, Lampe, & Wohn, 2011), and Twitter (Chen, 2011).

More recently, with the focus of image-based SNS, Mull and Lee (2014) examined motives for Pinterest use and proposed a new set of measures for the U&G of Pinterest by employing a two-step mixed-method approach. First, a list of 153 descriptive items was collected from college students who used Pinterest. The researchers then extracted 54 terms and used them in the follow-up survey, which resulted in five types of gratification obtained from Pinterest: fashion, entertainment, organization, creative projects, and virtual exploration. Fashion, as the most important driver of Pinterest use includes items such as style, outfits, clothing, and shopping. Organization needs suggest that users find Pinterest to be a space where they can collect and organize images all in one location. This gratification highlights the type of information Pinterest users look for (e.g., crafts and do-it-yourself projects) and the unique purpose of using Pinterest (e.g., develop creative projects). With regard to virtual exploration, the results showed that Pinterest users wanted to use the site to explore and look for new things. Image-related SNSs, as the study suggested, share several motivational dimensions similar to SNSs yet have their own distinguishing factors. Therefore, their research not only provides retailers with the reasons how and why users use Pinterest, but it also contributes to the body of literature for U&G of image-related SNSs.

Punyanunt-Carter et al.'s (2017) study aimed to probe the uses sought and gratifications obtained from Snapchat within the framework of gender. By surveying

475 college students, the results showed that there were significant relationships between participant needs (entertainment and functional) with (a) communication apprehension (social media and Snapchat), (b) Snapchat addiction, intensity, and exhibitionism, and (c) optimism/pessimism and Snapchat satisfaction. While Snapchat users' optimism/pessimism is associated with their needs for using the platform, Individuals with high communication apprehension can be benefited in many interpersonal settings regarding Snapchat, or media similar to Snapchat, and that Snapchat allows for positive interpersonal interaction. Besides, users reported using Snapchat for fun and practicality, which may lead to frequent usage of the medium and even addiction. All of their findings support the use of U&G and that user satisfaction will increase as needs are gratified.

Lee et al. (2015) conducted a study to examine users' motives for using Instagram and to explore the relationships between identified motivations and key attitudinal and behavioral intention variables. A survey with a total of 212 Instagram users aged 20–39 years old in Korea was carried out to evaluate their motivation, primary activities, use intention, and attitude regarding Instagram. Findings of the study showed that Instagram users have five primary social and psychological motives: social interaction, archiving, self-expression, escapism, and peeking. Also, the study revealed that motivations of archiving and peeking predict both attitudes toward and intentions of Instagram use, suggesting the crucial role of these motives to form users' positive attitudes toward Instagram and their future intention to regularly use Instagram.

Similarly, Sheldon and Bryant (2016) investigated Instagram users' motives for using Instagram and how participants' age, life position indicators such as life satisfaction, interpersonal interaction, social activity, and the levels of narcissism influence their use of Instagram. The researchers argued that “a person's social and psychological characteristics influence not only motives for communicating (their gratifications sought) but also gratifications obtained” (Sheldon & Bryant, 2016, p. 90). The survey results yielded four interpretable factors of Instagram use: surveillance/knowledge about others, documentation, coolness, and creativity. Specifically, documentation and coolness are the two unique motivations that most closely related to the functions and characteristics of Instagram. Besides, results also showed that there were multiple significant relationships among contextual age,

narcissism, motives and behavioral outcomes of Instagram use. Gender was found to be the strongest predictor of the amount of time spent on Instagram, followed by the surveillance motive, the creativity motive, and life satisfaction. The study hence made an important contribution to understanding which contextual age indicators can best predict how and why a person chooses to create an Instagram account, and the findings revealed that social activity emerged as one of the most important predictors of why people use Instagram, yet life satisfaction negatively predicted the use of Instagram to appear cool. Furthermore, it is also reported that Instagram is appealing to narcissists, which suggests that narcissism is one of the essential psychological traits observed in Instagram use.

While there have been several U&G studies examining the motivational dimensions of image-sharing social media usage (Mull & Lee, 2014; Punyanunt-Carter et al., 2017), and Instagram usage (Lee et al., 2015; Sheldon & Bryant, 2016), there have not been empirical efforts devoted to examine users' motivations to engage in Instagram Stories. Given that each type of media has specific uses and gratifications, it is important for researchers to further understand distinctive user motivations for using popular features within Instagram. Thus, the present research utilizes U&G as the theoretical approach to explore the motives behind the major users (i.e., Millennials) of Instagram Stories (Instagram, 2017), and put forth the following research question.

RQ1: What are Millennials' motivations for using Instagram Stories?

2.4. Engagement

2.4.1. Conceptualization of Engagement

In response to the dynamic and interactive nature of communication evolved on social media, researchers and practitioners alike (Calder, Malthouse, & Schaedel, 2009; Higgins & Scholer, 2009; Owyang, 2007; Vivek, Beatty, & Morgan, 2012) have tried to gain deeper insights into how and why the audience engage with social media, what engagement entails, and its effects on communication outcomes.

Engagement, originated as a psychological concept, has also been broadly used in various fields including sociology, communication, organizational behavior, education, political science, and more (Hollebeek, 2011; Kuvykaitė & Tarutė, 2015). The concept is generally utilized in discussions regarding how individuals involve in

processes, co-creation, solution development and/or utilization, interactions and/or marketing-related forms of service exchange (Brodie, Hollebeek, Juric, & Ilic, 2011). It may be used to determine the degree of “connection,” “attachment,” “emotional involvement,” and/or “participation” (London, Downey, & Mace, 2007), yet the notion of engagement has been conceptualized variously and diversely in the literature.

Broadly, Calder and Malthouse (2008) proposed that engagement represents a sense of involvement and connectedness with the media channel itself. Hollebeek (2011) further explained that engagement is strongly oriented to the context and can be influenced by users’ decisions associated with specific engagement objects, such as brands, products, or organizations, and regarded engagement as a multidimensional concept that comprises three dimensions: cognitive (thoughts), emotional (feelings), and behavioral (actions). Along that logic, cognitive engagement dimension is defined as a user’s degree of thought processing, concentration and interest in specific interactions; emotional dimension, also labeled as “affection,” refers to a user’s state of emotional activity in certain interactions; while behavioral dimension, known as “activation,” is a user’s levels of energy, endeavor and time spent on particular interactions (Hollebeek, 2011; Hollebeek, Glynn, & Brodie, 2014).

Notionally, Brodie et al. (2011) defined engagement as a temporary state occurring within broader relevant engagement processes developed overtime. While Lorena, Blanca, and Julio (2013) perceived engagement as a reflection of positive reaction of using technologies, which is usually suggested by intrinsic interest, curiosity, focused attention, concentration and absorption in a task, Patterson, Yu, and De Ruyter (2006) classified four main dimensions of engagement, including absorption, dedication, vigor, and interaction, and argued that users are enthusiastic and determined to devote energy, concentrate on and interact with a focal engagement object. Vivek (2009) identified five engagement components, comprising awareness, enthusiasm, interaction, activity, and extraordinary experience.

Although diverse definitions of engagement emerged in the literature due to different contexts in which it occurs and being analyzed (Brodie et al., 2011), the extant research has used engagement to describe individuals’ interactive experience with focal objects such as products, services, media, activities, and so on. By interacting with each other through online communication and participation formats,

people are able to engage in dialogues through interactive media and content they themselves create (Creamer, 2006); thus, engagement of social media platforms at different intensities should be a key consideration. Considering the intensity of engagement depends on highly the contextual conditions, such as the type of media (e.g., social networks), situational variables (e.g., advertising), and involved subjects (e.g., brand communities) (Brodie et al., 2011), the thesis would put more focus on specific focal object of engagement— users’ interactions with content— in a social media context.

2.4.2. Social Media Engagement

In the era of digital and social media, users’ attention has been shifting from the mass media to social media, and they tend to spend a lot of time engaging with content on social media (Carton, 2011), which lead to marketers’ increasing investment in social media to connect with users.

Chaffey (2007) depicted that engagement increases when users have repeated interactions with brands that can strengthen their emotional, psychological or physical investment. Owyang (2007) proposed that online engagement indicates the level of authentic involvement, intensity, contribution, ownership, which are considered “apparent interest.” Engagement thus encompasses attention, interaction, velocity, authority, and relevant attributes. For example, people can read, comment, or subscribe on blogs as well as poking, sharing, or friending on Facebook. Likewise, Peterson (2007) defined online engagement as an estimate of the degree and depth of visitor interaction on the site, measured against a clearly defined set of goals. Due to the uniqueness of each organization’s version of engagement, a number of root metrics have been performed, including frequency, recency, length of visit, purchases, and lifetime value. Both Owyang (2007) and Peterson (2007) drew attention to different levels and intensity of online engagement, which is in line with the notion that engagement levels represent a specific state at different stages of relationships between organizations and users (Hollebeek, 2011). However, while previous researchers employed different approaches to determine the levels and types of engagement, there is general consensus in the literature that there are varying levels of engagement (Malthouse, Haenlein, Skiera, Wege, & Zhang, 2013). By elaborating engagement from a behavioral perspective, Van Doorn, Lemon, Mittal, Nass, Pick,

Pirner, and Verhoef (2010) further defined social media engagement behavior as “a customer’s behavioral manifestations that have a social media focus beyond purchase, resulting from motivational drivers” (p. 254), which is central to the conceptualization of engagement in the current study.

Building on the U& G theory, Shao (2009) identified three types of individuals’ engagement with content: consumption (i.e., viewing, reading, watching), participation (i.e., commenting, sharing, liking, disliking), and production (i.e., creating, publishing), arguing that individuals use user-generated media in different ways for different purposes. The findings showed that individuals consume content to fulfill their needs for information, entertainment, and manage their mood, participate through interacting with the content as well as with other users to enhance social connections and the sense of being a part of virtual communities, and produce their own content for self-expression and self-actualization, both of which may ultimately achieve constructing their identity. Also, the researcher argued that, it is “easy to use” and “let users control” (Shao, 2009, p. 7) as two usability aspects of user-generated media that allow individuals to consume, participate, and/or produce in a highly efficient and controllable way, which makes individuals obtain greater gratification from using user-generated media.

Morrison, Cheong, and McMillan (2013) presented a classification of participants who create user-generated content, including posters, lurkers, and networkers, and explored their demographics, personality types, and key user characteristics. While lurkers are people who simply read the content posted by others and posters are those who post online content at user-generated media sites, networkers are those who engage in producing and consuming user-generated content on SNSs. The researchers revealed that lurkers are a lot more prevalent than posters in the online environment. Demographically, lurkers, posters, and networkers do not differ in terms of ethnicity, education, or household, yet age, gender, and employment status were proven to be factors related to behaviors in the context of user-generated content.

In particular, Muntinga, Moorman, and Smit (2011) proposed the typology of consumers’ online brand-related activities (COBRAs) and categorized COBRAs into three continuous levels of gradual involvement with social media content: consuming (i.e., participating without actively contributing or creating content), contributing (i.e.,

user-to-content and user-to-user interactions) and creating (i.e., actively producing and publishing the content that others consume and contribute to). To gain insights into why users engage in COBRAs, the researchers followed the U&G approach and discovered six motivations behind users' engagement in SNS communities: information, entertainment, remuneration, personal identity and integration, social interaction, and empowerment. Specifically, they found that consuming content is driven by the need for information and remuneration, creating content is linked to empowerment motivation, and both contributing to communities and creating content are associated with social interaction and self-presentation, whereas the need for entertainment is related to all types of engagement in COBRAs.

Following Muntinga et al.'s (2011) framework of social media use motivations as antecedents of engagement, De Veirman, Cauberghe, Hudders, and De Pelsmacker (2017) examined the characteristics and marketing potential of SNS brand communities, how SNS users interact with the communities, and what motivates them to engage in different types of interaction. As the development of the Internet facilitates the creation of virtual communities, such as pages on Facebook or accounts on Twitter or Instagram, individuals are allowed to join a page and help spread information by simply clicking "Like," "Share," "Retweet," or "Comment" on posts on SNSs. In most cases, they engage in SNSs by lurking (i.e., non-interactive behavior that they passively, not publicly view pages and read posts from others as they browse). In some cases, they engage in SNSs by posting (i.e., interactive behavior that they publicly like and share posts, add content themselves, and/or react to comments of others). Via surveying on Facebook, the researchers found that both lurking and posting are driven by the need for social interaction. While lurking is motivated by the need for entertainment, posting is reported to be strongly related to the empowerment motivation, which may indicate that users actively engage in online activities to have an impact on others. Given the contextual differences, the motives for engaging in SNS activities should be further explored.

Based on the reviewed literature, social media use motivations are determinants of engagement. In particular, viewing, participating and uploading content are observed to be the main activities that individuals engage on social media (Morrison et al., 2013; Muntinga et al., 2011; Shao, 2009; Tsai & Men, 2013). In view of the Instagram Stories context, this study conceptualizes engagement by integrating

the typology of engagement proposed by Muntinga et al. (2011), exploring the relationships between motivations of Instagram Stories usage and types of engagement: consuming (i.e., viewing, browsing, checking out, and swiping up Instagram Stories), contributing (i.e., participating in activities, replying to Instagram Stories), and creating (i.e., posting and uploading Instagram Stories). Considering that there is not much literature on users' engagement with Instagram Stories, the following research question asks how different motivations contribute to Millennials' engagement levels with Instagram Stories, aiming to elucidate the nature of their content consuming, contributing, and creating behaviors.

RQ2: How are Millennials' motivations for using Instagram Stories related to their engagement in terms of content consumption, contribution, and creation?

2.5. Psychological Consequences of Social Media Engagement

2.5.1. Emotional Outcomes of Social Media Use

As the use of social media becomes pervasive, concerns about the social media impact on users' psychological well-being have emerged (O'Keeffe & Clarke-Pearson, 2011; Pantic, 2014). Particularly, the role of emotions is an important subject of study in audience research and an essential component in understanding media users' communications and responses (Richins, 1997). Extant research has shown that social media use may lead to different emotional outcomes (Weinstein, 2018), and the results of prior studies on the psychological effects of social media usage are quite mixed. While some researchers found that social media use is associated with increased depressive symptoms (Pantic, Damjanovic, Todorovic, Topalovic, Bojovic-Jovic, Ristic, & Pantic, 2012), others showed that social media use is related to decreased depressive symptoms (Thorsteinsson, & Davey, 2014) or is not related to depressive symptoms (Datu, Valdez, & Datu, 2012). One explanation for such contradicting findings is that the effects of social media use on emotions depend on specific social media activities individuals engage in (Frison & Eggermont, 2016). Therefore, it is important to take individuals' social media engagement and the effects of specific social media activities into consideration when examining the emotional consequences of social media use.

Along that logic, Krasnova, Wenninger, Widjaja, and Buxmann (2013) investigated the scale, scope, and nature of envy-inducing incidents triggered by Facebook use as well as the mediating role of envy feelings in Facebook passive use on users' life satisfaction. The researchers found that positive emotions (e.g., feelings of joy/fun, satisfaction, excitement, and relaxation) were reported more by participants than negative ones (e.g., feelings of boredom, anger, frustration, guiltiness, sadness, loneliness, and envy) when asked to report their overall feelings after their most recent Facebook usage. The results revealed that intensity of passive following and the consumption of other people's information (e.g., vacation photos) can evoke invidious feelings of envy on SNSs and in turn reduce users' life satisfaction. Also, the researchers pointed out that it should be worrisome for SNS providers if too many negative feelings were triggered by envy-inducing posts (e.g., vacation pictures), users might quit using Facebook, which may endanger the sustainability of the social media platform in the long term. Nevertheless, it is unclear whether different feelings are triggered by different social media consumption and whether such social media usage can elicit several feelings.

Wise et al. (2010) examined how users spent time on Facebook and how different Facebook uses influenced their physiological responses associated with emotions by recording participants' physiological signals as they navigated Facebook. Specifically, they conceptualized social browsing as passive social information-seeking and social searching as extractive social information-seeking. The findings revealed that participants spent more time on social searching than on social browsing, and that they showed greater pleasantness during social searching than social browsing. However, the researchers distinguished only between directed (e.g., a certain friend's profile) and arbitrary (e.g., news feed) online social information seeking without linking those activities to other Facebook-unrelated Internet activities such as social gaming (e.g., *Mafia Wars*) or social commerce (e.g., Facebook Marketplace).

Sagioglou and Greitemeyer (2014) investigated the relation between Facebook activities and users' emotional states through three studies. They examined the correlation between time spent on Facebook and users' current emotional states, the effect of Facebook activity on users' current mood through activity meaningfulness, and users' anticipated feelings after Facebook use. The researchers found that the

more time individuals spent on browsing Facebook, the more negative their mood was immediately afterwards, which was mediated by the feelings of wasting time and having done nothing meaningful. Also, the results suggested that emotional effects of Facebook activities were more negative than expected, which is in contrast to Krasnova et al.'s (2013) findings that Facebook users indicated more positive emotions than negative ones when asked to estimate how they typically felt after using Facebook. However, which mechanisms were at work in creating such affective forecasting error remains unclear.

To have a comprehensive understanding of whether reading positive posts on Facebook would result in more positive emotions (e.g., happiness) or more negative emotions (e.g., envy, boredom), Lin and Utz (2015) focused on the momentary feelings of browsing Facebook on an individual message level, examining whether the tie strength (i.e., the relationship closeness) between the posters and readers can predict those emotional outcomes. A correlational study with a sample of 207 Americans and an experimental study with a sample of 194 Germans were conducted. The results showed that positive emotions were more prevailing than negative emotions while viewing posts on Facebook, and that tie strength moderated the feelings of happiness and benign envy after reading Facebook posts. That is, the closer the relationship, the happier one feels after reading positive posts and the sadder one feels after reading negative posts. For instance, if positive posts were posted by strong ties, users were more likely to be happy for them (i.e., family or friends) as well as experiencing only benign envy that generally motivates individuals' self-improvement (Lin & Utz, 2015). Thus, their study not only filled the research gap on the role of tie strength in predicting the emotional outcomes of browsing Facebook posts, but also was the first to differentiate malicious and benign envy in the context of Facebook use.

Considering the prevalence of social media and its association with users' psychological outcomes, Pittman and Reich (2016) examined the relationships among happiness, loneliness, satisfaction with life, and different types of social media platforms, including text-based (e.g., Twitter and Yik Yak), image-based (e.g., Instagram and Snapchat), and mixed (e.g., Facebook) social media platforms by using a mixed-method survey. In contrast to the previously mentioned literature (e.g., Johnson & Knobloch-Westerwick, 2016), the researchers found that text-based social

media use had no relationship with psychological well-being owing to its relative lack of intimacy. Nevertheless, image-based social media use is related to an increase in happiness and satisfaction with life and a decrease in loneliness due to images' ability to stimulate social presence and the feelings of connectedness, which in turn indicates that the more users use image-based social media platforms, the happier they are likely to be, the more satisfied they are with their life, and the less lonely they are likely to feel. While Pittman and Reich's (2016) findings contribute to the psychology and communication literature by advancing the understanding of social media consumption and psychological well-being, it is ambiguous what potential effects of individual differences on social media use and the causal role of image-based social media use plays in psychological well-being.

Bayer et al. (2016) probed the relationship between users' social and emotional experiences on Snapchat by conducting a multi-method investigation using both quantitative and qualitative approaches. They found that Snapchat interactions—general interactions and especially interactions with close ties—are associated with more positive mood but less social support than other social media platforms such as Facebook. Also, sharing mundane and spontaneous experiences with close others facilitates positive affect. While interactions were defined broadly as “any form of communication between you and another person” (Bayer et al., 2016, p. 962) in the study, it is unknown how different and specific types of user behaviors are associated with users' emotional well-being.

Being the first study to examine Instagram use and psychological well-being, Lup et al. (2015) surveyed 117 young adults aged 18–29 and found that frequent Instagram use is negatively associated with psychological well-being for those who follow more strangers, while a positive association with psychological well-being for those who follow fewer strangers emerged. In line with Krasnova et al.'s (2013) findings that passively browsing others' profiles displaying photos of vacations or social events to which one is not invited often triggers resentment, envy, and loneliness, Lup et al. (2015) pointed out that passive SNS use (e.g., viewing others' profiles without posting one's own new materials) seems to be particularly detrimental.

De Vries et al. (2018) investigated the emotional consequences of browsing strangers' positive posts on Instagram. By conducting a lab experiment, the study

examined both social comparison and emotional contagion perspectives along with individual differences regarding their varying tendencies to compare themselves to others. The findings showed that, from a social comparison perspective, strangers' positive social media posts negatively affect emotions of viewers with high levels of social comparison orientation; from an emotional contagion perspective, strangers' positive posts positively affect emotions of viewers with low levels of social comparison orientation. Besides, the findings also indicated that viewing strangers' positive posts only impact positive affect but not negative affect, suggesting that browsing strangers' positive posts can make social media users experience more positive affect but only if they do not compare themselves to others as this leads to less positive affect. De Vries et al.'s (2018) study provided important insights into how social media posts are processed in different ways and among different individuals and results in different affective consequences.

Yang (2016) examined the relationships between loneliness and Instagram activities with the moderation of social comparison orientation. The findings revealed that the interactive activity (i.e., interaction) and the passive activity (i.e., browsing) on Instagram are both associated with lower levels of loneliness, whereas the active but non-interactive activity (i.e., broadcasting) on Instagram is related to higher levels of loneliness. However, contradicting to the previous research that passive social media use is negatively related to psychological well-being (e.g., Krasnova et al., 2013; Lup et al., 2015), it is noteworthy that Instagram browsing associated with less solitude may due to its capability that users can learn about others, and this may in turn facilitate actual social interaction.

Differently, Weinstein (2018) examined the positive and negative influences of daily interactions with social media use on adolescents' affective well-being. The findings revealed that participants reported their affective experiences of portray social media use as positive. Both positive and negative emotions were found to be related to their social media experiences of expression, relational interactions, exploration, and browsing. Besides, teens indicated that social media platforms reflected and amplified positive and challenging aspects of their lives. Individual differences (e.g., appearance) and social-contextual factors (e.g., family circumstances) were intertwined with affect experiences of social media use. In this way, the findings

concluded a “both/and model” (Weinstein, 2018, p. 3620) that teens experienced different aggregation of both positive and negative influences of social media.

Based on the reviewed articles, passive consumption of social information has rather negative outcomes for some of the users (Wise et al., 2010; Krasnova et al., 2013; Sagioglou & Greitemeyer, 2014). However, some prior research showed that passive content consumption may also trigger positive emotions, and even has additional salutary effects on Millennials’ psychological and emotional well-being (Weinstein, 2018; Bolton, Parasuraman, Hoefnagels, Migchels, Kabadayi, Gruber, Loureiro, & Solnet, 2013). In light of that, the current study integrates different engagement levels, ranging from consumption to participation to creation, and examines how the levels of engagement is associated with users’ emotions, aiming to bridge the gap that extant research has focused more on Facebook than other social media platforms and emerging new features. To understand young adults’ total experience with Instagram Stories, the study attends to both positive and negative emotions related to their social media engagement.

RQ3: What are the emotions Millennials experience when using Instagram Stories?

2.5.2. Social Media Dependency

As individuals spend increasingly more time on usage of communication technologies and social media than before, researchers have examined individuals’ psychological state of dependency as a consequence of media usage (Turel, Serenko, & Giles, 2011; Wang, Lee, & Hua, 2015).

Introduced by Ball-Rokeach and Defleur (1976), dependency is described as a relationship in which the attainment of one party’s needs and goals is reliant on another party’s resources. As the main focus of the theory is the relationship between media and audiences, media dependency is thus defined as a “relation between the fulfillment of individuals’ goals and the extent the goals rely on the information resources of the media which can create, gather, process, and disseminate information” (Ball-Rokeach, 1985). Over the years, the concept of media dependency has been used to investigate dependency relationships through mass communication channels such as television (Grant, Guthrie, & Ball-Rokeach, 1991), radio (Loges, 1994), and newspapers (Loges & Ball-Rokeach, 1993). Recently, research focus on media

dependency has been shifted to the Internet and social media (Kim & Jung, 2017; Patwardhan & Yang, 2003; Wang et al., 2015). A plenty of terms have been proposed to describe psychological dependency on media, including SNS dependency (Kim & Jung, 2017), media dependency (Thadani & Cheung, 2011a), technology dependence (Fan, Liu, Wang, & Wang, 2017), Internet addiction (Kuss, Griffiths, Karila, & Billieux, 2014; Young, 1998), media addiction (LaRose, Lin, & Eastin, 2003), and technology addiction (Charlton, 2002; Turel et al., 2011).

Based on Griffiths' (1999) definition of technological dependency, it is a form of non-substance behavioral addiction involving excessive interaction with information technologies (i.e., both the technology and the content) under conditions of psychological dependency. Namely, dependency represents an irrational and compulsive circumstance. Likewise, considering it is possible for an individual to have different degrees of deficient self-regulation, this research defines social media dependency as a "deficient in self-regulation with which an individual is unable to effectively regulate one's dependency on the SNSs" (Thadani & Cheung, 2011b, p. 3), and refers to such dependency as a form of technology addiction. Some studies (Thadani & Cheung, 2011a; Wang et al., 2015; Young, 1998) share the idea that the terms "dependency" and "addiction" are interchangeable to some extent, suggesting that dependency is a phenomenological process reflected by behavioral addiction. Dependency, in that sense, represents a psychological state, whereas addiction encapsulates the related behavior (Thadani & Cheung, 2011b). However, unlike some studies (Griffiths, 1990; Turel et al., 2011) conceptualized such types of addictive dependency as gambling or auction, this research believes that social media dependency is relatively harmless, acceptable, and similar to the concept of soft addiction in that people spend a majority of time and energy engaging in SNS activities, seeking to avoid anxiety, satisfy surface desires/urges, and feel a sense of fulfillment from their habitual social media use (Wright, 2006). Following Wright's (2006) notion, it is important to examine the relationship between social media usage and users' psychological dependency.

2.5.3. Engagement and Social Media Dependency

Researchers have pointed out that there may exist a developmental process of high engagement precedes addictive technological activities (Charlton, 2002). That is, high levels of engagement with social media can lead to addictive social media usage.

Caplan (2010) provided an update of the cognitive-behavioral model of the Generalized Problematic Internet Use Scale 2 and integrated related ideas and results from recent studies. By using a two-step approach to develop and validate the theory, the results showed that while preference for online social interaction and Internet use for mood regulation predict deficient self-regulation of compulsive Internet use and cognitive preoccupation with the Internet, deficiency in self-regulation is a significant factor affecting negative outcomes related to Internet use. In addition, along with preference for online social interaction, mood regulation and deficient self-regulation are central aspects of generalized problematic Internet use. Therefore, individuals' preference for online social interaction, Internet use for mood regulation, and deficient self-regulation play significant roles in predicting problematic Internet use.

Along with Caplan's (2010) view on technology dependency as a form of self-regulatory disorder, Thadani and Cheung (2011b) examined the concept of technology dependency in the SNS context such as Facebook, proposing that technology dependency is crucially related to habit formation, and that online social network dependency is not only a significant determinant of habit but also an enhancer in SNS users' perceptions that indirectly influences habit. The scholars defined online social network dependency as a moderator that individuals are consciously preoccupied with thoughts about SNSs, and unable to get their mind off it. They also proposed online social network dependency as having a direct effect that an individual is unable to consciously control their behaviors. Through utilizing a web-based field survey with a convenience sample of Facebook users, the results revealed that frequency of prior behavior, comprehensiveness of usage and satisfaction were found to be major factors influencing the habit formation in the SNS context; specifically, frequency of prior behavior was found to be the least significant exogenous predictor of habit. Besides, it was found that via positive framing, addicts/dependents overestimate the benefit they could obtain from SNSs, which results in such bias that SNSs could best satisfy their needs for interpersonal connection, and in turn make them have higher tendency to form habit. In this sense, Thadani and Cheung (2011b) not only shed light on how technology dependency relates to the habit formation in SNS context and how habit

can be formed in SNSs, but also explicates the application of the psychological insights into the conceptualization of technology dependency.

Fan et al. (2017) investigated the effects of interactivity (i.e., control, communication, and responsiveness) on engagement, user satisfaction, and technology dependence to better understand users' technology utilization behavior. The researchers conceptualized technology dependence as the proportion of time users choose to use the information technologies, and identified technology dependence as the intensity of information technologies usage by adopting the notion of proactive stickiness proposed by Wu, Wang, and Tsai (2010). The findings showed that both engagement and user satisfaction have effects on technology dependence. Specifically, engagement, influenced by interactivity, has a stronger effect on technology dependence, and user satisfaction is affected by engagement and responsiveness of the technology. This indicates that high interactive features and designs of the technology may ensure the higher quality and better utilization of the technology, and that the more users engage with the technology, the more likely they are to rely on the technology led by the immersed media environment. In the sense, the proposed technology dependence model can help technology developers to understand not only what features need to be included in the technology design, but also how to attract users to rely more on and actively use the technology. Following this logic, it is plausible that users will become dependent on communication technology if they experience a high level of engagement. Thus, engagement with social media is expected to have a direct impact on social media dependency.

2.5.4. The Mediating Role of Emotions

In addition, researchers have suggested that emotions are associated with addictive Internet use (Campbell, Cumming, & Hughes, 2006). While pleasant feelings (e.g., excitement, euphoria, or exhilaration) typically amplify addictive patterns of Internet use (Young, 1999), negative mood (e.g., depression) is also a necessary cause of Internet dependency, for users who turn to the Internet to avoid further deteriorating mood (Davis, 2001). As addicted people find more pleasant feelings when online compared to their feelings when offline, they tend to engage more intensely on the Internet; the longer they go without the Internet, the more intense such unpleasant feelings they have. Besides, such attachment or sensation of

addicts towards the Internet may damage one's life to some extent, and this can in turn make addicts psychologically long for the euphoria related to the Internet (Young, 1999).

Donnelly and Kuss (2016) investigated the relationships between SNS usage, SNS addiction and depression across the four SNS platforms, including Instagram, Twitter, Snapchat and Facebook, by employing a cross-sectional online study. The findings showed that, based on the U&G theory, Instagram use is related to SNS addiction, and that both Instagram use and SNS addiction are predictors of depression. Instagram use can lead to excessive use because users obtain gratification from enjoying the visual functions of the platform as well as exploring new identities by presenting such online self-image that they wish to promote. Besides, users may have the feelings of pride, euphoria, and self-confidence when receiving likes or comments on their profiles, yet they may have the feelings of despondency and depression if not. Thus, the more users participate in Instagram, the more likely they are to experience SNS addiction due to gratification-seeking. However, it is noteworthy that such usage may sequentially increase the feelings of depression. As users tend to create more positive self-images on Instagram, exposures to those images may induce such comparisons that users' may not find their real lives as privileged as others', which in turn results in dissatisfaction. While the results also indicated there is a relationship between SNS addiction and depression, there is no such relationship between Facebook, Twitter and Snapchat use and SNS addiction or depression. The reason may be that young people migrate from Facebook to other newer SNSs, such as Instagram, and that Twitter is primarily a text-based SNS which users may not receive that much gratification or methodological differences (Donnelly & Kuss, 2016).

By integrating the U&G theory and Media System Dependency theory, Sun, Rubin, and Haridakis (2008) investigated the mediating role of cognitive involvement (i.e., attention and recognition) and affective involvement (i.e., positive and negative affect) in the relationship between demographics, motivations for Internet use and Internet dependency. Through surveying 471 participants, the results showed that young people were more likely to develop Internet dependency than older people, as most of young adults are technologically savvy. While Internet motivations (i.e., substitution, information, social interaction, and control) and involvement (i.e., cognitive involvement, positive affect, and negative affect) were significant predictors

of Internet dependency than demographics, motivation was found to be a stronger precursor of Internet dependency than demographics, and cognitive and affective involvement. Also, as an instrumental Internet orientation (e.g., social interaction and control motivations) was found to be related to cognitive involvement, a ritualized orientation (e.g., substitution motivation) was found to be related more to affective involvement.

Longstreet and Brooks (2017) investigated how a generalized positive emotional state (i.e., happiness) and a generalized negative emotional state (i.e., stress) affect Internet and social media addiction through life satisfaction by conducting online surveys among 251 participants aged from 18 to 44. The results showed that different emotional states impact life satisfaction differently, and life satisfaction has a significant influence on both types of addictions. While happiness has a positive effect on life satisfaction, stress has a negative influence on life satisfaction. In other words, higher happiness levels are related to greater life satisfaction, yet high stress levels may lead to a decrease in life satisfaction. The findings also suggested that decreases in life satisfaction are related to increased levels of Internet and social media addiction, because users may turn to the Internet or social media for happiness. In this way, as users experience more pleasant feelings in life, their life satisfaction will increase and the corresponding levels of Internet and social media addiction will decrease. Contrarily, as users have more stress in life, their life satisfaction will decrease, which may then increase their degrees of Internet and social media addiction. Therefore, increased positive emotions (i.e., happiness) and decreased negative emotions (i.e., stress) may be associated with decreased levels of Internet and social media addiction through life satisfaction, which indicates that seeking increased life satisfaction in an alternative way can reduce these addictions (Longstreet & Brooks, 2017).

Altuwairiqi, Kostoulas, Powell, and Ali (2019) examined the relationship between the usage experience of people with a problematic attachment to social media and their associated emotions by conducting a multistage qualitative method: interviews and diary study. The researchers found that usage experience of problematic attachment to social media is related to both negative (i.e., sadness, anger, and fear) and positive emotions (i.e., love, joy, and surprise). On one hand, receiving notification, hasty and unconsciously prolonged usage, unconscious disregard,

unsuccessful self-promotion, missing opportunities, unmet expectations, unconscious interaction, and social comparison can trigger negative emotions; on the other hand, popularity increased, mutuality of interaction, constant connectedness, and passing time can evoke positive emotions. Problematic attachment is related to reliance on resulting positive emotions, which further enhances satisfaction of social media use. However, such usage as overly relying on social media to self-promote or gain popularity and relatedness may lead to excessive use of social media and accelerate negative emotions. As a result, the researchers revealed that, the more users feel euphoric over social media use (e.g., obtaining real-time information, increasing their numbers of followers, or getting comments and reposts from other users), the more likely they become depend on it. They also indicated that such results could be generated from negative emotions as well (Altuwairiqi et al., 2019).

Taken together, this research probes into the positive association between engagement and social media dependency through positive and negative emotions. Given that little research has been devoted to understand addictive uses of Instagram features (Kircaburun & Griffiths, 2018), the current research fills the gap by deepening the understanding of the development of social media dependency in the context of Instagram Stories. Two hypotheses are thus postulated:

H1: Engagement with Instagram Stories will positively affect Instagram Stories users' social media dependency.

H2: The positive effect of engagement with Instagram Stories on social media dependency is mediated by positive emotions.

H3: The positive effect of engagement with Instagram Stories on social media dependency is mediated by negative emotions.

CHAPTER 3

METHODOLOGY

3.1. Overview of the Research

Considering Instagram Stories is a relatively new feature on Instagram, and that Millennials spend more time on it, Millennials' self-reported portrayals of their Instagram Stories related activities, emotions, and social media dependency were examined to address the abovementioned research questions and hypotheses. To explore the relationships between Millennial Instagram users' motivations for using Instagram Stories and types of engagement, the influences engagement on subsequent emotional outcomes, and the mediating role of positive and negative emotions between engagement with Instagram Stories and social media dependency, a two-stage mixed-method approach was utilized (Churchill, 1979).

Given that the U.S. headed the ranking of the countries with the most Instagram users, especially popular among young adults (Statista, 2019d), participants of this study were U.S. Millennial adults (also known as Generation Y). They are digital natives who grew up with digital devices and information technology, and receive information fast and multitask frequently (Prensky, 2001). While Millennials are defined as those born between 1980 and 2000 (Donnison, 2007), there is no consensus on the precise definition of the term, and the range of birth years slightly differs among studies: 1981 to 1999 (Bolton et al., 2013), 1982 to 2000 (Rich, 2008), and 1982 to 2005 (Howe & Strauss, 2007). In view of that Instagram users worldwide are mainly between the ages of 18 and 34 years old (Statista, 2019c), the current study defines Millennials as those born between 1980 and 2001; therefore, participants of this study were Millennial adults between the ages of 18 and 39 in 2019. Participants were recruited from Amazon's Mechanical Turk (MTurk), a crowdsourcing platform which has been used in many social science studies due to its relatively large and diverse pool (Lee, Hon, & Won, 2018; Mason & Suri, 2012). Prior research has provided support for the quality of MTurk data, and shown that samples collected from this online panel are more representative of the U.S. population compared to other convenience sample and participant pools in the U.S. (Berinsky, Huber, & Lenz, 2012; Kees, Berry, Burton, & Sheehan, 2017).

To generate the list of motivations that drive Millennials' Instagram Stories usage, a pretest using a qualitative questionnaire was first conducted. Instagram Stories users were asked to provide exploratory lists of terms or phrases describing their uses and gratifications. Those descriptive items related to uses and gratifications generated from Instagram Stories users recruited from MTurk were beneficial, because the descriptive items are in the users' own words and carry the meanings shared by the typical users on the platform (Joinson, 2008). The list of motivations to Instagram Stories use were then obtained. The main study employed a survey to understand Millennials' Instagram Stories use regarding their motivations, engagement, and resulting psychological consequences. Participants' responses to motivation-related questions were first subjected to a factor analysis and grouped into dimensions of specific uses and gratifications (Bantz, 1982); while multiple regression analyses were used to understand the relationship between motivations for Instagram Stories usage and engagement, a mediation analysis was used to examine the relationship among engagement, resulting emotional outcomes, and social media dependency.

3.2. Pretest: Exploratory Stage

By carrying out an open-ended questionnaire on the survey website Qualtrics and recruiting participants on MTurk, the pretest aimed to obtain specific motivations for Instagram Stories use and form the U&G items related to Instagram Stories use, which would be utilized in the main study.

3.2.1. Participants

The data was collected by using the online survey tool, Qualtrics, from September 5th to September 10th. A total of 21 participants comprising 10 females and 11 males were recruited from MTurk. The age of participants ranged from 20 to 39, with the average age of 30 years old. While 13 participants had obtained a college degree as their highest level of education, four of them had achieved a Master's degree, two of them had completed some college, and the other two had completed high school (see Table 1).

Table 1
Sample Demographic Characteristics (N = 21)

Demographics	Frequency (N)	Percentage (%)
<i>Gender</i>		
Male	11	52.4
Female	10	47.6
<i>Age</i>		
18–24	2	9.5
25–29	7	33.3
30–34	8	38.1
35–39	4	19.1
<i>Educational Level</i>		
High school/ GED	2	9.5
Some college	2	9.5
2-year college degree	2	9.5
4-year college degree	11	52.4
Master’s degree, professional degree, or doctorate degree	4	19.1

3.2.2. Procedure

Participants were asked to consent to participate in the study, and then they were instructed to answer the filter questions to indicate whether they were aged between 18 and 39 and lived in the U.S. who had an Instagram account and used Instagram Stories. Subsequently, they were asked to reply to how and why they used Instagram Stories with descriptive terms or short sentences.

A questionnaire with open-ended questions adapted from Stafford, Stafford, and Schkade (2004) was utilized to form a preliminary list of narrative terms in the pretest: (1) Using three easy-to-understand terms respectively that describe what do you consume content/ participate in activities, interactions, conversations/ post content on Instagram Stories for?; (2) What is the first thing that comes to mind when you think about what you enjoy the most when using Instagram Stories?; (3) Please use five words to describe what you enjoy when using Instagram Stories; (4) What uses of Instagram Stories are most important to you?.

Besides, participants were asked to report the frequency of their engagement with Instagram Stories on a 7-point scale (1 = never; 2 = seldom; 3 = a few times a month; 4 = once a week; 5 = a few times a week; 6 = once a day; 7 = several times per day): “In the past week, how often on average do you consume content (e.g., view, browse, check out)/ participate in activities, interactions, conversations (e.g., replying, clicking polls/question stickers)/ post content (e.g., upload, create content) on Instagram Stories?” Next, to gain in-depth insights into the specific motivations of Instagram Stories use, participants were also asked to give examples of what their

motivations for consuming content (e.g., viewing, browsing, checking out), participating in activities (e.g., replying, clicking polls/ question stickers), and posting (e.g., uploading, creating content) on Instagram Stories were. Eventually, participants were asked to provide demographic information, including age, biological sex, educational levels, and numbers of followers/followings they had.

3.2.3. Results

All participants ($N = 21$) reported having an average of 978 followers (range from 12 to 10,000 followers) and 544 followings (ranged from 1 to 5,000 followings). A total of 11 participants consumed content on Instagram Stories “several times per day,” while six participants participated in Instagram Stories “several times per day.” However, only two participants indicated that they posted content on Instagram Stories “several times per day.” The majority of participants posted content on Instagram Stories “a few times a week” (see Table 2), which revealed that Instagram Stories users tend to consume content more frequently than participating or posting.

Table 2
Frequency of Using Instagram Stories (N = 21)

Frequency (%)	Never	Seldom	A few times a month	Once a week	A few times a week	Once a day	Several times per day
Consuming	0	0	0	0	6 (29)	4 (19)	11 (52)
Participating	0	0	2 (9.5)	1 (4.7)	6 (28.6)	6 (28.6)	6 (28.6)
Posting	1 (4.8)	3 (14.3)	3 (14.3)	3 (14.3)	8 (38)	1 (4.8)	2 (9.5)

Note: Frequency = N

To form a preliminary list of motivations to be used in the main study, responses collected from the sample were clustered and coded by identifying the ones that are related. In total, the sample revealed 416 descriptive terms. Firstly, the collected terms with the same or similar meanings were merged and formed 48 U&G items (see Table 3).

Table 3
The List of Newly Coded 48 Items Based on the Results of the Pretest

No.	Items
1	To keep in touch with family and friends.
2	To have conversations with others (e.g., chats, gossip, etc.).
3	To maintain a good relationship with others (for networking).

Table 3 (cont'd)
The List of Newly Coded 48 Items Based on the Results of the Pretest

No.	Items
4	To meet/connect with others who have similar interests.
5	To interact with brands.
6	To browse products/services (e.g., clothes, shoes).
7	To buy products/services (e.g., clothes, shoes).
8	To relax.
9	To pass the time when bored.
10	To occupy my time.
11	To escape from reality.
12	To forget about troubles.
13	To avoid loneliness.
14	To share information about me (e.g., feelings, updates, etc.).
15	To share information I think is interesting (e.g., reposting).
16	To promote certain topics.
17	To explore.
18	To get free information without much effort.
19	To learn about new things (e.g., watching tutorials, etc.).
20	To keep up with current issues and events of the day.
21	To receive exclusive contents in real time.
22	To get updates on my family and friends.
23	To follow influencers/celebrities.
24	To see what other people share.
25	To record things that happen in my daily life.
26	To create my own portfolio (e.g., vlogging).
27	To receive responses from others.
28	To feel like I belong to a community.
29	To express my actual self (who I really am).
30	To self-promote.
31	To become popular.
32	To show off.
33	Because it is easy to use.
34	Because it is entertaining.
35	Because it is enjoyable.
36	Because it is fun.
37	Because it is cool.
38	Because it is casual.
39	Because it is functional.
40	Because it is convenient.
41	Because it is real.
42	Because it is private.
43	Because it is new.
44	Because it disappears after 24 hours.
45	Because I enjoy editing stories with the features (e.g., filters, texts, emojis).
46	Because I can receive some benefits (e.g., giveaways, coupons).
47	Because I have nothing better to do.
48	Because people around me use Instagram Stories.

Secondly, the 48 items based on the result of the pretest was compared and integrated with the list derived from the U&G literature on social media use (Kaye & Johnson, 2002; Kim, 2016; Lee et al., 2015; Papacharissi & Rubin, 2000; Sheldon &

Bryant, 2016) that includes themes such as social interaction, entertainment, passing time, information sharing, information seeking, surveillance, archiving, need for recognition, coolness, and creativity (see Table 4).

Table 4
The List of Motivations Derived from the U&G Literature

Motivations	Items	References
Social interaction	To interact with a number of people. To maintain a good relationship with others (for networking). To get updates on close friends and family. To keep in touch with friends far away. To communicate with friends and family. Because people around me use Instagram. To know about things that are happening around me. To connect/meet with people who share similar interest.	Lee et al. (2015)
Entertainment	Because it is entertaining. Because it is enjoyable. To escape from reality To forget about troubles To avoid loneliness To get what I want without much effort To relax	Papacharissi & Rubin (2000); Lee et al. (2015)
Passing Time	Because it passes time when bored. When I have nothing better to do. To occupy my time.	Papacharissi & Rubin (2000)
Information Sharing	To provide my update. To be noticed by others. To express my actual self (who I really am). To share my personal information with others. To show off.	Lee et al. (2015)
Information seeking	New way to do research. It is easier. To get information for free. To look for information. To see what is out there. To keep up with main issues of the day.	Papacharissi & Rubin (2000); Kaye & Johnson (2002)
Surveillance	To interact with my friends. To see “visual status updates” of my friends. It is fun. To follow my friends. To see what other people share. To “like” my followers’ photos. To creep through other people’s posts.	Sheldon & Bryant (2016)
Archiving	To record daily events through photos. To create my personal space. To record my traces (e.g., trip) via photomap. To do personal blogging. To take fancy photos and save them online. To update photos and videos with various filters	Lee et al. (2015)

	applied.	
Need for recognition	To get recognition from other users. To make me more popular. To enhance my personal reputation.	Kim (2016)
Coolness	To become popular. It is cool. To self-promote. To provide “visual status updates” for my friends.	Sheldon & Bryant (2016)
Creativity	To find people with whom I have common interests. To create art. To show off my photography skills.	Sheldon & Bryant (2016)

However, to conform to the context of Instagram Stories and the results from the pretest, all items were reviewed and modified. As a result, 10 of them were excluded: (1) to relax, (2) to occupy my time, (3) to escape from reality, (4) to forget about troubles, (5) to avoid loneliness, (6) to express my actual self (who I really am), (7) because it is cool, (8) because I have nothing better to do, (9) Because I enjoy editing stories with the features (e.g., filters, texts, emojis), and (10) because people around me use Instagram Stories.

In conclusion, by using an open-ended questionnaire, the pretest focuses on establishing specific items for capturing motivations for Instagram Stories usage in the main study. A total of 48 items were obtained as the result of the pretest. After comparing and integrating the 48 items with the ones acquired from the U&G literature, 38 items were used as the instrument for understanding users’ motivations for using Instagram Stories in the main study.

3.3. Main Study: Survey

By conducting an online survey on the website Qualtrics and recruiting participants on MTurk, the main study aspires to understand how and why users use Instagram Stories, their engagement with this feature, and their resulting psychological effects, including emotional outcomes and social media dependency.

3.3.1. Participants and Procedure

In the main study, a total of 296 U.S. Millennial participants ($M_{age} = 32.12$, $SD_{age} = 4.79$) were recruited from MTurk during the period from October 12th to October 20th, 2019. They were first instructed to consent to participate in the study and to fill out the filter questions that asked whether they were aged between 18 and

39 and lived in the U.S. who had an Instagram account and used Instagram Stories. Next, they were asked to respond to questions pertaining to their motivations for using Instagram Stories, followed by questions about their engagement with Instagram Stories, emotional outcomes, and social media dependency. Finally, participants were asked to provide demographic information, including age, biological sex, educational levels, usage time, and number of the followers/followings.

3.3.2. Measures

The survey included questions to understand the characteristics of the Instagram Stories users, the uses and gratifications items, Instagram Stories engagement, the resulting emotional outcomes, and social media dependency on Instagram Stories.

3.3.2.1. Motivations for Using Instagram Stories

Participants' motivations for using Instagram Stories were measured by utilizing 38 items generated from the results of the pretests and the U&G literature (Kaye & Johnson, 2002; Kim, 2016; Lee et al., 2015; Papacharissi & Rubin, 2000; Sheldon & Bryant, 2016). Using the guiding statement “(w)e would like to learn about your usage of Instagram Stories. Please check the statements below that reflect why you use Instagram Stories,” participants were instructed to indicate their perceived level of agreement for each item that described their uses and gratifications for Instagram Stories on a 7-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neutral; 5 = somewhat agree; 6 = agree; 7 = strongly agree) (see Table 5).

Table 5
Motivation Items for using Instagram Stories

No.	Items
1	To keep in touch with family and friends.
2	To have conversations with others (e.g., chats, gossip, etc.).
3	To maintain a good relationship with others (for networking).
4	To meet/connect with others who have similar interests.
5	To interact with brands.
6	To browse products/services (e.g., clothes, shoes).
7	To buy products/services (e.g., clothes, shoes).
8	To pass the time when bored.
9	To share information about me (e.g., feelings, updates, etc.).
10	To share information I think is interesting (e.g., reposting).

Table 5 (cont'd)
Motivation Items for using Instagram Stories

No.	Items
11	To promote certain topics.
12	To explore.
13	To get free information without much effort.
14	To learn about new things (e.g., watching tutorials, etc.).
15	To keep up with current issues and events of the day.
16	To receive exclusive contents in real time.
17	To get updates on my family and friends.
18	To follow influencers/celebrities.
19	To see what other people share.
20	To record things that happen in my daily life.
21	To create my own portfolio (e.g., vlogging).
22	To receive responses from others.
23	To feel like I belong to a community.
24	To self-promote.
25	To become popular.
26	To show off.
27	Because it is easy to use.
28	Because it is entertaining.
29	Because it is enjoyable.
30	Because it is fun.
31	Because it is casual.
32	Because it is functional.
33	Because it is convenient.
34	Because it is real.
35	Because it is private.
36	Because it is new.
37	Because it disappears after 24 hours.
38	Because I can receive some benefits (e.g., giveaways, coupons).

3.3.2.2. Instagram Stories Engagement

To measure social media engagement in terms of consumption, participation, and creation behaviors on Instagram Stories, the instrument was adapted from Muntinga et al.'s (2011) and Schivinski, Christodoulides, and Dabrowski's (2016) research to know the frequency of participants' Instagram Stories use, while the wording was modified to fit in the context of Instagram Stories. Considering the limited time of Instagram Stories and to avoid any recall biases, participants were asked to answer the questions based on their social media usage in the past week.

In terms of consuming Instagram Stories, two questions were used in the questionnaire, such as (1) "In the past week, how often on average do you use Instagram Stories by viewing others' Stories?" and (2) "In the past week, how often on average do you swipe up others' Instagram Stories?". A total of two questions were asked to understand participants' frequency of contributing to Instagram Stories, such

as (1) “In the past week, how often on average do you use Instagram Stories by responding to Stories features created by others (e.g., poll stickers, emoji reactions etc.)?” and (2) “In the past week, how often on average do you reply to others’ Stories?”. Three questions were used to understand participants’ frequency of creating Instagram Stories, such as (1) “In the past week, how often on average do you post your own Instagram Stories?,” (2) “In the past week, how often on average do you share something (e.g., music, reposting other stories etc.) to your Instagram Stories?,” and (3) “In the past week, how often on average do you post your own Stories with Instagram Stories features (e.g., digital filters, texts, draws and handwritings, links, etc.)?”. Three levels of engagement were assessed ranging from 1 (never), 2 (not once this week), 3 (once this week), 4 (2-3 times this week), 5 (4-6 times this week), 6 (once a day), to 7 (several times a day): consuming ($r = 0.53, p < .01$), contributing ($r = 0.82, p < .01$), and creating ($\alpha = .90$), whereas the index of engagement ($\alpha = .90$) composed of consumption, contribution, and creation was also computed.

3.3.2.3. Emotional Outcomes

Based on research literature (Richins, 1997), eight types of positive emotions ($\alpha = .91$) (i.e., romantic love, love, peacefulness, contentment, optimism, joy, excitement, and surprise), and eight types of negative emotions ($\alpha = .93$) (i.e., anger, discontent, worry, sadness, fear, shame, envy, and loneliness) were measured and assessed by asking participants to respond to the guiding query of “How often do you experience any of the feelings when you used Instagram Stories?” on a 7-point scale (1 = never; 2 = very rarely; 3 = rarely; 4 = sometimes; 5 = often; 6 = very often; 7 = all the time). An index of emotional outcomes ($\alpha = .88$) comprised positive and negative emotions was also computed.

3.3.2.4. Social Media Dependency

Social media dependency ($\alpha = .94$) on Instagram Stories was measured by three sub-constructs adapted from Caplan (2010) and Thadani and Cheung (2011a): (1) mood regulation, emphasis on the motivation for using the Internet to reduce distressing feelings; (2) cognitive preoccupation, reflection of obsessive thinking about the Internet; and (3) compulsive Internet use, indication of problems with impulse control, all of which indicate that users need to use Instagram Stories to

obtain gratifications and reflect their addictive usage. The items were modified to fit in the Instagram Stories context and assessed by asking participants to rate the corresponding levels of agreement on a 7-point Likert scale to the statements in terms of mood regulation: (1) “I use Instagram Stories to interact with others when I feel isolated,” (2) “I use Instagram Stories to make myself feel better when I am down,” and (3) “I use Instagram Stories to make myself feel better when I feel upset.” Besides, statements related to cognitive preoccupation were also included: (1) “I think about Instagram Stories if I cannot use it for some time,” (2) “I miss using Instagram Stories if I don’t have access to it,” (3) “When not on Instagram Stories, I wonder what I miss out,” (4) “I am not at ease if I cannot go on Instagram Stories,” and (5) “It is hard to stop thinking about what is being shared and what can be shared on Instagram Stories.” As for measuring participants’ compulsive Instagram Stories use, the guiding statements were: (1) “I want to, or have made unsuccessful efforts to, limit or control my use of Instagram Stories,” (2) “I feel guilty about the amount of time I spend on Instagram Stories,” (3) “I have tried to stop using Instagram Stories for long periods of time,” and (4) “I have attempted to spend less time on Instagram Stories but have not been able to.” The scale was anchored from 1 (strongly disagree), 2 (disagree), 3 (somewhat disagree), 4 (neutral), 5 (somewhat agree), 6 (agree), to 7 (strongly agree).

CHAPTER 4

RESULTS

The collected data was analyzed using SPSS 25 software to perform reliability tests, descriptive statistics, exploratory factor analysis, multiple regressions analysis, and path analysis. The sample demographic characteristics, and the descriptive statistics of motivations for using Instagram Stories, engagement with Instagram Stories, emotional outcomes of Instagram Stories use, and social media dependency were reported in Table 6, 7, 8, 9, and 10.

To answer RQ1, a factor analysis was performed to come up with specific motivations that accounted for Instagram Stories use, while multiple regression analyses were used to answer RQ2 and RQ3. Lastly, a mediation analysis was utilized to look at H1, H2, and H3 all together to examine the relationships among Instagram Stories engagement, positive and negative emotions, and social media dependency.

4.1. Descriptive Analysis

A total of 296 U.S. Millennial participants, including 141 females and 155 males, were recruited from MTurk. The age of participants ranged from 18 to 39 ($M_{age} = 32.12$, $SD_{age} = 4.79$). The majority of participants had obtained bachelor's (58.8%) or high school's degree (24.7%). The demographics of the participants were shown in the Table 6. On average, participants indicated that while they spent 1.69 hours on Instagram on a typical day ($SD = 3.62$ hours), they spent less time on Facebook ($M = 1.30$ hours, $SD = 2.23$ hours). The results showed that Instagram is relatively more popular than Facebook among young adults. Also, they reported having an average of 456 followers (ranged from 1 to 24,232 followers) and 348 followings (ranged from 0 to 5,000 followings).

Table 6
Sample Demographics (N = 296)

Demographics	Frequency (N)	Percentage (%)
<i>Gender</i>		
Male	155	52.4
Female	141	47.6
<i>Age</i>		
18–24	20	6.8

Table 6 (cont'd)

Sample Demographics (N = 296)

Demographics	Frequency (N)	Percentage (%)
25–29	79	26.7
30–34	101	34.1
35–39	96	32.4
<i>Educational Level</i>		
No schooling completed, or some high school, no diploma	4	1.4
Junior high school graduate, diploma or the equivalent	1	0.3
High school graduate, diploma or the equivalent	73	24.7
Bachelor's degree	174	58.8
Master's degree, professional degree, or doctorate degree	44	14.9

Overall, the mean scores of the items “Because it is fun” ($M = 5.95$, $SD = 1.00$), “Because it is entertaining” ($M = 5.95$, $SD = 1.03$), and “Because it is enjoyable” ($M = 5.92$, $SD = 1.08$) were relatively higher than the others, followed by “To pass the time when bored” ($M = 5.83$, $SD = 1.19$), and “To see what other people share” ($M = 5.76$, $SD = 1.11$). In this sense, it was observed that participants used Instagram Stories mainly for fun, entertainment, passing time, and learning about others' information (see Table 7).

Table 7

Descriptive Statistics of Motivations for Using Instagram Stories (N = 296)

No.	Items	M	SD
1	To keep in touch with family and friends.	5.40	1.36
2	To have conversations with others (e.g., chats, gossip, etc.).	4.61	1.81
3	To maintain a good relationship with others (for networking).	4.79	1.61
4	To meet/connect with others who have similar interests.	4.62	1.69
5	To interact with brands.	4.22	1.85
6	To browse products/services (e.g., clothes, shoes).	4.27	1.88
7	To buy products/services (e.g., clothes, shoes).	3.60	1.86
8	To pass the time when bored.	5.83	1.19
9	To share information about me (e.g., feelings, updates, etc.).	5.30	1.44
10	To share information I think is interesting (e.g., reposting).	5.38	1.41
11	To promote certain topics.	4.56	1.59
12	To explore.	5.28	1.44
13	To get free information without much effort.	4.57	1.76
14	To learn about new things (e.g., watching tutorials, etc.).	4.94	1.68
15	To keep up with current issues and events of the day.	5.00	1.60
16	To receive exclusive contents in real time.	4.55	1.71
17	To get updates on my family and friends.	5.72	1.23
18	To follow influencers/celebrities.	4.87	1.75
19	To see what other people share.	5.76	1.11
20	To record things that happen in my daily life.	5.21	1.46
21	To create my own portfolio (e.g., vlogging).	4.26	1.84
22	To receive responses from others.	4.69	1.66
23	To feel like I belong to a community.	4.78	1.60
24	To self-promote.	4.27	1.84

Table 7 (cont'd)
Descriptive Statistics of Motivations for Using Instagram Stories (N = 296)

No.	Items	M	SD
25	To become popular.	3.54	1.85
26	To show off.	3.46	1.93
27	Because it is easy to use.	5.58	1.27
28	Because it is entertaining.	5.95	1.03
29	Because it is enjoyable.	5.92	1.08
30	Because it is fun.	5.95	1.00
31	Because it is casual.	5.43	1.29
32	Because it is functional.	5.46	1.26
33	Because it is convenient.	5.59	1.23
34	Because it is real.	5.09	1.44
35	Because it is private.	3.65	1.73
36	Because it is new.	4.13	1.77
37	Because it disappears after 24 hours.	4.17	1.78
38	Because I can receive some benefits (e.g., giveaways, coupons).	3.74	1.88

In terms of engagement with Instagram Stories, the mean score of consuming ($M = 4.83, SD = 1.36$) was higher than contributing ($M = 4.06, SD = 1.55$) and creating ($M = 3.70, SD = 1.31$). Therefore, participants consumed Instagram Stories more than contributed to and created Instagram Stories.

Table 8
Descriptive for Engagement with Instagram Stories (N = 296)

Variable	M	SD
	<i>Engagement</i> ($\alpha = .90$)	4.12
Consuming ($\alpha = .69, r = .53$)	4.83	1.36
Contributing ($\alpha = .90, r = .82$)	4.06	1.55
Creating ($\alpha = .90$)	3.70	1.31

As for resulting emotional outcomes of Instagram Stories use, the mean scores of positive emotions ($M = 4.12, SD = 1.21$) was higher than negative emotions ($M = 2.13, SD = 1.12$), which indicated that participants experienced both positive and negative emotions when using Instagram Stories; however, they experienced more positive emotions than negative ones. Particularly, the mean scores of joy ($M = 4.65, SD = 1.44$), contentment ($M = 4.52, SD = 1.53$), and optimism ($M = 4.51, SD = 1.48$) were the highest among positive emotions. While the mean scores of negative emotions were relatively low, envy ($M = 2.85, SD = 1.68$), loneliness ($M = 2.39, SD = 1.49$), and discontent ($M = 2.14, SD = 1.33$) emerged as the most significant negative emotions. Participants were likely to experience more positive emotions such as joy and less negative emotions such as envy when using Instagram Stories (see Table 9).

Table 9

Descriptive for emotional outcomes of Instagram Stories use (N = 296)

Variable	M	SD
<i>Emotions</i> ($\alpha = .88$)	3.12	0.88
<i>Positive emotions</i> ($\alpha = .91$)	4.12	1.21
Joy (happy, pleased, joyful)	4.65	1.44
Contentment (contented, fulfilled)	4.52	1.53
Optimism (optimistic, encouraged, hopeful)	4.51	1.48
Peacefulness (calm, peaceful)	4.42	1.52
Excitement (excited, thrilled, enthusiastic)	4.41	1.53
Surprise (surprised, amazed, astonished)	4.12	1.55
Love (loving, sentimental, warm hearted)	3.56	1.69
Romantic love (sexy, romantic, passionate)	2.75	1.68
<i>Negative emotions</i> ($\alpha = .93$)	2.13	1.12
Envy (envious, jealous)	2.85	1.68
Loneliness (lonely, homesick)	2.39	1.49
Discontent (unfulfilled, discounted)	2.14	1.33
Worry (nervous, worried, tense)	2.08	1.36
Sadness (depressed, sad, miserable)	2.07	1.33
Anger (frustrated, angry, irritated)	1.92	1.21
Shame (embarrassed, ashamed, humiliated)	1.80	1.26
Fear (scared, afraid, panicky)	1.76	1.27

Apart from emotional outcomes, social media dependency is another psychological consequences of Instagram Stories use examined in this study. While participants showed they were indeed reliant on Instagram Stories ($M = 3.17$, $SD = 1.36$), the mean score of mood regulation ($M = 3.77$, $SD = 1.70$) was higher than cognitive preoccupation ($M = 3.23$, $SD = 1.54$) and compulsive Internet use ($M = 2.64$, $SD = 1.49$). Specifically, participants were more likely to use Instagram Stories to manage their moods (see Table 10).

Table 10

Descriptive for Social Media Dependency (N = 296)

Variable	M	SD
<i>Social Media Dependency</i> ($\alpha = .94$)	3.17	1.36
mood regulation	3.77	1.70
cognitive preoccupation	3.23	1.54
compulsive Internet use	2.64	1.49

4.2. Factor Analysis

To answer RQ1 that investigates Millennials' motivations for using Instagram Stories, an exploratory factor analysis (EFA) based on the principal component extraction with varimax rotation was performed to identify specific motivations for

Instagram Stories use (Lee et al., 2015; Mull & Lee, 2014; Punyanunt-Carter et al., 2017; Sheldon & Bryant, 2016). Principal component analysis (PCA) is a cluster analytical technique for identifying groups or clusters of variables, and it is used to condense the data set into a more convenient and manageable size while retaining as much of the original information as possible (Field, 2005). Through the PCA, each item had an equal chance to cluster to any one of the factors (Morecroft, Cantrill, & Tully, 2006). Meanwhile, one of the orthogonal rotation, varimax, was used to maximize the dispersion of factor loadings (Field, 2005). Accordingly, an eigenvalue greater than or equal to 1.0 and a loading score for each factor greater than or equal to 0.40 were required to retain a factor (Nunnally, 1978).

The initial EFA consisted of 38 items suggested that eight factors should be retained; however, since the item “Because I enjoy editing stories with the features (e.g., filters, texts, emojis)” had no loadings, the item was eliminated. As a consequence, the PCA results showed that the eight-factor, 38-item measure accounted for 66.97% of the total variance explained. The obtained factors were named based on the U&G literature (e.g., Whiting & Williams, 2013) and the meanings of the items. Eight factors were defined as: exploration, recognition-seeking, perceived functionality, entertainment, social sharing, interaction, novelty, and surveillance (see Table 11).

Factor 1, labeled “exploration” (eigenvalue = 12.27), contained nine items (e.g., “To interact with brands,” “To browse products/services (e.g., clothes, shoes),” “To buy products/services (e.g., clothes, shoes),” “To explore,” “To get free information without much effort,” “To learn about new things (e.g., watching tutorials, etc.),” “To keep up with current issues and events of the day,” “To receive exclusive contents in real time,” and “To receive exclusive contents in real time”) and accounted for 32.30% of the total variance after rotation ($\alpha = .90$). Mull and Lee (2014) found that users use Pinterest for virtual exploration (i.e., exploring images for interesting ideas and learning), which is similar to McQuail’s (1983) motivational dimension of information seeking, yet both of the identified motivations are merely about information searching and learning. Nevertheless, taken in Instagram Stories context, users not only exploring exclusive information but also interacting with brands and making purchases.

Factor 2, “recognition seeking” (eigenvalue = 4.10), explained 10.80% of the variance ($\alpha = .84$), and consisted of four items (e.g., “To create my own portfolio (e.g., vlogging),” “To self-promote,” “To become popular,” and “To show off”). Since imagery presentation of personalities, lifestyles, and tastes on Instagram empowers users’ impression management (Lee et al., 2015), gaining replies (e.g., “likes” or emoji reactions) and having a considerable number of viewers help validate popularity and status among peers on Instagram (Sheldon & Bryant, 2016), and satisfy the psychological needs to be seen and valued (Greenwood, 2013). As a result, this factor was named “recognition seeking” following the terminology used in prior research (Chen, 2018; Shao, 2009).

Factor 3, “perceived functionality” (eigenvalue = 2.22), accounted for 5.83% of the variance ($\alpha = .86$) and included five items (e.g., “Because it is easy to use,” “Because it is casual,” “Because it is functional,” “Because it is convenient,” and “Because it is real”). This factor is closely related to Whiting and Williams’s (2013) convenience utility of social media use as it illustrates perceived usefulness and perceived ease of use of Instagram (Hwang & Cho, 2018) and implies the functional dimension of social media. However, unlike some studies only focusing on SNS usability and functionality (Korhan & Ersoy, 2016), this factor also reflects the specific perceptions of Instagram Stories due to its fast and visual nature: casualness and realness. Therefore, this factor was named “perceived functionality.”

Factor 4 was named “entertainment” (eigenvalue = 1.84), and explained 4.84% of the variance ($\alpha = .85$), containing four items (e.g., “To pass the time when bored,” “Because it is entertaining,” “Because it is enjoyable,” and “Because it is fun”). This factor is supported by the literature in that SNSs usually help satisfy users’ needs for entertainment (Mull & Lee, 2014; Whiting & Williams, 2013).

Factor 5, “social sharing” (eigenvalue = 1.55), accounted for 4.07% of variance ($\alpha = .83$) and comprised seven items (e.g., “To share information about me (e.g., feelings, updates, etc.),” “To share information I think is interesting (e.g., reposting),” “To promote certain topics,” “To see what other people share,” “To record things that happen in my daily life,” “To receive responses from others,” and “To feel like I belong to a community”). This factor is associated with Whiting and Williams’s (2013) concept of information sharing with others and expression of opinion, but it also contains the dynamic social aspect as users want to see what others

share and receive others' responses. As the literature suggests, individuals use SNSs for self-presentation, for feeling included, and for fulfilling their need to belong (Nadkarni & Hofmann, 2012). Therefore, this factor was named "social sharing."

Factor 6, "interaction" (eigenvalue = 1.35), accounted for 3.55% of variance ($\alpha = .75$) and embodied four items (e.g., "To have conversations with others (e.g., chats, gossip, etc.)," "To maintain a good relationship with others (for networking)," "To meet/connect with others who have similar interests," and "Because I can receive some benefits (e.g., giveaways, coupons).") The theme of this factor is communicating and interacting with others as well as maintaining relationships with others, which has been supported by previous U&G research relating to social media use (Alhabash & Ma, 2017; Lee et al., 2015).

Factor 7, "novelty" (eigenvalue = 1.09), explained 2.86% of the variance ($\alpha = .73$) and included three items (e.g., "Because it is private," "Because it is new," and "Because it disappears after 24 hours"). This factor was originally proposed by Sundar and Limperos (2013) and defined as seeking unusual experience of accessing technology with different interface that is new and innovative.

Finally, Factor 8, "surveillance" (eigenvalue = 1.03) with two items (e.g., "To keep in touch with family and friends" and "To get updates on my family and friends"), accounted for 2.71% of the variance ($r = .59$). Initially proposed by Whiting and Williams (2013) and further specified by Sheldon and Bryant (2016), "surveillance" is defined as watching what other people are doing. However, in this study, surveillance is more about keeping in touch with close ties (i.e., family and friends). Table 11 summarizes the item wording for each motive.

Table 11
Summary of Exploratory Factor Analysis Results for Motivations (N = 296)

Factor title, indicator, and item	EFA Loading
<i>Factor 1: Exploration ($\alpha = .90$)</i>	
To interact with brands.	.66
To browse products/services (e.g., clothes, shoes).	.74
To buy products/services (e.g., clothes, shoes).	.56
To explore.	.65
To get free information without much effort.	.67
To learn about new things (e.g., watching tutorials, etc.).	.71
To keep up with current issues and events of the day.	.64
To receive exclusive contents in real time.	.60
To follow influencers/celebrities.	.63

<i>Factor 2: Recognition Seeking ($\alpha = .84$)</i>	
To create my own portfolio (e.g., vlogging).	.52
To self-promote.	.75
To become popular.	.82

Table 11 (cont'd)

Summary of Exploratory Factor Analysis Results for Motivations (N = 296)

Factor title, indicator, and item	EFA Loading
To show off.	.80
<i>Factor 3: Perceived Functionality ($\alpha = .86$)</i>	
Because it is easy to use.	.48
Because it is casual.	.68
Because it is functional.	.72
Because it is convenient.	.76
Because it is real.	.74
<i>Factor 4: Entertainment ($\alpha = .85$)</i>	
To pass the time when bored.	.59
Because it is entertaining.	.81
Because it is enjoyable.	.82
Because it is fun.	.82
<i>Factor 5: Social Sharing ($\alpha = .83$)</i>	
To share information about me (e.g., feelings, updates, etc.).	.71
To share information I think is interesting (e.g., reposting).	.70
To promote certain topics.	.42
To see what other people share.	.52
To record things that happen in my daily life.	.71
To receive responses from others.	.53
To feel like I belong to a community.	.43
<i>Factor 6: Interaction ($\alpha = .75$)</i>	
To have conversations with others (e.g., chats, gossip, etc.).	.66
To maintain a good relationship with others (for networking).	.59
To meet/connect with others who have similar interests.	.51
Because I can receive some benefits (e.g., giveaways, coupons).	.59
<i>Factor 7: Novelty ($\alpha = .73$)</i>	
Because it is private.	.57
Because it is new.	.60
Because it disappears after 24 hours.	.78
<i>Factor 8: Surveillance ($r = .59$)</i>	
To keep in touch with family and friends.	.80
To get updates on my family and friends.	.74

Note: means for a 7-point scale (strongly disagree = 1; disagree = 2; somewhat disagree = 3; neutral = 4; somewhat agree = 5; agree = 6; strongly agree = 7).

4.3. Regression Analysis

Multiple regression analyses were conducted to investigate RQ2 about how Millennials' motivations for using Instagram Stories are related to their engagement in terms of consuming, contributing, and creating. Eight motivations emerging from the EFA results were regressed on each type of engagement: consumption, contribution, and creation, respectively. First, the model of motivations on consuming Instagram Stories was significant, $R^2 = .28$, $F(8, 287) = 14.18$, $p < .001$. The model explained 28% of the variance. The results suggested that entertainment ($\beta = .21$, $t = 3.19$, $p < .01$) and perceived functionality ($\beta = .18$, $t = 2.52$, $p < .05$) were found to be significant predictors of individuals' consumption on Instagram Stories. Second, the model of motivations on contributing Instagram Stories was significant, $R^2 = .34$, $F(8, 287) = 18.04$, $p < .001$. The model explained 34% of the variance. The results suggested that social sharing ($\beta = .24$, $t = 3.38$, $p \leq .001$) and interaction ($\beta = .23$, $t = 3.27$, $p < .01$) were significant predictors of individuals' contribution on Instagram Stories. Finally, the model of motivations on creating Instagram Stories was significant, $R^2 = .39$, $F(8, 287) = 22.62$, $p < .001$. The model explained 39% of the variance. The results suggested that recognition-seeking ($\beta = .17$, $t = 2.66$, $p < .01$), social sharing ($\beta = .17$, $t = 2.53$, $p < .05$), interaction ($\beta = .30$, $t = 4.43$, $p < .001$), and novelty ($\beta = .16$, $t = 2.81$, $p < .01$) were significant predictors of individuals' creation on Instagram Stories (see Table 12).

Table 12
Summary of Regression Analysis Results of Motivations Predicting Engagement (N = 296)

Variable	Consuming			Contributing			Creating		
	β	SE	t	β	SE	t	β	SE	t
Exploration	.13	.08	1.72	-.05	.09	-.67	-.05	.07	-.68
Recognition-Seeking	.00	.06	.05	.09	.07	1.32	.17**	.06	2.66
Entertainment	.21**	.10	3.19	.10	.11	1.53	.05	.09	.80
Perceived Functionality	.18*	.09	2.52	.04	.10	.64	-.02	.08	-.25
Social Sharing	.14	.10	1.84	.24***	.11	3.38	.17*	.09	2.53
Interaction	-.00	.08	-.05	.23**	.08	3.27	.30***	.07	4.43
Novelty	.02	.06	.25	.11	.07	1.88	.16**	.05	2.81
Surveillance	.03	.07	.47	.01	.08	.15	.01	.06	.23
R^2	.28			.34			.39		
F	14.18***			18.04***			22.62***		

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

To provide answers to RQ3 that asks what emotions Millennials experience when using Instagram Stories, two simple regression analyses were carried out. The index of engagement was regressed on positive and negative emotions, respectively. The model of engagement with Instagram Stories on positive emotions was

significant, $R^2 = .23$, $F(1, 294) = 87.68$, $p < .001$. The model explained 23% of the variance. The results suggested that engagement ($\beta = .48$, $t = 9.36$, $p < .001$) was positively related to positive emotions. The model of engagement with Instagram Stories on negative emotions was significant, $R^2 = .06$, $F(1, 294) = 18.38$, $p < .001$. The model explained 6% of the variance. The results suggested that engagement ($\beta = .24$, $t = 4.29$, $p < .001$) was positively related to negative emotions. Thus, engagement with Instagram Stories was found to be related to both positive and negative emotional outcomes (see Table 13). That is, the more participants engaged with Instagram Stories, the stronger their emotions were. Although engagement with Instagram Stories significantly predicted both positive and negative emotions, the standardized coefficient was stronger between engagement and positive emotions than that between engagement and negative emotions. Also, it is important to note that, the mean scores of positive emotions were higher than negative emotions (see Table 9 for details), suggesting that participants tended to experience a higher level of positive emotions than negative ones when using Instagram Stories.

Table 13
Summary of Regression Analysis Results of Engagement Predicting Emotions (N = 296)

Variable	Positive Emotions				Negative Emotions			
	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>
Engagement	.48	.05	.48***	9.36	.22	.05	.24	4.29***
R^2	.23				.06			
<i>F</i>	87.68***				18.38***			

Note: *** $p < .001$.

4.4. Mediation Analysis

H1 explores the relationship between engagement and social media dependency, while H2 and H3 propose the mediation role of positive and negative emotions in that relationship. Therefore, this research conducted a parallel mediation analysis using Hayes' PROCESS macro (2019, model 4, 10,000 bootstrap resamples) with engagement of using Instagram Stories as the independent variable, positive and negative emotional outcomes of Instagram Stories use as the mediators, and social media dependency as the dependent variable. The results revealed a positive direct effect of engagement with Instagram Stories on social media dependency ($c' = .34$, $SE = .06$, 95% CI: = [.23; .46], $p < .001$), and significant indirect effects of engagement with Instagram Stories on social media dependency via positive emotions ($ab = .08$,

SE = .03, 95% CI: = [.01; .15]) and negative emotions (de = .12, SE = .03, 95% CI: = [.06; .19]) (see Table 14).

Specifically, in the mediation of positive emotions on the relationship between engagement using Instagram Stories and social media dependency, engagement was positively associated with positive emotional outcomes (a = .48, SE = .05, 95% CI: = [.38; .58], $p < .001$), while positive emotions positively affected social media dependency (b = .17, SE = .06, 95% CI: = [.05; .28], $p < .01$). The results suggested that the greater the engagement with Instagram Stories is, the more likely participants would experience positive emotional outcomes, which, in turn, increases social media dependency. Additionally, in the mediation of negative emotions on the relationship between engagement using Instagram Stories and social media dependency, engagement was a significant positive predictor of negative emotional outcomes (d = .22, SE = .05, 95% CI: = [.12; .33], $p < .001$), while negative emotions had a positive effect on social media dependency (e = .53, SE = .06, 95% CI: = [.42; .64], $p < .001$), indicating that negative emotions increases as engagement with Instagram Stories increases, which, in turn, enhances social media dependency. Lastly, the total effect of engagement of Instagram Stories use on social media dependency was significant (c = .54, SE = .06, 95% CI: = [.43; .66], $p < .001$). Therefore, these findings support the mediating effects of both positive and negative emotions on the relationship between engagement with Instagram Stories and social media dependency. H1, H2, and H3 were therefore supported (see Figure 1).

Table 14
Standardized Direct and Indirect Effects of Engagement on Social Media Dependency
(N = 296)

Direct effect	Indirect effect	Mediation
Engagement → SMD 0.34 ^{***} (SE: 0.06, CI: 0.23 to 0.46)	Engagement → Positive emotions → SMD 0.08 (SE: 0.03, CI: 0.01 to 0.15)	Partial
	Engagement → Negative emotions → SMD 0.12 (SE: 0.03, CI: 0.06 to 0.19)	Partial

Note: ^{**} $p < .01$; ^{***} $p < .001$.
SMD, social media dependency.

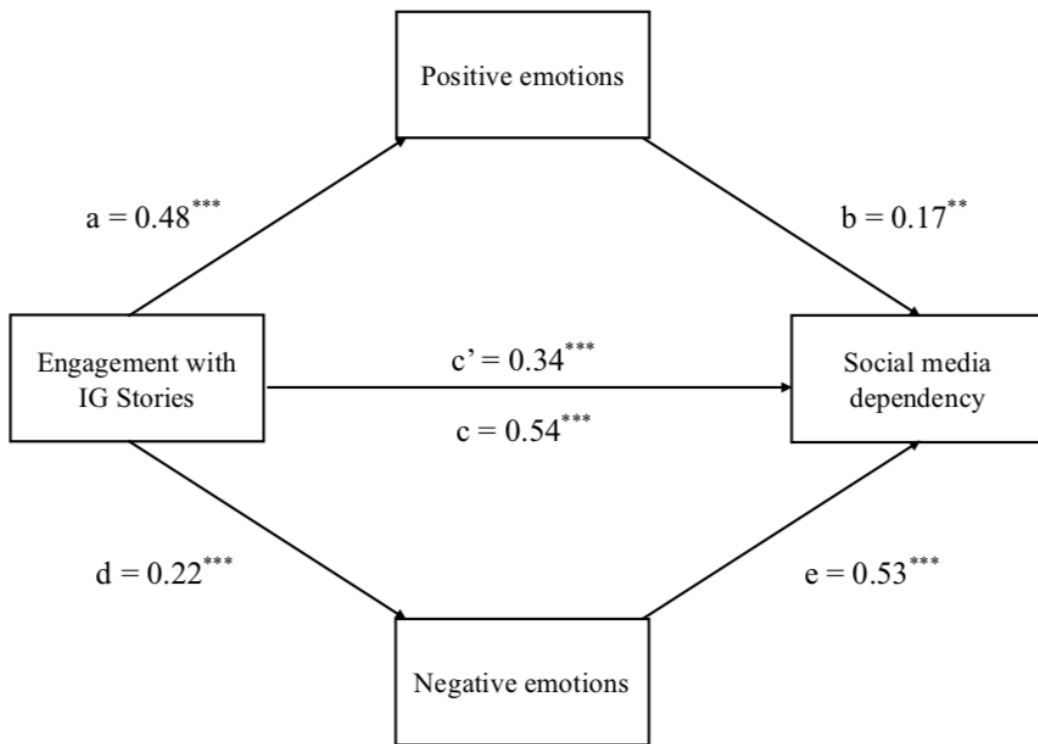


Figure 1. Tested parallel mediation model.

Note: ** $p < .01$; *** $p < .001$.

a = direct effect of engagement on positive emotions; b = direct effect of positive emotions on social media dependency; c' = direct effect of engagement on social media dependency; c = total effect of engagement on social media dependency; d = direct effect of engagement on negative emotions; e = direct effect of negative emotions on social media dependency.

CHAPTER 5

DISCUSSION AND CONCLUSION

Considering that Instagram Stories are used by 500 million users every day (Instagram, 2020) and the lack of understanding into the psychological mechanisms behind such growing phenomenon, this research builds on the U&G theory to first understand specific motivations for users to engage with the fastest growing feature of Instagram, and then examines the associations among engagement, emotions, and social media dependency with a specific focus on Millennials in the U.S., because the U.S. headed the ranking of the countries with the most Instagram users, especially popular among young adults (Statista, 2019d). This research is significant in that, it contributes to the U&G literature by developing a typology of motivations underlying Instagram Stories use. This research also applies the engagement framework from the literature (Muntinga et al., 2011) to examine engagement with Instagram Stories and demonstrates psychological effects of such usage.

5.1. The Typology of Motivations for Instagram Stories Use

Eight motivations for Instagram Stories use were obtained in this research: exploration, recognition-seeking, perceived functionality, entertainment, social sharing, interaction, novelty, and surveillance. The results suggest that users of Instagram Stories not only share several key motivational dimensions with other SNS users (Whiting & Williams, 2013), but also have motivations that are unique to this feature.

Of the eight motives, *exploration* was the strongest motive driving Instagram Stories use, which illustrated and confirmed that many users use Instagram Stories to explore, acquire knowledge and keep up with current trends to learn new things. This motive is associated with the “virtual exploration” motivation identified by Mull and Lee (2014) in that, users are motivated to explore image-based SNSs to search for interesting images and ideas. Similarly, in this study, participants were found to use Instagram Stories to interact with brands, to browse and buy products/services, to get free and exclusive information in real time, to keep up with current trends, and to learn about new things. Due to the nature of Instagram Stories and its features, users

are allowed to get quick updates easily and exclusively on Instagram Stories by following different types of accounts, such as brands and influencers/celebrities. For instance, brands use Instagram Stories to showcase the latest products/services or tutorials without the full description. Users can also get a sneak peek of certain products/services and to swipe up to be redirected to brands' websites or landing pages for more detailed information.

The *recognition-seeking* motive suggested that participants used Instagram Stories for self-promotion and popularity obtainment, which is similar to the “coolness/popularity” motivation proposed by Sheldon and Bryant (2016) that people are interested in using cool features and being on a platform that is popular among peers. Likewise, Instagram Stories users tend to use Instagram Stories to create their own portfolios to promote themselves, show off, and become popular. For example, Instagram Stories users are likely to post content of “self-experiences” to showcase their tastes or lifestyles to be seen and valued (Greenwood, 2013) and they may feel appreciated and respected accordingly. While Instagram users can gain a substantial amount of “like” on their posts, they can gain a substantial amount of “viewing numbers” or “emoji reactions” on their Stories, which indicate and validate their popularity and can positively affect their self-worthiness and self-identity.

The *perceived functionality* motive indicated that users of Instagram Stories considered the feature easy to comprehend, simple to navigate, convenient, casual, and real, integrating usability and functionality (Korhan & Ersoy, 2016). While posts on Instagram tend to be unrealistically edited and create feelings of inadequacy and low self-esteem (Macmillan, 2017), Instagram Stories are relatively unedited or authentic (Facebook, 2018), since the embedded camera within Instagram Stories allows the content to be shot casually, easily and quickly (Wagner, 2018). Therefore, such perceived functionality may encourage users to share the content spontaneously without time-consuming editing and help reduce their feelings of deficiency and inferiority.

The *entertainment* motivation showed that participants used Instagram Stories for fun, enjoyment, pastime, and they expect to gain entertaining experiences on Instagram Stories. According to a study from Facebook, 55% of Instagram users in the U.S. use Instagram Stories to see playful or funny content (Facebook, 2018). As Instagram constantly introduces new features on Stories, users are enabled to use

various filters or stickers to entertain themselves. For example, Instagram Stories utilized AR technique and introduced a variety of prediction filters, such as “which Disney character are you?” or “In 2020 I will be.” The filters randomly select a Disney character or an adjective to describe what users will be like this year, and display the outcome above users’ head. Besides, users become more interested in entertaining Instagram Stories than static photos (Lorenz, 2019).

The *social sharing* motive manifested that participants used Instagram Stories to express and share information, to record what happens in daily life, to see what others share and receive others’ responses, and to feel a sense of belonging. As visual communication facilitates self-expression (Waddell, 2016), users may use Instagram Stories to share their feelings; hence, Instagram Stories may be used as an outlet of users’ emotional release. Besides, Instagram Stories users, by expressing themselves or sharing information they think is interesting, can receive responses (e.g., replies or direct messages) from others and in turn gain social support, which may make them feel they belong to the community and enhance their self-affirmation. Also, instead of considering the colors, the organizations, and the original aesthetics of Instagram, users nowadays tend to think less when sharing Instagram Stories (Lorenz, 2019), which may be one of the factors that facilitate the sharing behaviors on Instagram Stories.

Another motive, *interaction*, indicates that participants used Instagram Stories to interact with others (i.e., user-to-user/direct interaction) for social connection and relationship maintenance, or with the content (i.e., user-to-content/indirect interaction) when they rate, save, share the content or leave comments (Shao, 2009). Instagram Stories allows its users to reply to others’ Stories and provide a variety of interactive features, such as question stickers, to facilitate social interaction. For instance, similar to question stickers, Instagram Stories has been swept by “Ask me my top 3” recently. Through “Ask me my top 3,” users can post their answers to their followers’ questions in a template with the ranking of top three answers. Plus, Instagram Stories is indicated to have improved users’ communication with family and friends (Facebook, 2018). Also, the results showed that participants interacted with Instagram Stories content to receive benefits such as giveaways. This notion is in line with the “remuneration” motivation identified by Muntinga et al. (2011), suggesting that

brand-related online activities may be driven by economic incentives (e.g., money or rewards).

The *novelty* motive emerged as participants used Instagram Stories for its transiency: it disappears after 24 hours unless saved, followed by the perceived new and privacy gratifications. With the ephemeral nature and superiority in instant image-sharing and editing compartment (e.g., filters, drawings, emojis) (Ting, Ming, de Run, & Choo, 2015; Wagner, 2018), users not only tend to present more authentically due to such fleeting feature (Facebook, 2018), but also acquire both intimacy and immediacy of social presence, and perceived loneliness can thus decrease (Pittman & Reich, 2016). Plus, new features constantly introduced by Instagram Stories enable users to express themselves freely in diverse creative ways (Instagram, 2019). Despite the traditional features of highlighting gratifications, the new and interactive features constantly introduced by Instagram Stories also facilitate social interaction.

The final motivation factor found in this research is *surveillance*, which is defined as keeping up with or get knowledge about others (i.e., family and friends). Similar to Sheldon and Bryant's (2016) findings, surveillance is one of the influential motivations for Instagram usage. Besides, it was found that 61% of U.S. Instagrammers check Instagram Stories to see what their friends are doing now (Facebook, 2018). Likewise, the results indicated that participants used Instagram Stories to learn what others are doing. However, in this study, participants were found to use Instagram Stories to keep in touch and get updates on close ties, such as family and friends. While the surveillance motivation identified by Sheldon and Bryant (2016) is more likely to fulfill users' gratifications of voyeurism and gossip, and be potentially related to envy that might lead to depression (Tandoc, Ferrucci, & Duffy, 2015), this study labels the surveillance motivation for Instagram Stories use as the information gained about others that can help maintain interpersonal relationships and fulfill the need to belong, and thus ameliorate loneliness (Alhabash & Ma, 2017).

5.2. The Relationship between Motives and Engagement

Instagram Stories users tend to engage with Instagram Stories in different ways: consuming, contributing, and creating. Previous research has revealed entertainment to be an overall motive for media consumption (Katz et al., 1974; McQuail, 1983; Shao, 2009). Likewise, the findings of this research show that

participants consumed Instagram Stories mainly for entertainment and perceived functionality. Similar to Bryant and Davies' (2006) and Yang's (2016) findings, this study confirms that through the selection for consumption of entertaining content on Instagram Stories, users could alter their mood and regulate their mood states as well as becoming less solitude by learning about others' lives and what is happening, which may facilitate actual social interaction. Apart from that, a variety features of Instagram Stories such as filters were found to enhance users' gratifications of Instagram Stories consumption. Content shared on Instagram Stories are mundane, spontaneous, and realistic in real time, offering both intimacy and immediacy of social presence, which in turn attenuate perceived loneliness (Pittman & Reich, 2016). Therefore, gratifications generated from exposures to the creative and ephemeral content may stimulate the involvement with Instagram Stories.

In addition to consuming, participants of this research also contributed to Instagram Stories to express themselves and interact with the content as well as with others. Specifically, the social sharing and social interaction motivations were found to drive both contributing and creating behaviors on Instagram Stories. While social sharing through contributing to Instagram Stories refers to engaging in self-presentation, self-expression, and self-assurance behaviors (Muntinga et al., 2011), Millennial users were found to contribute to Instagram Stories to present their personalities, shape their identities, and receive recognition from others in order to gain self-assurance. With the development of virtual communities, they can connect and interact regarding shared interests, social support, sociability, and identity (Wellman, 2001). Moreover, Instagram Stories' fleeting nature indeed limits the content viewing time, which facilitates users' urge to respond (Bayer et al., 2016), and thus accelerates social interaction. Also, the phenomenon is considered associated with Millennials' desire for immediate gratification, since their attention spans are usually limited (Flecha-Ortíz, Santos-Corrada, Dones-González, López-González, & Vega, 2019).

Finally, Instagram Stories users reported that they created content for recognition-seeking, social sharing, interaction, and novelty. Interaction was found to be the major motivation for creating Instagram Stories, followed by social sharing, recognition-seeking, and novelty motivation. Out of Millennials' desire to be visible in their social networks (Flecha-Ortíz et al., 2019), they create, produce, design, edit,

or publish Instagram Stories to express their personal identities or opinions and maintain their social relationships through its novel features. By expressing themselves on Instagram Stories, users may feel empowered and exert influence on others (Muntinga et al., 2011; DeVeirman et al., 2017). For example, a user can tag the location of a restaurant and post his/her experiences in that restaurant on Instagram Stories to share or to influence others' future decisions to go there. While maintaining social relationships has the potential to "subtly embrace us in the warmth of self-affirmation, the whispers of encouragement, and the meaningfulness of belonging" (Hughes, Waite, Hawley, & Cacioppo, 2004, p. 1), Millennials' social relationships developed and maintained on SNSs may as well provide positive effects (e.g., happiness). In support of this notion, the findings also show that Millennials create Instagram Stories to feel a sense of belonging, so they share self-related information to receive responses from others.

5.3. Engagement with Instagram Stories and Emotional Outcomes

The results showed that engagement with Instagram Stories is associated with both positive and negative emotions, corresponding to Weinstein's (2018) findings. Nevertheless, consistent with Lin and Utz's (2015) study, the current study found that positive emotions were more prevalent than negative ones when users used Instagram Stories. Specifically, Instagram Stories use was positively associated with positive emotions, such as joy, contentment, optimism, peacefulness, and excitement. Participants exhibited stronger emotions in joy, contentment, optimism, peacefulness, excitement, surprise, love and romantic love during Instagram Stories use. While entertainment is related to all types of online engagement activities (Muntinga et al., 2011), a possible explanation is that the visual and functional aspect of the feature is entertaining, funny and enjoyable so that users gain gratifications from it. Plus, with the real-time exchange of texts, stickers, images, videos, or voices via direct messages, interaction with others on Instagram Stories can render users to feel more intimate, connected and less solitude (Yang, 2016). Therefore, in line with Pittman and Reich's (2016) and Bayer et al.'s (2016) findings, the use of Instagram Stories can attenuate users' loneliness and increase their happiness, and that the real-time of exposure to Instagram Stories produces emotional gratification effects.

On the other hand, participants showed relatively fewer negative emotions during using Instagram Stories; however, negative emotions such as envy, loneliness, discontent, worry, sadness, anger, shame, and fear were still found to be associated with Instagram Stories use. Specifically, the results showed that envy, loneliness, and discontent were found to be the major negative emotional outcomes of Instagram Stories use. Although negative emotions are less likely to be experienced during Instagram Stories use, it is plausible that through social comparisons, users may feel insufficient and dissatisfied with their own lives, and maliciously envy others' happiness and ways of spending vacations and socializing, which might diminish their own life satisfaction. Yet, on the other hand, if the Stories are from strong or close ties (i.e., family, friends), users may be more likely to be happy for them and experience benign envy (Lin & Utz, 2015). Even though social comparison on social media can be the "thief of joy," it is not the stimulant of negative emotions (De Vries et al., 2018). Interacting with others and browsing Instagram Stories can decrease the feelings of loneliness owing to the comforts provided by Instagram Stories, whereas frequent Instagram Stories broadcasting may signify loneliness (Yang, 2016), because users who post Instagram Stories frequently might seek for support or attention from others (Blight, Jagiello, & Ruppel, 2015).

5.4. Engagement, Emotions, and Social Media Dependency

As expected, engagement with Instagram Stories was found to have a significant positive impact on social media dependency. Align with the literature that a high level of engagement plays a predictive role in addictive use of Internet activities (Charlton, 2002; Fan et al., 2017), this study found that participants who highly engaged in using Instagram Stories tended to become dependent on the feature. This could be understood that as users obtain a variety of gratifications from using Instagram Stories, they may find the experience of using Instagram Stories enjoyable and immersing, which, in turn, makes them rely on Instagram Stories. In this way, the more users engage with Instagram Stories, the more likely they are to experience addictive use of Instagram Stories and become dependent on it.

While this research provides empirical support to the positive relationship between engagement with Instagram Stories and social media dependency, the findings also reveal that engagement with Instagram Stories is positively related to

positive and negative emotions, and that both types of emotions were positively associated with social media dependency. That is, both positive and negative emotions mediate the relationship between engagement and social media dependency.

In line with Turel et al.'s (2011) and Chou and Hsiao's (2000) conclusions that pleasant feelings play a critical role in social media dependency, and that pleasurable experiences related to the Internet are found to be a crucial determinant of the Internet addiction development, the current study found that participants with higher levels of engagement with Instagram Stories tended to experience positive emotions during the usage. What's more, the functionality of Instagram Stories, especially the full screen format with pictures and videos, provide such entertaining and enjoyable experience to users, and users can gain instant gratifications from using it, which can lead to social media dependency (Donnelly & Kuss, 2016). In line with this point, the findings also indicate that, as users experience positive emotions when using Instagram Stories, they are more likely to excessively and obsessively using and constantly preoccupied by Instagram Stories (Altuwairiqi et al., 2019; Donnelly & Kuss, 2016).

However, negative emotions were found to be more predictive than positive emotions regarding social media dependency. That is, even though positive emotions were more prevalent during Instagram Stories use than negative emotions, negative emotions were more related to social media dependency. While this study confirms previous findings that negative factors (e.g., negative affect anticipation and depression) relate to social media dependency (LaRose et al., 2003; Wang et al., 2015), there are several possible explanations. First, as users expose themselves frequently to Instagram Stories created by others, they might compare themselves with others when they find similarities between themselves and the target of comparison (Corcoran, Crusius, & Musweiler, 2011). For instance, users might envy others when noticing others' advantages (e.g., luxury lives). In spite of upward or downward social comparison, users would want to know what others are doing through the process of social comparison, and this can enhance their dependency on Instagram Stories. Second, those with higher levels of loneliness or depression and lower levels of self-identification are more likely to psychologically rely on Instagram Stories for the avenue to express and interact (Han, Han, Qu, Li, & Zhu, 2019). In this sense, users might turn to Instagram Stories to dispel their loneliness or depression, interact with others, and seek comforts and social support. Another possible explanation is that

users might try to avoid unpleasant feelings (e.g., fear, anxiety, or loss) and desire to modify their emotions and pursue such rewarding experiences by gaining pleasant feelings (e.g., excitement, joy, or elation), which leads to the development of addictive social media usage (Young, 1999). Therefore, negative emotions are more related to social media dependency than positive emotions.

As a result, this study illustrates that the relationship between engagement with Instagram Stories and social media dependency is mediated by both positive and negative emotions, yet the mediating role of negative emotions is stronger than positive emotions. Namely, the more Millennials engage with Instagram Stories, the more reliant they are on it through the increasing emotions.

5.5. Research Contributions

The current study sheds light on what makes Instagram Stories appealing to people and contributes to U&G research literature of social media by exploring the relatively new feature, Instagram Stories. First, to identify specific motivations related to Instagram Stories use, this study utilized the pretest to collect the U&G items from Instagram Stories users, and integrated the motives emerged from the result of the pretest with those for social media use identified in previous U&G literature (e.g., Lee et al., 2015; Sheldon & Bryant, 2016), such as information-seeking, social interaction, archiving, self-expression, surveillance/knowledge about others, coolness, and creativity. The motives classified in this study are rendered to be suitable for the context of Instagram Stories. For example, the limited time of Instagram Stories provokes perceived scarcity (Lynn, 1991) and facilitates interactions with others. In addition, the visual functions of the feature offer users ways of more direct and enjoyable communication compared to texts. Moreover, users engage in Instagram Stories by consuming, contributing to, and creating content for different purposes, explaining what makes Instagram Stories appealing to people. While the extant studies have focused less on Instagram than on other social media platforms such as Facebook (De Vries et al., 2018), the enormous popularity of Instagram among young people discloses the significance for researchers and practitioners to understand not only why they use Instagram in general, but also how they engage with specific Instagram features (i.e., Instagram Stories). This study thus advances our understanding of the usage of Instagram Stories.

Furthermore, another theoretical contribution made to understanding users' psychological consequences of using Instagram Stories is investigating the relationships between engagement with Instagram Stories, emotional outcomes of such usage, and social media dependency on it. While the effects of such engagement on users' emotional well-being (Duggan, 2015; Newcom, 2016) have gained attentions from researchers and practitioners, Instagram Stories use is found to generate more positive emotional experiences than negative ones. Users might become addictive of and rely on using Instagram Stories when they make social comparison, feel isolated, and want to gain more social support and pleasant feelings. Whereas the literature suggests that social media use is associated with both positive and negative emotions (Weinstein, 2018), and that Instagram use is related to mood (Lup et al., 2015), this study fills the gap to understand what emotions users experience when using Instagram Stories, and how engagement and different emotions can lead to social media dependency.

In sum, this research sheds light on what makes Instagram Stories appealing to Millennials, expanding the U&G theoretical framework as well as contributing to literature on psychological consequences of engagement in SNSs.

5.6. Limitations and Future Research

Apart from the important findings, the current research has limitations that need to be addressed. First, while this study examines how engagement may influence social media dependency, it is also possible for future studies to consider whether social media dependency can impact engagement. As social media platforms may differ depending on the theme, user demographics, or different focus they have (Mull & Lee, 2014), and that this research focuses on a specific demographic group: Millennials in the U.S., the results may not be generalized and applied to other demographic groups or SNS usage in different countries, as residential locations and cultural differences might influence individuals' social media use. Therefore, future studies may pay attention to social media use of other generational cohorts such as Gen Z, or people from other countries to increase the validity of constructs and findings emerged from this research. Another sample limitation could be that even though the quality of MTurk samples is supported by the previous research (e.g., Berinsky et al., 2012), participants recruited from MTurk may not fully represent the

general population in the U.S. In addition, while this research employed self-reported assessments for studying the constructs of interest for both the pretest and the main study, future studies are suggested to use in-depth interviews to gain deeper insights into Instagram Stories usage. Future studies may also look into actual expression to explore unstructured text or patterns by using different research approaches (e.g., text analysis, content analysis, or pattern analysis) (Choi & Sung, 2018).

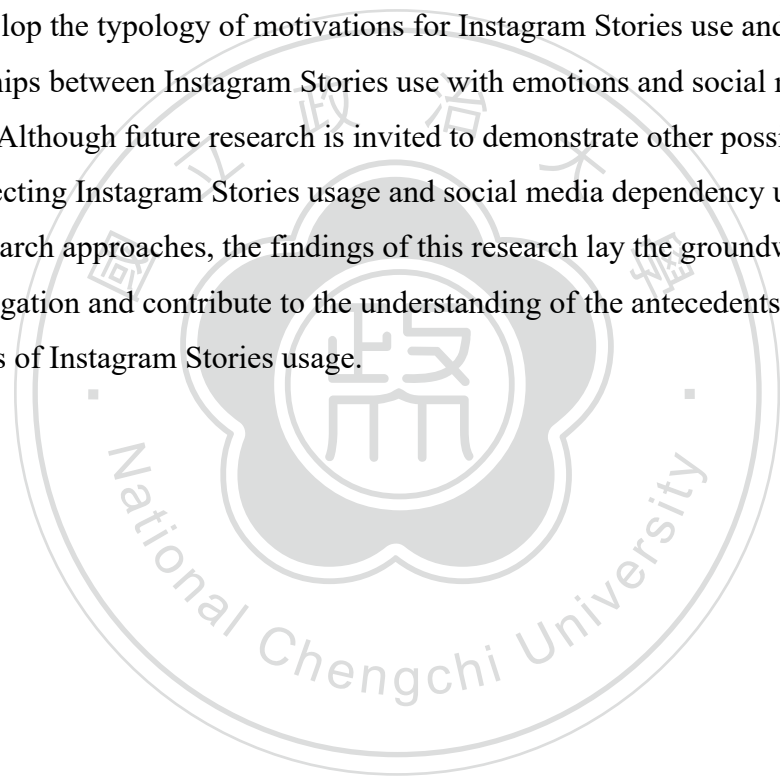
While this study elucidates that engagement with Instagram Stories has positive impacts on social media dependency through both positive and negative emotions, further investigations may explore other antecedents of peoples' dependency on social media, and examine how to reduce the plausible negative outcomes of social media dependency (e.g., Turel & Serenko, 2010), which could enrich this line of research. Even though Instagram is reported to be the most detrimental SNS for youngsters' mental health, such as negatively affecting body images and sleep patterns, and adding a sense of the fear of missing out (FOMO) (Macmillan, 2017), the findings illuminate that compared with positive emotions, negative emotions are less prevalent on Instagram Stories, which affirms that Instagram Stories can also be a positive outlet for many young people's self-expression and self-identity (Fox, 2017), and this can be put into further discussion in the future.

Recently, as Instagram has had "likes" hidden in the feed, it was reported that the majority felt positively about this change in terms of improving well-being (Yurieff, 2019). Although it remains unknown how this move can impact Instagram users, future research may be conducted to examine whether hiding "likes" on Instagram is effective in improving users' emotional and psychological well-being.

5.7. Conclusion

Given that more and more young adults use Instagram Stories and spend more time on it, it is important for researchers and practitioners to delineate users' psychology and behaviors on Instagram Stories. With the exploratory attempt of analyzing Instagram Stories usage and resulting psychological consequences, this research explicates that Millennials use Instagram Stories mainly for exploration, recognition-seeking, perceived functionality, entertainment, social sharing, interaction, novelty, and surveillance, and they engage in Instagram Stories through consuming,

contributing, and creating content. Generally, they consume Instagram Stories for entertainment and its unique functions, contribute to it to express themselves and interact with others, and create content for social sharing, interaction, recognition seeking, and novelty. While Instagram Stories can elicit both positive and negative emotions, it was found that positive emotions pervade more than negative emotions. Besides, the current study demonstrates that there is a statistically significant relationship between engagement with Instagram Stories and social media dependency, and between engagement and emotional outcomes. Findings also highlight that there is a positive relationship between both positive and negative emotions and social media dependency. To the researcher's knowledge, this is the first study to develop the typology of motivations for Instagram Stories use and examine the relationships between Instagram Stories use with emotions and social media dependency. Although future research is invited to demonstrate other possible variables affecting Instagram Stories usage and social media dependency using different research approaches, the findings of this research lay the groundwork for future investigation and contribute to the understanding of the antecedents and consequences of Instagram Stories usage.



References

- Alhabash, S., & Ma, M. (2017). A Tale of Four Platforms: Motivations and Uses of Facebook, Twitter, Instagram, and Snapchat Among College Students. *Social Media + Society*, 1–13.
- Altuwairiqi, M., Kostoulas, T., Powell, G., & Ali, R. (2019). Problematic attachment to social media: Lived experience and emotions. In *Proceedings of the World Conference on Information Systems and Technologies (WorldCIST)*, Galicia, Spain, 16–19 April (pp.1–10). Berlin/Heidelberg, Germany: Springer.
- Ball-Rokeach, S. J. (1985). The origins of individual media-system dependency: A sociological framework. *Communication Research*, 12(4), 485–510.
- Ball-Rokeach, S. J., & Defleur, M. L. (1976). A dependency model of mass media effects. *Communication Research*, 3(1), 3–21.
- Bantz, C. R. (1982). Exploring uses and gratifications: A comparison of reported uses of television and reported uses of favorite program types. *Communication Research*, 9, 352–379.
- Bayer, J., Ellison, N., Schoenebeck, S., & Falk, E. (2016). Sharing the small moments: Ephemeral social interaction on Snapchat. *Information, Communication & Society*, 19(7), 956–977.
- Berelson, B. (1949). What ‘Missing the Newspaper’ Means. In P. F. Lazarsfeld & F. N. Stanton (Eds.), *Communications Research 1948-1949* (pp. 111–128). New York: Harper & Brothers.
- Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com’s Mechanical Turk. *Political Analysis*, 20, 351–368.
- Blight, M., Jagiello, K., & Ruppel, E. K. (2015). “Same stuff different day”: a mixed-method study of support seeking on Facebook. *Computers in Human Behavior*, 53, 366–373.
- Bolton, R. N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S., Gruber, T., Loureiro, Y. K., & Solnet, D. (2013). Understanding Generation Y and their use of social media: a review and research agenda. *Journal of Service Management*, 24(3), 245–267.
- Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research. *Journal of Service Research*, 14(3), 252–271.
- Bryant, J., & Davies, J. (2006). Selective exposure processes. In J. Bryant, & P. Vorderer (Eds.), *Psychology of Entertainment*, Lawrence Erlbaum Associates (pp. 19–33). New Jersey: Mahwah.
- Bug, P., & Helwig, J. (2020). Overview of Product Presentation with Moving Images in Fashion E-Commerce. In P. Bug (Ed.), *Fashion and Film: Moving Images and Consumer Behavior* (pp. 217–242). Singapore: Springer.
- Calder, B. J., & Malthouse, E. C. (2008). Media Engagement and Advertising Effectiveness. In B. J. Calder (Ed.), *Kellogg on Advertising and Media* (pp. 1–36). New Jersey: Wiley.
- Calder, B. J., Malthouse, E. C., & Schaedel, U. (2009). Engagement with Online Media and Advertising Effectiveness. *Journal of Interactive Marketing*, 23(4), 321–331.
- Campbell, A. J., Cumming, S. R., & Hughes, I. (2006). Internet use by the socially fearful: Addiction or therapy. *CyberPsychology & Behavior*, 9(1), 69–81.

- Caplan, S. E. (2010). Theory and measurement of generalized problematic Internet use: A two-step approach. *Computers in Human Behavior*, 26, 1089–1097.
- Carton, S. (2011, October 24). Marketing to the Distracted Consumer. *ClickZ*. Retrieved from <https://www.clickz.com/>
- Chaffey, D. (2007, April 29). Customer engagement Interview with Richard Sedley of cScape. *Smart Insights*. Retrieved from <https://www.smartinsights.com/>
- Charlton, J. P. (2002). A factor-analytic investigation of computer ‘addiction’ and engagement. *British Journal of Psychology*, 93, 329–344.
- Charney, T., & Greenberg, B. (2001). Uses and gratifications of the internet. In C. Lin, & D. Atkin (Eds.), *Communication, Technology and Society: New media adoption and uses and gratifications* (pp. 383–406). New Jersey: Hampton.
- Chen, H. (2018). College-aged young consumers’ perceptions of social media marketing: The story of Instagram. *Journal of Current Issues & Research in Advertising*, 39(1), 22–36.
- Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior*, 27, 755–762.
- Choi, T. R., & Sung, Y. (2018). Instagram versus Snapchat: Self-expression and privacy concern on social media. *Telematics and Informatics*, 35, 2289–2298.
- Chou, C., & Hsiao, M-C. (2000). Internet addiction, usage, gratification, and pleasure experience: The Taiwan college students’ case. *Computers & Education*, 35, 65–80.
- Churchill, G. A. (1979). A paradigm for development better measures of marketing constructs. *Journal of Marketing Research*, 16, 64–73.
- Clark, L. (2019, September 2). Not Liking It: Instagram really is as addictive as drugs and is giving us coughs, colds and memory loss – I got wired up to a machine to prove it. *The Sun*. Retrieved from <https://www.thesun.co.uk/>
- Clement, J. (2019, September 2). Number of monthly active Instagram users 2013-2018. *Statista*. Retrieved from <https://www.statista.com/>
- Corcoran, K., Crusius, J., & Musweiler, T. (2011). Social comparison: Motives, standards, and mechanisms. In D. Chadee (Eds.), *Theories in social psychology* (pp. 119–139). Oxford, UK: Wiley-Blackwell.
- Creamer, M. (2006, March 21). ARF Reveals Working Definition of Engagement: In Moving from Buzzword to Industry Standard, It’s a Start. *AdAge*. Retrieved from <https://adage.com>
- Datu, J., Valdez, J., & Datu, N. (2012). Does Facebooking make us sad? Hunting relationship between Facebook use and depression among Filipino adolescents. *International Journal of Research Studies in Educational Technology*, 1, 83–91.
- De Veirman, M., Cauberghe, V., Hudders, L., & De Pelsmacker, P. (2017). Consumers’ motivations for lurking and posting in brand communities on social networking sites. In Shelly Rodgers & E. Thorso (Eds.), *Digital advertising: theory and research* (3rd ed., pp. 207–221). Taylor & Francis.
- De Vries, D. A., Möller, A. M., Wieringa, M. S., Eigenraam, A. W., & Hamelink, K. (2018). Social Comparison as the Thief of Joy: Emotional Consequences of Viewing Strangers’ Instagram Posts. *Media Psychology*, 21(2), 222–245.
- Donnelly, E., & Kuss, D. J. (2016). Depression among Users of Social Networking Sites (SNSs): The Role of SNS Addiction and Increased Usage. *Journal of Addiction and Prevention Medicine*, 1(2), 1–6.
- Donnison, S. (2007). Unpacking the Millennials: A cautionary tale for teacher

- education. *Australian Journal of Teacher Education*, 32(3), 1–13.
- Duggan, M. (2013). Photo and video sharing grow online. *Pew Research Center*. Retrieved from <http://www.pewinternet.org/>
- Duggan, M. (2015). Mobile messaging and social media 2015. *Pew Research Center*. Retrieved from <http://www.pewinternet.org/>
- Facebook IQ (2018, June 21). How Do People Perceive and Use Instagram Stories and Feed. *Facebook*. Retrieved from <https://www.facebook.com/business/news/insights/how-do-people-perceive-and-use-instagram-stories-and-feed>
- Fan, L., Liu, X., Wang, B., & Wang, L. (2017). Interactivity, engagement, and technology dependence: understanding users' technology utilisation behavior. *Behaviour & Information Technology*, 36(2), 113–124.
- Field, A. (2005). *Discovering statistics using SPSS* (2nd edition). London: Sage Publications.
- Flecha-Ortíz, J., Santos-Corrada, M., Dones-González, V., López-González, E., & Vega, A. (2019). Millennials & Snapchat: Self-expression through its use and its influence on purchase motivation. *Journal of Business Research*.
- Fox, K. (2017, May 19). Instagram worst social media app for young people's mental health. *CNN*. Retrieved from <https://edition.cnn.com/>
- Frison, E., & Eggermont, S. (2016). Exploring the relationships between different types of Facebook use, perceived online social support, and adolescents' depressed mood. *Social Science Computer Review*, 34, 153–171.
- Geurin-Eagleman, A. N., & Burch, L. M. (2016). Communicating via photographs: A gendered analysis of Olympic athletes' visual self-presentation on Instagram. *Sports Management Review*, 19(2), 133–145.
- Grant, A. E., Guthrie, K. K., & Ball-Rokeach, S. J. (1991). Television shopping: a media system dependency perspective. *Communication Research*, 18, 773–798.
- Greenwood, D. N. (2013). Fame, Facebook, and Twitter: how attitudes about fame predict frequency and nature of social media use. *Psychology of Popular Media Culture*, 2, 222–236.
- Griffiths, M. (1990). The cognitive psychology of gambling. *Journal of Gambling Studies*, 6, 31–42.
- Han, X., Han, W., Qu, J., Li, B., & Zhu, Q. (2019). What happens online stays online? — Social media dependency, online support behavior and offline effects for LGBT. *Computers in Human Behavior*, 93, 91–98.
- Herron, J. (2018, July 12). The Importance of Instagram Stories. *Workspace Digital*. Retrieved from <https://www.workspace.digital/instagram-stories/>
- Herzog, H. (1944). What do we really know about daytime serial listeners. *Radio research*, 1943, 3–33.
- Higgins, E. T., & Scholer, A. A. (2009). Engaging the Consumer: The Science and Art of the Value Creation Process. *Journal of Consumer Psychology*, 19(2), 100–114.
- Hollebeek, L. (2011). Exploring customer brand engagement: Definition and themes. *Journal of Strategic Marketing*, 19(7), 555–573.
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer Brand Engagement in Social Media: Conceptualization, Scale Development and Validation. *Journal of Interactive Marketing*, 28, 149–165.
- Howe, N., & Strauss, W. (2007). The next 20 years: How customer and workforce attitudes will evolve. *Harvard Business Review*, 85(7/8), 41–52.

- Hughes, M. E., Waite, L. J., Hawkey, L. C., & Cacioppo, J. T. (2004). A Short Scale for Measuring Loneliness in Large Surveys: Results from Two Population-Based Studies. *Research on Aging, 26*(6), 655–672.
- Hwang, H., & Cho, J. (2018). Why Instagram? Intention to continue using Instagram among Korean college students. *Social Behavior and Personality, 46*(8), 1305–1316.
- Instagram Press News (2016, August 02). Introducing Instagram Stories. Retrieved from <https://instagram-press.com/>
- Instagram Press News (2017, August 02). Celebrating One Year of Instagram Stories. Retrieved from <https://instagram-press.com/>
- Instagram Press News (2018, August 02). Happy Birthday, Instagram Stories. Retrieved from <https://instagram-press.com/>
- Instagram Press (2019, April 30). Connecting You with Friends, Family and Interests on Instagram. Retrieved from <https://Instagram-press.com/>
- Instagram Press (2020, January 14). Instagram Statistics. Retrieved from <https://instagram-press.com/>
- Johnson, B. K., & Knobloch-Westerwick, S. (2016). When misery avoids company: Selective social comparisons to photographic online profiles. *Human Communication Research*. Advance online publication. doi:10.1111/here.12095
- Joinson, A. N. (2008). ‘Looking at’, ‘Looking up’ or ‘Keeping up with’ people? Motives and uses of Facebook. In *Proceedings of CHI 2008 Online Social Networks*. Florence, Italy (pp. 1027–1036).
- Katz, E. (1959). Mass communication research and the study of popular culture: An editorial note on a possible future for this journal. *Studies in Public Communications, 2*, 1–6.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Uses and gratifications research. *The Public Opinion Quarterly, 37*, 509–523.
- Kaye, B. K., & Johnson, T. J. (2002). Online and in the know: uses and gratifications of the web for political information. *Journal of Broadcasting & Electronic Media, 46*(1), 54–71.
- Kees, J., Berry, C., Burton, S., & Sheehan, K. (2017). An Analysis of Data Quality: Professional Panels, Student Subject Pools, and Amazon’s Mechanical Turk. *Journal of Advertising, 46*(1), 141–155.
- Kim, B. (2016). *Individual, Technological, Socio-Cultural Factors Affecting Facebook and Instagram Use* (Master’s thesis, The University of Alabama). Retrieved from <https://ir.ua.edu/handle/123456789/2673>.
- Kim, Y., & Jung, J. (2017). SNS dependency and interpersonal storytelling: An extension of media system dependency theory. *New Media & Society, 19*(9), 1458–1475.
- Kim, E., Lee, J. A., Lee, S., Sung, Y., & Choi, S. M. (2016). Predicting selfie-posting behavior on social networking sites: An extension of theory of planned behavior. *Computers in Human Behavior, 62*, 116–123.
- Kim, D. H., Seely, N. K., & Jung, J. (2017). Do you prefer, Pinterest or Instagram? The role of image-sharing SNSs and self-monitoring in enhancing ad effectiveness. *Computers in Human Behavior, 70*, 535–543.
- Kim, D., Sung, Y. H., Lee, S. Y., Choi, D., & Sung, Y. (2016). Are you on timeline or news feed? The roles of Facebook pages and construal level in increasing ad effectiveness. *Computers in Human Behavior, 57*, 312–320.
- Kircaburun, K., & Griffiths, M. D. (2018). Instagram addiction and the Big Five of

- personality: The mediating role of self-liking. *Journal of Behavioral Addictions*, 7(1), 158–170.
- Korhan, O., & Ersoy, M. (2016). Usability and functionality factors of the social network site application users from the perspective of uses and gratification theory. *Qual Quant*, 50, 1799–1816.
- Krasnova, H., Wenninger, H., Widjaja, T., & Buxmann, P. (2013). Envy on Facebook: A hidden threat to users' life satisfaction? *In 11th International conference on Wirtschaftsinformatik* (pp. 1–16).
- Krause, A. E., North, A. C., & Heritage, B. (2014). The uses and gratifications of using Facebook music listening applications. *Computers in Human Behavior*, 39, 71–77.
- Ku, Y. C., Chu, T. H., & Tseng, C. H. (2013). Gratifications for using CMC technologies: a comparison among SNS, IM, and e-mail. *Computers in Human Behavior*, 29, 226–234.
- Kuss, D. J., Griffiths, M. D., Karila, L., & Billieux, J. (2014). Internet Addiction: A Systematic Review of Epidemiological Research for the Last Decade. *Current Pharmaceutical Design*, 20, 1–26.
- Kuvykaitė, R., & Tarutė, A. (2015). A Critical Analysis of Consumer Engagement Dimensionality. *Procedia - Social and Behavioral Sciences*, 213, 654–658.
- LaRose, R., Lin, C. A., & Eastin, M. S. (2003). Unregulated Internet usage: addiction, habit, or deficient self-regulation. *Media Psychology*, 5, 225–253.
- Lee, A. R., Hon, L., & Won, J. (2018). Psychological proximity as a predictor of participation in a social media issue campaign. *Computers in Human Behavior*, 85, 245–254.
- Lee, E., Lee, J. A., Moon, J. H., & Sung, Y. (2015). Pictures speak louder than words: Motivations for using Instagram. *Cyberpsychology Behavior and Social Networking*, 18(9), 552–556.
- Lin, R., & Utz, S. (2015). The emotional responses of browsing Facebook: Happiness, envy, and the role of tie strength. *Computers in Human Behavior*, 52, 29–38.
- Loges, W. E. (1994). Canaries in the coal mine: perceptions of threat and media system dependency relations. *Communication Research*, 21, 5–23.
- Loges, W. E., & Ball-Rokeach, S. J. (1993). Dependency relations and newspaper readership. *Journalism & Mass Communication Quarterly (JMCQ)*, 70, 602–614.
- London, B., Downey, G., & Mace, S. (2007). Psychological Theories of Educational Engagement: A Multi-Method Approach to Studying Individual Engagement and Institutional Change. *Vanderbilt Law Review*, 60(2), 455–481.
- Longstreet, P., & Brooks, S. (2017). Life satisfaction: A key to managing internet & social media addiction. *Technology in Society*, 50, 73–77.
- Lorena, B., Blanca, H., & Julio, J. (2013). Adopting Television as a New Channel for E-Commerce: The Influence of Interactive Technologies on Consumer Behavior. *Electronic Commerce Research*, 13(4), 457–475.
- Lorenz, T. (2019, April 23). The Instagram Aesthetic Is Over: The look made famous by the platform just doesn't resonate anymore. *The Atlantic*. Retrieved from <https://www.theatlantic.com/>
- Lup, K., Trub, L., & Rosenthal, L. (2015). Instagram #instasad? Exploring associations among Instagram use, depressive symptoms, negative social comparison, and strangers followed. *Cyberpsychology, Behavior, and Social Networking*, 18, 247–252.
- Lynn, M. (1991). Scarcity effects on value: A quantitative review of the commodity

- theory literature. *Psychology and Marketing*, 8(1), 43–57.
- Macmillan, A. (2017, May 25). Why Instagram Is the Worst Social Media for Mental Health. *TIME*. Retrieved from <https://time.com/>
- Malthouse, E. C., Haenlein, M., Skiera, B., Wege, E., & Zhang, M. (2013). Managing Customer Relationships in the Social Media Era: Introducing the Social CRM House. *Journal of Interactive Marketing*, 27, 270–280.
- Marcus, S. R. (2015). *Picturing' ourselves into being: Assessing identity, sociality and visuality on Instagram*. Presented at the International Communication Association Conference. Puerto Rico: San Juan.
- Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's mechanical Turk. *Behavioral Research Methods*, 44, 1–23.
- McQuail, D. (1983). *Mass communication theory*. London: Sage Publications.
- McQuail, D., Blumler, J. G., & Brown, J. (1972). The television audience: a revised perspective. In D. McQuail (Ed.), *Sociology of mass communication* (pp. 135–165). Middlesex, England: Penguin.
- Mendelsohn, H. (1964). Listening to Radio. In L. A. Dexter & D. M. White (Eds.), *People, Society and Mass Communication* (pp. 239–249). New York: Free Press.
- Mendiratta, H. (2019, May 10). How to Quick React/Reply to Instagram Stories, Direct. *TechUntold*. Retrieved from <https://www.techuntold.com/>
- Mersey, R. D., Malthouse, E. C., & Calder, B. J. (2010). Engagement with Online Media. *Journal of Media Business Studies*, 7(2), 39–56.
- Morecroft, C., Cantrill, J., & Tully, M. P. (2006). Individual patient's preferences for hypertension management: A Q-methodological approach. *Patient Education and Counseling*, 61, 354–362.
- Morrison, M. A., Cheong, H. J., & McMillan, S. J. (2013). Posting, Lurking, and Networking: Behaviors and Characteristics of Consumers in the Context of User-Generated Content. *Journal of Interactive Advertising*, 13(2), 97–108.
- Mull, I. R., & Lee, S. (2014). "PIN" pointing the motivational dimensions behind Pinterest. *Computers in Human Behavior*, 33, 192–200.
- Muntinga, D. G., Moorman, M., & Smit, E. G. (2011). Introducing COBRAs. *International Journal of Advertising*, 30(1), 13–46.
- Nadkarni, A., & Hofmann, S. G. (2012). Why Do People Use Facebook?. *Personality and individual differences*, 52(3), 243–249.
- Nedraa, B., Hadhrib, W., & Mezranic, M. (2019). Determinants of customers' intentions to use hedonic networks: The case of Instagram. *Journal of Retailing and Consumer Services*, 46, 21–32.
- Newcom. (2016). *Nationale social media onderzoek 2016*. Newcom. Retrieved from <http://www.newcom.nl/>
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- O'Donnell, N. H. (2018). Storied Lives on Instagram: Factors Associated with the Need for Personal-Visual Identity. *Visual Communication Quarterly*, 25(3), 131–142.
- Oeldorf-Hirsch, A., & Sundar, S. S. (2016). Social and Technological Motivations for Online Photo Sharing. *Journal of Broadcasting & Electronic Media*, 60(4), 624–642.
- O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*, 127, 800–804.
- Owyang, J. (2007, February 1). Defining Engagement. Retrieved from <http://www.web-strategist.com/blog/2007/02/01/defining-engagement/>

- Pantic, I. (2014). Online social networking and mental health. *Cyberpsychology, Behavior, and Social Networking*, 17, 652–657.
- Pantic, I., Damjanovic, A., Todorovic, J., Topalovic, D., Bojovic-Jovic, D., Ristic, S., & Pantic, S. (2012). Association between online social networking and depression in high school students: Behavioral physiology viewpoint. *Psychiatria Danubina*, 24, 90–93.
- Papacharissi, Z., & Rubin, A. M. (2000). Predictors of internet use. *Journal of Broadcasting & Electronic Media*, 44(2), 175–196.
- Patterson, P., Yu, T., & De Ruyter, K. (2006). Understanding customer engagement in services. In *Advancing theory, maintaining relevance, proceedings of ANZMAC 2006 conference* (pp. 4–6). Brisbane.
- Patwardhan, P., & Yang, J. (2003). Internet dependency relations and online consumer behavior: a media system dependency theory perspective on why people shop, chat, and read news online. *Journal of Interactive Advertising*, 3(2), 57–69.
- Peterson, E. T. (2007, October 22). How to Measure Visitor Engagement. *Redux*. Retrieved from <https://analyticsdemystified.com/general/how-to-measure-visitor-engagement-redux/>
- Pew Research Center. (2019). Social media fact sheet. Retrieved from <http://www.pewinternet.org/>
- Phillips, B. J., Miller, J., & McQuarrie, E. F. (2014). Dreaming out loud on Pinterest: New forms of indirect persuasion. *International Journal of Advertising*, 33(4), 633–655.
- Pittman, M., & Reich, B. (2016). Social media and loneliness: Why an Instagram picture may be worth more than a thousand Twitter words. *Computers in Human Behavior*, 62, 155–167.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1–6.
- Punyanunt-Carter, N. M., De La Cruz, J. J., & Wrench, J. S. (2017). Investigating the relationships among college students' satisfaction, addiction, needs, communication apprehension, motives, and uses & gratifications with Snapchat. *Computers in Human Behavior*, 75, 870–875.
- Read, A. (2018, November 29). Instagram Stories: The Complete Guide to Using Stories. *Buffer*. Retrieved from <https://buffer.com/library/instagram-stories>
- Rich, M. (2008). Millennial students and technology choices for information searching. In *Proceedings of the 7th European conference on research methodology for business and management studies: ECRM2008* (p. 263). Academic Conferences Limited.
- Richins, M. L. (1997). Measuring emotions in the consumption experience. *Journal of Consumer Research*, 24(2), 127–146.
- Richter, F. (2019, February 8). Snapchat v.s. Facebook: Facebook's Apps Dominate Social Media Stories. *Statista*. Retrieved from <https://www.statista.com/>
- Ridgway, J. L., & Clayton, R. B. (2016). Instagram unfiltered: Exploring associations of body image satisfaction, Instagram #selfie posting, and negative romantic relationship outcomes. *Cyberpsychology, Behavior, and Social Networking*, 19(1), 2–7.
- Riviere, C. (2005). Mobile camera phones: A new form of “being together” in daily interpersonal communication. In R. Ling, & P. Pedersen (Eds.), *Mobile communications: Re-negotiation of the social sphere* (pp. 167–185). London: Springer.

- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, 3(1), 3–37.
- Sagioglou, C., & Greitemeyer, T. (2014). Facebook's emotional consequences: Why Facebook causes a decrease in mood and why people still use it. *Computers in Human Behavior*, 35, 359–363.
- Schivinski, B., Christodoulides, G., & Dabrowski, D. (2016). Measuring Consumers' Engagement with Brand-Related Social-Media Content: Development and Validation of a Scale that Identifies Levels of Social-Media Engagement with Brands. *Journal of Advertising Research*, 56(1), 64–80.
- Shao, G. (2009). Understanding the appeal of user-generated media: A uses and gratification perspective. *Internet Research*, 19(1), 7–25.
- Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. *Computers in Human Behavior*, 58, 89–97.
- Smock, A. D., Ellison, N. B., Lampe, C., & Wohn, D. (2011). Facebook as a toolkit: a uses and gratification approach to unbundling feature use. *Computers in Human Behavior*, 27(6), 2322–2329.
- Southern, M. (2018, June 21). Instagram Has 1 Billion Monthly Users, Now the Fastest Growing Social Network. *Search Engine Journal*. Retrieved from <https://www.searchenginejournal.com/>
- Stafford, T. F., Stafford, M. R., & Schkade, L. L. (2004). Determining uses and gratifications for the Internet. *Decision Sciences*, 35(2), 259–288.
- Statista. (2019a). Number of daily active Instagram Stories users from October 2016 to January 2019 (in millions). Retrieved from <https://www.statista.com/>
- Statista. (2019b). Most famous social networks worldwide as of October 2019, ranked by number of active users (in millions). Retrieved from <https://www.statista.com/>
- Statista. (2019c). Distribution of Instagram users worldwide as of October 2019, by age and gender. Retrieved from <https://www.statista.com/>
- Statista. (2019d). Leading countries based on number of Instagram users as of October 2019 (in millions). Retrieved from <https://www.statista.com/>
- Sun, S., Rubin, A. M., & Haridakis, P. M. (2008). The Role of Motivation and Media Involvement in Explaining Internet Dependency. *Journal of Broadcasting & Electronic Media*, 52(3), 408–431.
- Sundar, S. S., & Limperos, A. M. (2013). Uses and Grats 2.0: New Gratifications for New Media. *Journal of Broadcasting & Electronic Media*, 57(4), 504–525.
- Tandoc, E. C., Ferrucci, P., & Duffy, M. (2015). Facebook use, envy, and depression among college students: is facebooking depressing. *Computers in Human Behavior*, 43, 139–146.
- Thadani, D. R., & Cheung, C. M. K. (2011a). Exploring the role of online social network dependency in habit of formation. In *Proceedings of the 32nd International Conference on Information Systems (ICIS) 2011*. Shanghai, China.
- Thadani, D. R., & Cheung, C. M. K. (2011b). Online social network dependency: Theoretical development and testing of competing models. *Proceedings of the annual Hawaii international conference on system Sciences*. IEEE Computer Society.
- Thorsteinsson, E. B., & Davey, L. (2014). Adolescents' compulsive Internet use and depression: A longitudinal study. *Open Journal of Depression*, 3, 13–17.

- Ting, H., Ming, W. W. P., de Run, E. C., & Choo, S. L. Y. (2015). Beliefs about the use of Instagram: An exploratory study. *International Journal of Business and Innovation*, 2(2), 15–31.
- Tsai, W. S., & Men, L. R. (2013). Motivations and Antecedents of Consumer Engagement with Brand Pages on Social Networking Sites. *Journal of Interactive Advertising*, 13(2), 76–87.
- Turel, O., Serenko, A., & Giles, P. (2011). Integrating technology addiction and use: an empirical investigation of online auction users. *MIS Quarterly*, 35, 1043–1061.
- Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer Engagement Behavior: Theoretical Foundations and Research Directions. *Journal of Service Research*, 13(3), 253–266.
- Vaterlaus, J., Barnett, K., Roche, C., & Young, J. (2016). “Snapchat is more personal”: An exploratory study on Snapchat behaviors and young adult interpersonal relationships. *Computers In Human Behavior*, 62, 594–601.
- Vivek, S. D. (2009). *A scale of consumer engagement*. Graduate School of The University of Alabama.
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer Engagement: Exploring Customer Relationships Beyond Purchase. *Journal of Marketing Theory and Practice*, 20(2), 127–149.
- Waddell, T. F. (2016). The allure of privacy or the desire for self-expression? identifying users’ gratifications for ephemeral, photograph-based communication. *Cyberpsychology, Behavior, and Social Networking*, 19(7), 441–445.
- Wagner, K. (2018, August 8). ‘Stories’ was Instagram’s smartest move yet: can it become Facebook’s next big business. *Vox Media*. Retrieved from <https://www.vox.com/>
- Wang, C., Lee, M. K. O., & Hua, Z. (2015). A theory of social media dependence: Evidence from microblog users. *Decision Support Systems*, 69, 40–49.
- Weinstein, E. (2018). The social media see-saw: Positive and negative influences on adolescents’ affective well-being. *New Media & Society*, 20(10), 3597–3623.
- Wellman, B. (2001). Physical place and cyberspace: the rise of networked individualism. *International Journal of Urban & Regional Research*, 25(2), 227–252.
- Whiting, A., & Williams, D. (2013). Why people use social media: a uses and gratifications approach. *Qualitative Market Research: An International Journal*, 16(4), 362–369.
- Wimmer, R. D., & Dominick, J. R. (1994). *Mass media research: An introduction*. Belmont, CA: Wadsworth.
- Wise, K., Alhabash, S., & Park, H. (2010). Emotional responses during social information seeking on Facebook. *Cyberpsychology, Behavior, and Social Networking*, 13, 555–562.
- Wright, J. (2006). *The Soft Addiction Solution: Break Free of the Seemingly Harmless Habits that Keep You from the Life You Want*. New York: Tarcher.
- Wu, J., Wang, S., & Tsai, H. (2010). Falling in love with online games: The uses and gratifications perspective. *Computers in Human Behavior*, 26, 1862–1871.
- Yang, C. (2016). Instagram Use, Loneliness, and Social Comparison Orientation: Interact and Browse on Social Media, But Don’t Compare. *CyberPsychology, Behavior & Social Networking*, 19(12), 703–708.
- Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder.

- CyberPsychology & Behavior*, 3, 237–44.
- Young, K. S. (1999). Internet addiction: symptoms, evaluation and treatment. In L. VandeCreek & T. Jackson (Eds.), *Innovations in Clinical Practice: A Source Book* (Vol. 17; pp. 19–31). Sarasota, FL: Professional Resource Press.
- Yurieff, K. (2019, November 11). Instagram is about to hide likes for some US users. Here's what to expect. *CNN Business*. Retrieved from <https://edition.cnn.com/>



Appendix A

Dear Participants:

We invite you to participate in a research study that examines how and why people use Instagram Stories. In this study, you will be asked to fill out questions about your usage of Instagram Stories. You understand that you must be aged between 18 and 39 and currently live in the U.S. who has an Instagram account and uses Instagram Stories to be eligible to participate in this research project. The entire study will take approximately 15 minutes to complete.

In order to make this study a valid one, some information about your participation or the study will be withheld until completion of the study. Any individually identifiable information that is obtained in connection with this study will remain confidential. Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. However, once the materials are received by the researchers, standard confidentiality procedures will be employed. The results of the research study may be published, but your name or any identifying information will not be used. In fact, the published results will be presented in summary form only.

Thank you for your consideration!

- I understand that I agree with the statement to participate in this research project.
- I disagree with the statement to participate in this research project.

For qualification purposes, please answer the following question:

What is your age?

- below 18
- 18 ~ 24
- 25 ~ 29
- 30 ~ 34
- 35 ~ 39
- 40 and up

Do you currently live in the United States?

- Yes
- No

Do you have an Instagram account?

- Yes
- No

Have you ever used the Instagram Stories?

- Yes
- No

(page 2)

Here is a visual example of Instagram Stories.

We would like to ask about how and why you use Instagram Stories.



1. In the past week, how often on average do you consume content (e.g., view, browse, check out) on Instagram Stories? Please indicate your answer to each question by clicking the appropriate option.
 - never
 - seldom
 - a few times a month
 - once a week
 - a few times a week
 - once a day
 - several times per day

2. Using three easy-to-understand terms that describe what do you consume content on Instagram Stories for?

3. In the past week, how often on average do you participate in activities/interactions/conversations (e.g., reply, click polls/question stickers) on Instagram Stories? Please indicate your answer to each question by clicking the appropriate option.
 - never
 - seldom
 - a few times a month
 - once a week
 - a few times a week
 - once a day
 - several times per day

4. Using three easy-to-understand terms to describe what do you participate in activities/interactions/conversations on Instagram Stories for?

5. In the past week, how often on average do you post content (e.g., upload, create content) on Instagram Stories? Please indicate your answer to each question by clicking the appropriate option.

- never
- seldom
- a few times a month
- once a week
- a few times a week
- once a day
- several times per day

6. Using three easy-to-understand terms to describe what do you post content on Instagram Stories for?

(page 3)

7. What is the first thing that comes to mind when you think about what you enjoy the most when using Instagram Stories?

8. Please use 5 words to describe what you enjoy when using Instagram Stories?

9. What uses of Instagram Stories are most important to you?

10. Specifically, what are your motivations for consuming content (e.g., viewing, browsing, checking out) on Instagram Stories? Please give examples.

11. Specifically, what are your motivations for participating in activities (e.g., replying, clicking polls/question stickers) on Instagram Stories? Please give examples.

12. Specifically, what are your motivations for posting (e.g., uploading, creating content) on Instagram Stories? Please give examples.

(page 4)

Please answer the following questions.

1. Please fill in your age _____

2. Your biological sex

- Male
- Female

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

- Less than High School
- High School/GED

- Some College
- 2-year College Degree
- 4-year College Degree
- Master Degree
- Doctoral Degree
- Professional Degree (JD, MD)

4. How many followers do you have on Instagram currently? Please check your Instagram account.

5. How many accounts are you following on Instagram currently? Please check your Instagram account.



Appendix B

Dear Participants:

We invite you to participate in a research study that examines how and why people use Instagram Stories. In this study, you will be asked to fill out questions about your usage of Instagram Stories. You understand that you must be aged between 18 and 39, currently live in the U.S., own an active Instagram account, and use Instagram Stories to be eligible to participate in this research project. The entire study will take approximately 15 minutes to complete.

In order to make this study a valid one, some information about your participation or the study will be withheld until completion of the study. Any individually identifiable information that is obtained in connection with this study will remain confidential.

Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. However, once the materials are received by the researchers, standard confidentiality procedures will be employed.

The results of the research study may be published, but your name or any identifying information will not be used. In fact, the published results will be presented in summary form only.

Thank you for your consideration!

- I understand that I agree with the statement to participate in this research project.
- I disagree with the statement to participate in this research project.

For qualification purposes, please answer the following question:

What is your age?

- below 18
- 18 ~ 24
- 25 ~ 29
- 30 ~ 34
- 35 ~ 39
- 40 and up

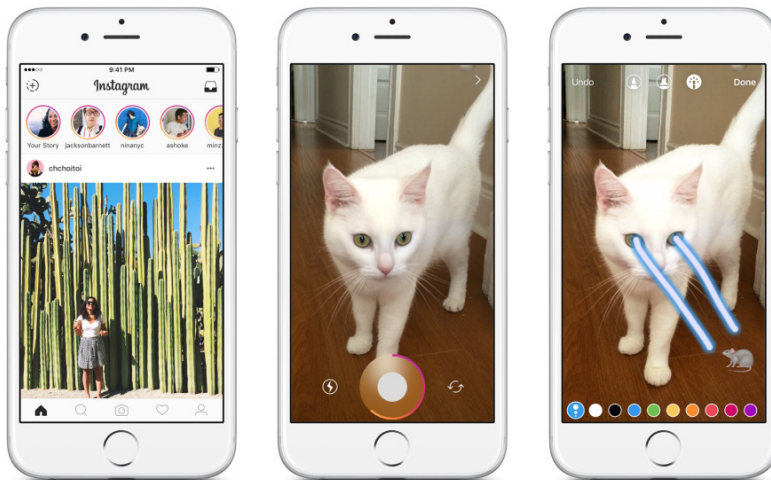
Do you currently live in the United States?

- Yes
- No

Do you have an Instagram account?

- Yes
- No

Here is a visual example of Instagram Stories.



Have you ever used the Instagram Stories?

- Yes
- No

(page 2)

I. Some statistics show that Instagram users tend to view, participate, and post on Instagram Stories for different reasons. Here, we would like to learn about your usage of Instagram Stories. Please check the statements below that reflect why you use Instagram Stories.

No.	Items	1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neutral	5 Somewhat Agree	6 Agree	7 Strongly Agree
1	To keep in touch with family and friends.							
2	To have conversations with others (e.g., chats, gossip, etc.).							
3	To maintain a good relationship with others (for networking).							
4	To meet/connect with others who have similar interests.							
5	To interact with brands.							
6	To browse products/services (e.g., clothes, shoes).							
7	To buy products/services (e.g., clothes, shoes).							

8	To pass the time when bored.								
9	To share information about me (e.g., feelings, updates, etc.).								
10	To share information I think is interesting (e.g., reposting).								
11	To promote certain topics.								
12	To explore.								
13	To get free information without much effort.								
14	To learn about new things (e.g., watching tutorials, etc.).								
15	To keep up with current issues and events of the day.								
16	To receive exclusive contents in real time.								
17	To get updates on my family and friends.								
18	To follow influencers/celebrities.								
19	To see what other people share.								
20	To record things that happen in my daily life.								
21	To create my own portfolio (e.g., vlogging).								
22	To receive responses from others.								
23	To feel like I belong to a community.								
24	To self-promote.								
25	To become popular.								
26	To show off.								
27	Because it is easy to use.								
28	Because it is entertaining.								
29	Because it is enjoyable.								
30	Because it is fun.								
31	Because it is casual.								
32	Because it is functional.								
33	Because it is convenient.								
34	Because it is real.								
35	Because it is private.								
36	Because it is new.								
37	Because it disappears after 24 hours.								

38	Because I can receive some benefits (e.g., giveaways, coupons).							
----	---	--	--	--	--	--	--	--

(page 3)

II. Now, please answer the following questions regarding the frequency of your Instagram Stories usage.

No.	Items	1 Never	2 Not once this week	3 Once this week	4 2-3 times this week	5 4-6 times this week	6 Once a day	7 Several times a day
1	In the past week, how often on average do you use Instagram Stories by viewing others' Stories?							
2	In the past week, how often on average do you swipe up others' Instagram Stories?							
3	In the past week, how often on average do you use Instagram Stories by responding to Stories features created by others (e.g., poll stickers, emoji reactions etc.)?							
4	In the past week, how often on average do you reply to others' Stories?							
5	In the past week, how often on average do you post your own Instagram Stories?							
6	In the past week, how often on average do you share something (e.g., music, reposting other stories etc.) to your Instagram Stories?							
7	In the past week, how often on average do you post your own Stories with Instagram Stories features (e.g., digital filters, texts, draws and handwritings, links, etc.)?							

(page 4)

III. Next, we would like to learn how often do you experience any of the feelings when you used Instagram Stories?

		1	2	3	4	5	6	7
No.	Items	Never	Very rarely	Rarely	Sometimes	Often	Very often	All the time
1	romantic love (sexy, romantic, passionate)							
2	love (loving, sentimental, warm hearted)							
3	peacefulness (calm, peaceful)							
4	contentment (contented, fulfilled)							
5	optimism (optimistic, encouraged, hopeful)							
6	joy (happy, pleased, joyful)							
7	excitement (excited, thrilled, enthusiastic)							
8	surprise (surprised, amazed, astonished)							

(page 5)

IV. Please let us know how much you agree with the following statements.

		1	2	3	4	5	6	7
No.	Items	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	I think about Instagram Stories if I cannot use it for some time.							
2	I miss using Instagram Stories if I don't have access to it.							
3	When not on Instagram Stories, I wonder what I miss out.							
4	I am not at ease if I cannot go on Instagram Stories.							
5	It is hard to stop thinking about what is being shared and what can be shared on Instagram Stories.							

6	I want to, or have made unsuccessful efforts to, limit or control my use of Instagram Stories.							
7	I feel guilty about the amount of time I spend on Instagram Stories.							
8	I have tried to stop using Instagram Stories for long periods of time.							
9	I have attempted to spend less time on Instagram Stories but have not been able to.							
10	I use Instagram Stories to interact with others when I feel isolated.							
11	I use Instagram Stories to make myself feel better when I am down.							
12	I use Instagram Stories to make myself feel better when I feel upset.							

(page 6)

V. Finally, we need some general information about you.

1. Please fill in your age _____

2. Your biological sex

Male

Female

3. The highest level of school you have completed
- No schooling completed, or some high school, no diploma
 - Junior high school graduate, diploma or the equivalent
 - High school graduate, diploma or the equivalent
 - Bachelor's degree
 - Master's degree, professional degree, or doctorate degree

4. How many followers do you have on Instagram currently? Please check your Instagram account.

5. How many accounts are you following on Instagram currently? Please check your Instagram account.

6. Do you have a Facebook account?

- Yes
- No

7. Which platform do you use more frequently?

- Facebook
- Instagram

Others _____ (please fill in)

8. The average time spent on Instagram on a typical day
_____ hour(s) _____ minute(s)

9. The average time spent on Facebook on a typical day
_____ hour(s) _____ minute(s)

