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Personal and Social Determinants of Fear of Missing Out (FoMO) in Younger Consumers

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Abstract

This study expands the exploration of a consumer behavior concept that has received considerable attention recently: the fear of missing out (FoMO). Several variables were analyzed in terms of their potential influence on FoMO: social media usage, self-concept, social identity, smartphone usage, innovativeness, and gender. The study builds upon the premise that the construct has two distinct components: a personal dimension and a social dimension. The importance of these results is discussed in terms of advancing FoMO theory as well as assisting practitioners in directing their promotional efforts.

Keywords

Fear of missing out (FoMO), Younger consumers, Personal dimension of FoMO, Social dimension of FoMO

1. Introduction

An emerging concept in consumer behavior is the fear of missing out (FoMO). It was introduced in academia by Herman (2000) who offered it as an explanation for the success of limited-edition brands. FoMO was later introduced by the news media (Columnist, 2010; Fake, 2011). However, the concept has been present throughout history in any communication form that increases a consumer's knowledge about his or her friends, family, or even strangers. These communication forms include newspapers, letters, annual holiday newsletters, and emails (Wortham, 2011). How-

ever, more recently its influence has greatly expanded via the context of social media marketing. FoMO is the feeling of being "left behind" when someone sees that peers own or experience something that seems rewarding that he or she is not owning or experiencing. Researchers have provided many definitions of FoMO (see Table 1). According to Zhang et al. (2020), the construct has two components, particularly when following a self-concept approach: the private self and/or the public self or a personal and/or a social dimension. FoMO is characterized as an uneasy feeling, a feeling of anxiety. So, consumers can fear miss-

ing out on experiences that other people enjoy (social FoMO) and can also fear missing out on experiences they had wished for themselves (personal FoMO).

The purpose of the study is to assess the influence of variables on the fear of missing out (FoMO). Much of the previous research on FoMO has examined variables individually and how each influences FoMO. This study addresses multiple variables and how they influence FoMO. The study also assesses the efficacy of the two-component depiction of the FoMO construct based upon the self-concept approach introduced by Zhang et al. (2020).

2. Literature Review and Theoretical Framework of FoMO

Past studies show that fear illustrates how social power is constituted, legitimated, and communicated through media logic with mediated formats guiding the use of technology (Altheide, 2013). Fear is an emotion resulting from perceived threats to one's well-being (Gill & Burrow, 2018). Threats involve adverse outcomes that the individuals want to terminate, escape from, or avoid (Gray, 1971). The concept of FoMO was first introduced by Herman (2000) as a potential explanation for the success of limited edition brands. He argues that when consumers feel incapable of exhausting all the options of products in the marketplace, they become fearful about the risk of possibly missing desirable opportunities. Thus, FoMO increases consumers' urgency to exhaust all available offerings, especially those that are scarce. As a result, FoMO could be a powerful motivation to encourage buying (Herman, 2000).

In consumer psychology, the FoMO phenomenon has been defined as a pervasive apprehension that others might be having rewarding experiences from which one is absent and is characterized by the desire to stay continually connected with what others are doing (Przybylski et al., 2013). In other words, FoMO refers to the anxiety social media users feel when they perceive their peers are doing, experiencing, or possessing something rewarding while they are not (Przybylski et al.,

2013).

Research has explored the prevalence of FoMO and its relation to social media (Abel et al., 2016). A recent study by Alt (2015) finds a positive link between social media engagement and FoMO. In fact, social media users have grown exponentially in the past decade. In 2021, over 4.26 billion people were using social media worldwide, a number projected to increase to almost six billion in 2027 (Statista, 2022). College students are the heaviest social media users (Alt, 2015). Smartphone penetration is believed to be one of the dominating forces driving social media usage (Swar & Hameed, 2017). Research has shown that the excessive use of smartphones links to adverse outcomes, such as smartphone addiction (Aljomaa et al., 2016; Lee et al., 2014).

In addition, the research examines the conceptual background of FoMO with offline consumer behavior. Zhang et al. (2020) propose a theoretical foundation for FoMO by following a self-concept approach. They posit that consumers experience FoMO when they perceive that missing experience poses a psychological threat to the private and/or public self. The private self refers to the evaluation of oneself (e.g., self-identify or membership), and the public self is the projection of others' view of oneself (e.g., self-concept/feeling of the self). Finally, Zhang et al. (2020) indicate novelty seeking or innovativeness may be a variable associated with FoMO. Recent research also shows that FoMO may be multidimensional (Zhang et al., 2020) and that FoMO involves two dimensions: a personal FoMO and a social FoMO. Accordingly, a new scale was developed, offering researchers to further test the concept of FoMO and related variables.

To conclude, many variables may activate FoMO. FoMO may be activated by threats to the self-concept (Zhang et al., 2020). Consumers tend to purchase goods and services that are consistent with or enhance, their self-concept. Consumers may perceive that missing out on experiences may be inconsistent with their self-concept. Furthermore, higher social media engagement may activate FoMO (Alt, 2015), although the construct has been found in non-online contexts as well, includ-

Table 1: Previous definitions of fear of missing out (FoMO)

Author (year)	Definition
JWT Intelligence in Przybylski et al. (2013)	The uneasy and sometimes all-consuming feeling that you are missing out, that your peers are doing something, are in the know about, or in possession of more of something better than you.
Przybylski et al. (2013)	A phenomenon characterized by the desire to stay continually connected with what others are doing and a pervasive apprehension that others might be having rewarding experiences from which one is absent.
Gil et al. (2015)	Fear of missing out is a concept that aims to describe the feeling that something is happening on social networks and you are not part of it.
Riordan et al. (2015)	The uneasy and often all-consuming sense that “friends or others are having rewarding experiences from which one is absent.”
Salem (2016)	A kind of anxiety, a sense that you will be inadequate or left behind if you don't react.
Abel et al. (2016)	FOMO is comprised of irritability, anxiety, and feelings of inadequacy, with these feelings tending to worsen when an individual logs on to social media websites.

(Zhang et al., 2020)

ing smartphone overuse (Elhai et al., 2016). Those consumers who are considered innovators (early users) in the product adoption process may also significantly impact FoMO (Manning et al., 1995). Finally, higher degrees of social identity in consumers may also influence FoMO (Reed, 2002).

Social Media Usage

It is well-documented that those with a high dependence on social media also have a high level of FoMO (Argan & Tokay Argan, 2020; Asif, 2020; Classen et al., 2020; Kang et al., 2020; Przybylski et al., 2013). So, social media services such as Instagram, YouTube, Facebook, Twitter, and TikTok may be especially attractive for those who fear missing out. Furthermore, there are positive and negative consequences of this attraction. On a positive note, social media are excellent for those who are seeking social connection and may provide greater social involvement. Knowing what friends and family are doing and buying is beneficial for connection and interaction.

However, time is a scarce commodity and so the negative result is missing out on some of the activities found via social media. So, unfortunately, social media and a fear of missing out may re-

sult in overall unhappiness. Feelings of irritability, anxiety (Gray, 1971), and inadequacy can impact the fear of missing out and these may intensify when individuals view social media (Abel et al., 2016). Providing the ability to see others' updates in real-time, social media allows consumers to constantly see what they may be missing out on, possibly resulting in dissatisfaction, anxiety, and unworthiness (Abel et al., 2016). Elhai et al. (2016) state that FoMO can drive the overuse of social media. In sum, social media is “kerosene on FoMO's fire” (Miller, 2012, p.2).

Based on this discussion, the following hypothesis is proposed:

Hypothesis 1a. Individuals exhibiting greater social media usage will have a greater personal fear of missing out.

Hypothesis 1b. Individuals exhibiting greater social media usage will have a greater social fear of missing out.

Self-Concept

Sirgy (1982) first suggested that some purchase decisions can be affected by a consumer's self-concept. He stated that self-concept is the sum

of an individual's thoughts and feelings about himself or herself relative to other objects. Consumers generally have favorable attitudes towards products and brands that are consistent with their self-concept and less favorable attitudes towards products and brands perceived to be inconsistent with their self-concept (Graeff, 1996). Furthermore, Zhang et al. (2020) proposed that FoMO, "is the fear an individual feels from missing out on an experience that can enhance or maintain her/his self-concept" (p. 1630).

Although they can overlap, Zhang et al. (2020) posit that there are two major types of self-concept: a private self and a public self. The private self refers to thoughts that the individual does not share with others or perhaps a small group of people. These thoughts include reflections, daydreams, or fantasies that can be satisfied through a consumption experience, which would maintain or enhance their private self-concept. Most research dealing with FoMO has focused on the public self, which is based upon what other people are doing or saying, fueled largely by social media. What people say on social media, whether discussing others or discussing events, can intensify FoMO (Zhang et al., 2020).

Based on this discussion, the following hypothesis is proposed:

Hypothesis 2a. Individuals with a greater self-concept will have a lower personal fear of missing out.

Hypothesis 2b. Individuals with a greater self-concept will have a lower social fear of missing out.

Social Identity

Social identity theory divides self-concept into two categories: personal identity, or how people view themselves, and social identity, or collective identity, which refers to how they view their social groups (Dutot, 2020). Additionally, social identity theory shows the importance of social group memberships to individuals' self-concept (Dutot, 2020). Similarly, Duman and Ozkara (2021) state that social identity is a part of self-concept that comes from the knowledge that an individual be-

longs to a social group(s) coupled with the value and emotional significance of that membership. Based on this discussion, the following hypothesis is proposed:

Hypothesis 3a. Individuals exhibiting greater social identity will have a greater personal fear of missing out.

Hypothesis 3b. Individuals exhibiting greater social identity will have a greater social fear of missing out.

Smartphone Usage

The mental disorders associated with excessive smartphone use have been well-documented, including depression, anxiety, sleeping issues (Demirci et al., 2015), stress, depression, and suicidal ideation (Kim et al., 2019). People high in FoMO overuse their smartphones in order to stay connected. Elhai et al. (2016) found that excessive smartphone use was associated with anxiety, the need for touch, and FoMO. Additionally, FoMO was the variable that was most related to excessive smartphone use on a bivariate and multivariate basis. FoMO and the need for touch were significant predictors of dysfunctional smartphone use. Furthermore, both Elhai et al. (2016) and Przybylski et al. (2013) found that FoMO is a discriminating variable between problematic and non-problematic smartphone use.

Based on this discussion, the following hypothesis is proposed:

Hypothesis 4a. Individuals exhibiting greater smartphone usage will have a greater personal fear of missing out.

Hypothesis 4b. Individuals exhibiting greater smartphone usage will have a greater social fear of missing out.

Innovativeness

Innovativeness is the degree to which an individual adopts a new idea faster than others (Vandecasteele & Geuens, 2010). Rogers (1995) introduced the Diffusion of Innovations Model, which grouped adopters of innovations based on the time of adoption. The two earliest groups in the

model are Innovators and Early Adopters (Girardi & Chiagouris, 2018). Early Adopters connect the Innovators with the mass groups of adopters, the Early Majority and the Late Majority. Innovators and Early Adopters are both depicted as having a high degree of innovativeness.

Clark and Goldsmith (2006) report that academicians contend that innovators prefer to use non-personal sources of information versus interpersonal sources of information when making new product purchase decisions. In other words, innovativeness has been shown to be more closely associated with opinion leadership than opinion seeking: "Innovativeness is the degree to which an individual makes innovation decisions independently of the communicated experience of others" (Midgley & Dowling, 1978, p. 235). They use non-personal sources, such as mass media versus interpersonal sources, such as social media.

This discussion of innovativeness and the behavior of innovators runs counter to the concept of FoMO, in which consumers place great importance on knowing what others are doing. Although communicating with innovators is a critical requirement for the acceptance of an innovation and its diffusion, it can be concluded based on the literature that those with a high FoMO are not part of the innovator group.

Therefore, the following hypothesis is proposed:

Hypothesis 5a. Individuals exhibiting greater innovativeness will have less personal fear of missing out.

Hypothesis 5b. Individuals exhibiting greater innovativeness will have less social fear of missing out.

Gender

Knowledge involving gender differences may be useful for FoMO research in order to control potential gender effects. However, previous research provides mixed results regarding the relationship between gender and FoMO. Przybylski et al. (2013) and Qutishat (2020) found that young males tended to have higher levels of FoMO than females. In contrast, Beyens et al. (2016) and Stead and Bibby (2017) found that females re-

ported higher levels of FoMO than males. Moreover, Rozgonjuk et al. (2021) found no significant gender differences in experiencing FoMO.

Therefore, the following hypothesis is proposed:

Hypothesis 6a. There are no gender differences regarding the personal fear of missing out.

Hypothesis 6b. There are no gender differences regarding the social fear of missing out.

3. Method

The sample consisted of undergraduate students, alumni, and non-students belonging to either Generation Y or Generation Z. The questionnaire was sent via a university "student announcements" email. Any completed questionnaires that were outside of the age range of the latter two generational cohorts (Generation Y, 1981-1996, and Generation Z, 1997-2012) were omitted from the sample. Although a convenience sample, these respondents are appropriate for the study since FoMO is more evident in young people (Zhang et al., 2020). Similarly, Przybylski et al. (2013) found that younger consumers had higher levels of FoMO, concurring with early industry reports that FoMO was more prevalent in younger people (JWT, 2011, 2012).

Respondents were introduced to the study in the body of the email and then asked to click on the link that would take them to the Qualtrics questionnaire. The questions capture the respondents' demographics (age, race, education, occupation, religion, etc.) and psychographic information, which focused on the variables in the hypotheses.

A pretest was conducted before the questionnaire was distributed to the main sample. The questionnaire was completed by six undergraduate students who were currently enrolled in at least one class. An additional questionnaire was sent to a recent alumnus who was named "Student of the Year" for the university's college of business. No problems were reported by anyone taking the pretest questionnaire. As a result, no changes were made to the questionnaire before its administration to the main sample.

The total number of questionnaires received over a two-week period, with a one-week reminder email after the first week, was 280. Since the focus of the study is younger consumers, only those respondents in Generation Y (Millennials) or Generation Z were retained, leaving a total of 229 respondents. Next, questionnaires with a significant amount of missing data were eliminated, leaving a total of 225 for the final sample size.

The final sample's demographics were analyzed. The profile emerged that the typical respondent is described as the following: female (73%), a member of Generation Z (63%), has an income of \$0-10,000 (55%), has never married (79%), is white (Caucasian) (58%), has completed an undergraduate degree (45%), and is a student (59%). The complete demographic data is presented in Table 2.

Scales

Existing multiple-item scales will be used for each of the psychographic variables or constructs that may have an impact on FoMO. They will be included as independent variables in a multiple regression analysis with FoMO as the dependent variable.

Social media usage

Rapp et al. (2013) created this scale, consisting of ten, seven-point items from "strongly disagree" to "strongly agree" to measure how much someone uses social media to stay current with brands, retailers, and consumers. Three statements were removed due to their context-specificity. The last question was changed from "retail stores" to "retailers" to accommodate online sellers.

Self-concept

The six-item, seven-point semantic differential scale was created by De Angelis et al. (2012) (Bruner, 2016). It is intended to measure how one feels about himself or herself.

Social identity

The social identity scale was created by Nario-Redmond et al. (2004). There are eight items on a seven-point scale from "not at all important to who I am" to "extremely important to who I am." It was reduced from a nine-point to a seven-point scale for consistency with the other psychographic measures in this study. Social identity was defined

for the respondent as how an individual is identified by his or her group memberships.

Smartphone usage

The smartphone usage scale was used in several studies (Cheever et al., 2014; Hoffner & Lee, 2015; Smith, 2015). The scale was expanded from six to seven points for consistency across scales in this study. It consists of 11 items on a "never" to "very often" scale. Respondents who did not own a smartphone were instructed to skip these questions.

Innovativeness

The scale used for innovativeness was based upon the notion that a consumer's level of innovativeness is domain-specific, i.e., it is based upon a product category (Klink & Athaide, 2010). The other forms of consumer innovativeness are consumer innate innovativeness (CII) and vicarious innovativeness (VI) (Chao et al., 2012). Prior research shows that the relationship between consumer innate innovativeness and new product adoption is weak and inconsistent. And although it has been shown that mass media and word-of-mouth influence new product adoption, few researchers have used vicarious innovativeness (Chao et al., 2012).

The innovativeness scale in this study was used by Shalev and Morwitz (2012). Bruner (2016) reported that the scale was actually developed by Shalev. It was domain-specific and used the product category of high-technology products. Shalev and Morwitz (2012) justified using the category based on the fact that younger consumers tend to be innovators of high-technology products. The scale was a ten-item, seven-point Likert "strongly disagree" to "strongly agree" measure.

FoMO

The scale used for FoMO was developed by Zhang et al. (2020). They proposed that FoMO has two components: personal FoMO, related to the private self, and social FoMO, related to the public self. Their analysis treated FoMO as a feeling that individuals can experience not only online, especially via social media, but also offline. The scale was a seven-point Likert scale from "strongly disagree" to "strongly agree." It consisted of five items to measure the personal FoMO dimension

Table 2: Descriptive information of the sample

Items		percent (n)
Gender	Male	24 (54)
	Female	73 (164)
	Non-binary/ third gender	3 (6)
Birth year	1981 - 1996	37 (83)
	1997 - 2012	63 (142)
Income	0-10k	55 (124)
	10,001 - 30k	20 (46)
	30,001 - 50k	12 (27)
	50,0001 - 70k	7 (15)
	Above 70k	5 (12)
Marital status	Married	18 (40)
	Widowed	1 (3)
	Divorced	1 (2)
	Separated	1 (2)
	Never Married	79 (178)
Race	White(Caucasian)	58 (131)
	Black	27 (60)
	Hispanic	6 (14)
	Asian American	3 (7)
	Pacific Islander	1 (2)
	Other	6 (13)
Educ completed	GED & High School	36 (81)
	Undergraduate	45 (101)
	Graduate	13 (29)
	Other	6 (13)
Occupation	Student	59 (133)
	Homemaker/Not Employed	2 (5)
	Self-Employed	1 (3)
	Educator	5 (11)
	Professional	8 (18)
	Work for Company/Business	22 (49)
	Other	3 (6)

percentages may not total 100 due to missing data or may exceed 100 due to rounding

and four items to measure the social FoMO dimension.

4. Results

Reliability coefficients were computed for each of the scales (Table 3a and 3b). All coefficient alphas were above the 0.70 value recommended by Nunnally (1978). In this analysis, the independent variables consisted of social media usage, self-concept, social identity, smartphone usage, and innovativeness; the dependent variable was fear of missing out (FoMO). Since the study focuses on both personal and social aspects of FoMO, FoMO was treated as two dependent variables, i.e., FoMOpersonal and FoMOSocial.

According to the analysis, the independent variables have a relationship to personal FoMO, i.e., FoMOpersonal ($F = 9.746$, $p < 0.001$) (see Table 4, Table 5). As hypothesized, social media usage has a positive influence on FoMOpersonal ($\beta = 0.208$, $t = 2.713$, $p < 0.05$) (H1a). Moreover, individuals with greater self-concept are negatively associated with FoMOpersonal ($\beta = -0.39$, $t = -5.852$, $p < 0.05$) (H2a). In addition, the analysis shows smartphone usage has a positive impact on FoMOpersonal ($\beta = 0.174$, $t = 2.493$, $p < 0.05$) (H4a). Yet, neither social identity (H3a) nor innovativeness (H5a) are associated with FoMOpersonal ($\beta = -0.115$, $t = -1.562$, $p > 0.05$) ($\beta = -0.118$, $t = -1.679$, $p > 0.05$).

Furthermore, the results show that self-concept is significant with a negative impact on FoMOSocial ($\beta = -0.482$, $t = -7.503$, $p < 0.05$) (H2b) (see Table 6, Table 7). Also, there were no gender differences in relation to FoMO ($t_{personal} = -0.72$, $p > 0.05$; $t_{social} = 0.475$, $p > 0.05$) (H6a), (H6b).

5. Discussion

FoMO is an emerging topic in consumer psychology, which is a feeling of being "left behind" (Salem, 2016). It generally relates to technological advancements, such as social media and smartphone usage. According to Zhang et al. (2020),

FoMO not only refers to the fear of missing out on experiences other people may enjoy but also the feeling of missing out on experiences they had wished for themselves. Therefore, FoMO tends to be activated by psychological threats to the self-concept. It is often a result of threats to the public and/or private self. This study contributes to FoMO theory by examining the personal and social aspects of FoMO. Specifically, it explores possible connections between social media, smartphone usage, innovativeness, social identity and self-concept, and FoMO. It also supports the lack of gender difference in relation to FoMO.

As Przybylski et al. (2013) posit, social media can be "thought of as reducing the 'cost of admission' for being socially engaged" (p. 1841). Yet, it was found that the use of technology, such as social media engagement and smartphone usage, has an impact on the personal dimension of FoMO but does not have an impact on the social dimension of FoMO, indicating that technology may have a more significant effect on personal FoMO than social FoMO. The non-significant results for social FoMO may indicate that ultimately consumers will engage in activities or purchase products that are right for them versus right for their social group(s). To concur with earlier research, the analysis shows that individuals with greater self-concept tend to exhibit less personal FoMO or social FoMO. Individuals with a confident "self" are less likely to be fearful. The results also reveal that innovativeness and social identity are not related to either personal FoMO or social FoMO. Finally, there was a non-significant difference between gender and FoMO. This finding may reflect the gender roles among Generation Z. Generally speaking, Generation Z favors gender role flexibility and is less in favor of the patriarchy (Lampert, 2021).

Theoretical and Practical Implications

This study aimed to examine the relationship between the two dimensions of FoMO and the "self" and to evaluate the relevant literature. Specifically, the study contributes to theory by supporting the self-concept view of FoMO proposed by Zhang et al. (2020), which differentiates the personal and

Table 3a: Reliability coefficients

Items	Coefficient alpha
Social media usage	0.90
I use social media to follow sales and promotions.	
I use social media to monitor events.	
People use social media to reach me.	
I use social media to improve my relationship with different brands.	
I use social media to communicate with retailers.	
I use social media to improve my relationship with retailers.	
My relationship with my retail stores is enhanced by social media.	
Self-concept	0.95
Unsatisfied with yourself	satisfied with yourself
Not proud of yourself	proud of yourself
Feel bad about yourself	feel good about yourself
Feel unsuccessful	feel successful
Not confident about yourself	confident about yourself
Feel worthless	feel like a person of worth
Social identity	0.83
The similarity I share with others in my group(s)	
My family nationality or nationalities	
The memberships I have in various groups	
The places where I have lived	
My sense of belonging to my own racial group	
My gender group	
The color of my skin	
My being a citizen of my country	
Smartphone usage	0.81
video and voice calls (making and receiving)	
text/instant messaging (sending and receiving)	
email (sending and receiving)	
social networking sites	
internet/websites	
games	
music/podcasts/radio	
taking pictures or videos	
watching videos/TV/movies	
reading books/magazines	
maps/navigation	

Table 3b: Reliability coefficients

Items	Coefficient alpha
Innovativeness	0.95
In general, I am among the first in my circle of friends to buy a new high-tech product when it appears.	
If I heard that a new high-tech product was available, I would be interested enough to buy it.	
I am usually one of the first people to know about new high-tech products.	
I will buy a new high-tech product even if I haven't tried it yet.	
I actively try to learn about new high-tech products.	
I generally keep up on high-tech products news and events.	
I consider myself very up-to-date when it comes to high-tech products.	
In general, I have a strong interest in high-tech products.	
High-tech products are a very important product category to me.	
High-tech products matter to me a lot.	
Personal FoMo	0.90
I feel anxious when I do not experience events/opportunities.	
I believe I am falling behind compared with others when I miss events/opportunities.	
I feel anxious because I know something important or fun must happen when I miss events/opportunities.	
I feel sad if I am not capable of participating in events due to constraints of other things.	
I feel regretful of missing events/opportunities.	
Social FoMO	0.93
I think my social groups view me as unimportant when I miss events/opportunities.	
I think I do not fit in social groups when I miss events/opportunities.	
I think I am excluded by my social groups when I miss events/opportunities.	
I feel ignored/forgotten by my social groups when I miss events/opportunities.	

Table 4: Hypothesis testing for FoMO_{personal}

Hypotheses	Results
Hypothesis 1a Individuals exhibiting greater social media usage will have a greater personal fear of missing out.	Accept
Hypothesis 2a Individuals with greater self-concept will have less personal fear of missing out.	Accept
Hypothesis 3a Individuals exhibiting greater social identity will have a greater personal fear of missing out.	Reject
Hypothesis 4a Individuals exhibiting greater smartphone usage will have a greater personal fear of missing out.	Accept
Hypothesis 5a Individuals exhibiting greater innovativeness will have less personal fear of missing out.	Reject
Hypothesis 6a There are no gender differences regarding personal fear of missing out.	Accept

Table 5: Regression analysis for FoMO_{personal}

	β	Standardized β	t	Sig.
(Constant)	3.395		5.557	0.000
Social Media Usage	0.217	0.208	2.713	0.007
Self-Concept/Image	-0.378	-0.390	-5.852	0.000
Social Identity	0.133	0.118	1.679	0.095
Smartphone Usage	0.276	0.174	2.493	0.013
Innovativeness	-0.122	-0.115	-1.562	0.120

Table 6: Hypothesis testing for FoMO_{social}

Hypotheses		Results
Hypothesis 1b	Individuals exhibiting greater social media usage will have a greater social fear of missing out.	Reject
Hypothesis 2b	Individuals with greater self-concept will have less social fear of missing out.	Accept
Hypothesis 3b	Individuals exhibiting greater social identity will have a greater social fear of missing out.	Reject
Hypothesis 4b	Individuals exhibiting greater smartphone usage will have a greater social fear of missing out.	Reject
Hypothesis 5b	Individuals exhibiting greater innovativeness will have less social fear of missing out.	Reject
Hypothesis 6b	There are no gender differences regarding social fear of missing out.	Accept

Table 7: Regression analysis for FoMO_{social}

	β	Standardized β	t	Sig.
(Constant)	3.746		5.645	0.000
Social Media Usage	0.169	0.144	1.945	0.053
Self-Concept/Image	-0.526	-0.483	-7.503	0.000
Social Identity	0.133	0.118	1.679	0.095
Smartphone Usage	0.276	0.174	2.493	0.013
Innovativeness	-0.122	-0.115	-1.562	0.120

social aspects of FoMO. Table 5 and Table 7 report the differences in regression analysis results between the personal dimension of FoMO and the social dimension of FoMO in regard to variables. The findings show that social media engagement and smartphone usage have a positive influence on the personal dimension of FoMO, whereas self-concept has a negative influence. The findings regarding social media and smartphone usage are consistent with previous research that FoMO is related to the overuse of technology (e.g. Elhai et al., 2016). In other words, for those who are afraid of missing out, social media and smartphones provide means to connect with others.

FoMO is an anxiety disorder that is defined as not being aware of exciting things when not being looked at, or missing out on the experiences of others. Although the FoMO effect has a negative meaning, businesses manage to use this concern to their advantage. For example, the results show that social FoMO is associated with self-concept. These findings may help social media marketers to identify FoMO consumers based on the “self-concepts.” That being said, social media marketers may use selfies as an indicator of self-concept on social media, thus finding insights into FoMO consumers.

Additionally, limited production, shortage of products in stock, short-term discounts, showing the number of people interested in the same product, and promotions offered as opportunities not to be missed are among the efforts of businesses to persuade consumers through FoMO. Furthermore, the call to action (e.g., do not miss out, a one-day sales event) may likely be contingent on social media usage and smartphone use. Digital marketers may use these “calls to action” to leverage more effective social media marketing campaigns. In particular, digital marketers may be able to incorporate consumers’ desires or fear as a motivational tool to purchase a product or seek out information. Moreover, digital marketers may need to be aware that individuals exhibiting greater smartphone usage and more significant social media use have a greater fear of missing out. This finding indicates that marketers can use software to track the usage of screen time and identity

a particular consumer group that is afraid of missing out. Finally, the results show that gender and innovativeness have no impact on FoMO, which offers marketers insights that gender and innovativeness are not the variables needed to be considered or focused on for market segmentation in the context of FoMO in social media advertising campaigns.

In sum, the fear of missing out on something can be a powerful emotion, and it is one that many individuals struggle with, especially members of Gen Z. This idea has been studied by various researchers who have found evidence supporting its validity as an explanation for why consumers select special editions over others (Altheide, 2013). As a result, FoMO may drive consumers to make impulsive buying decisions. Thus, consumers should be aware of FoMO in the context of social media promotion and be conscious of the consequences of FoMO.

A similar construct to FoMO, cognitive dissonance, which has been described as post-purchase anxiety in non-routine purchases, is an undesirable consumer behavior condition that both marketers and consumers wish to minimize or eliminate. Although FoMO is similar to cognitive dissonance in that it is a form of consumer anxiety, it is actually a condition that can be advantageous to the marketer. For the marketer who wishes to leverage FoMO as a promotional tool, a “don’t be left out” or “limited edition” approach may be prudent, specifically via social media and/or smartphone technology.

Limitations and Directions for Future Research

This study has some limitations. First, the sample, although representative of the target of younger consumers, was a convenience sample since an email list of students, alumni, and non-students of one university was used. Second, the results regarding gender may have been compromised due to the groups being rather unbalanced, with the majority of the sample consisting of female respondents (73%). This shortcoming is often addressed in studies using panels and/or offering incentives for participation. Additionally, this study has concluded that there are no gender differ-

ences regarding FoMO, concurring with some previous research. Yet, due to inconsistencies in the results found in other studies, this finding may need to be validated in future research.

FoMO has often been seen as a novel phenomenon that emerged with the increasing popularity of social media. This is perhaps the first study to simultaneously investigate multiple variables, specifically, innovativeness, self-concept, and social identity with both dimensions of FoMO. Future research may investigate why technology has not had an impact on the social aspect of FoMO. It is also worthwhile to examine why so-

cial identity is not related to FoMO and why most of the results for FoMOsocial were non-significant. The FoMO construct is based upon social relationships, so intuitively, those results were unexpected. Researchers may further collect a non-student sample to compare Generations Y and Z with the other generational cohorts, i.e., Matures, Baby Boomers, and Generation X. Nevertheless, Generation Y and Generation Z may be important cohorts to target since younger consumers still use technology to a greater degree than older consumers (Thanasrivanitchai et al., 2017).

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