Fear of Missing Out

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Fear of missing out: A definition

When the concept of fear of missing out (FOMO) was first defined in academic research it was referred to as "pervasive apprehension that others might be having rewarding experiences from which one is absent, FoMO" (Przybylski, Murayama, Dehaan, & Gladwell, 2013, p. 1841). The authors described FOMO within self-determination theory. That is, FOMO is a motivational driver based on threats to basic human needs of relatedness, autonomy, and competence. However, more broadly FOMO may be defined as an affective and cognitive experience based on the perceived discrepancy between individuals' current and possible experiences as well as that between their experiences and the ones their immediate and extended social environment is having. Thus, two underlying types of components play an important role when defining FOMO: (i) affective components and (ii) cognitive components (Browne, Aruguete, McCutcheon, & Medina, 2018). The affective component predominantly describes the emotional experience individuals are having. This affective experience is mostly negative in nature and driven by anxiety, fear, regret, envy, and other negatively valanced emotions. The cognitive component is comprised of two subcomponents: social comparison and counterfactual thoughts. According to the definition of FOMO above, social comparison describes the perceived discrepancy between individuals' experiences and the ones their immediate and extended social environment is having. Counterfactual thoughts describe the perceived discrepancy between individuals' current and possible experiences. The following will first elaborate on the components of FOMO in more depth, then summarize prior research regarding the effects of media on FOMO. Next, effects of FOMO on compulsive and problematic Internet and smartphone use, mental health and well-being, and advertising and marketing strategy will be described. Last, how FOMO develops and manifests throughout the life span will be briefly described.

Affective components of FOMO

Despite the construct's label ("fear of missing out") clearly indicating that "fear" is a driving affective component, most prior research describes the affective component of FOMO as a state of anxiety, apprehension, and uneasiness (e.g., Przybylski et al., 2013). Although anxiety is longer lasting than fear, and about a potentially negative but uncertain event or encounter in the future, it might arise from initial fear. For

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example, individuals who choose to stay at home over going out with friends might encounter an initial fearful reaction to perceived social exclusion through not being part of a social activity and therefore through socially excluding themselves. Consequently, individuals might then experience lingering anxiety by imagining that others might have more fun or are more included than themselves. They may worry about losing their social standing by not being part of the group, feel uneasy about possibly not having a good time, and apprehend that their lives are less joyful and exciting than their friends' lives. According to previous research, FOMO might be a perceived threat to one's inclusionary status and generate feelings of social exclusion (e.g., Lai, Altavilla, Ronconi, & Aceto, 2016). Thus, FOMO is based on a feeling of uncertainty about possible negative future outcomes closely related to anticipatory regret. In other words, individuals feel that they might have made, are currently making, or will make a wrong choice that will possibly lead to suboptimal outcomes and anticipate regretting the choice later on. Therefore, a haunting residual feeling that the chosen alternative will be less enjoyable than the not chosen alternative is experienced before, during, and after decisions are being made (Milyavskaya, Saffran, Hope, & Koestner, 2018). Further, not only is a not chosen alternative perceived as superior to the chosen alternative, but additionally experiences others are having are perceived as superior to the chosen activity. Hence, FOMO is closely related not only to regretful feelings, but also to feelings of social envy (Reagle, 2015). This leads to an overall negative affect that is part of the FOMO experience.

Cognitive components of FOMO

The cognitive component of FOMO includes internal thought processes, which compare individuals' lives in two different ways: (i) an individual's experiences when compared alongside the experiences of others and (ii) an individual's current experiences when compared with the potential for experiences which are perceived to be superior. Therefore, FOMO is tightly connected to social comparison and counterfactual thinking. In fact, some research states FOMO is a highly social construct that is considered a specific form of envy, regret, or rumination based on mostly social information (e.g., Reagle, 2015). In regard to how individuals compare the situation they are in with situations others are in, they engage in social comparison, which is important for individuals in order to create valid reference points for their self-assessment. In other words, people compare themselves, their situation, and their lives to others in order to evaluate their situations within the context of a group or society (see SOCIAL COMPARISON THEORY). These comparisons can be either upward—comparing oneself to someone in a better situation—or downward—comparing oneself to someone in a worse situation. People tend to have a negatively biased view when evaluating their own life and situation against others', such that individuals tend to see the lives of others as better than their own. This bias is most prevalent for social activities (e.g., the number of parties one attends). This is consistent with findings in FOMO literature (Milyavskaya et al., 2018), in that observing social activities of others increases FOMO within individuals.

Regarding how individuals compare the situation they are in with situations they possibly could be in, they engage in counterfactual thinking, which is the process of individuals asking themselves, "What could have been?" These processes of generating counterfactual thoughts mostly occur after a decision has been made and some kind of feedback on the chosen alternative is received. For example, when one has chosen to stay at home to do homework instead of going to a bar with friends, one might construct a counterfactual thought in order to assess "what could have been" against "what is." This counterfactual thought might be "I would have had so much fun" and therefore generates a mental simulation of an alternative reality in which the individual would have gone to the bar and enjoyed the night. Individuals might also construct counterfactuals about possible future events, in that they ask themselves, "What could be?" Thus, individuals engage in a process of taking autobiographical events as well as situational clues into account in order to construct a possible future event. Counterfactual thinking, and therefore FOMO, might occur right when the decision of doing homework over going to the bar is made. The counterfactual thought might be "I would have so much fun," and consequently the individual engages in mental simulations about what could possibly happen if they choose to go to the bar instead. These mental simulations about possible future events require substantial cognitive effort and therefore constitute distraction and rumination and bind cognitive capacity. When people experience FOMO, they perceive the current event they are partaking in as less enjoyable and the event they miss out on as more enjoyable. This is specifically true for alternative events that are social in nature. Yet this is true no matter the type of event that is actually chosen. In other words, even when individuals choose to spend their time with friends at a bar and are asked by a different group of friends to go to another bar instead, they will experience FOMO about missing out on the not chosen event. This finding is confirmed by other researchers (e.g., Rifkin, Cindy, & Kahn, 2015), who claim that individuals who experience FOMO perceive activities and lives of others as more fun and exciting.

FOMO and the media

A vast amount of prior research has addressed FOMO's connection to social media engagement. It has commonly been found that people who experience frequent FOMO are also more engaged in social media (e.g., Przybylski et al., 2013). However, a clear direction of effects is not well understood up to this point. That is, the directionality of whether people who experience higher levels of FOMO more regularly use social media more often or whether individuals who are using social media more regularly experience higher levels of FOMO is not well understood. On the one hand, individuals who experience higher FOMO more regularly might use social media to feel connected. Having a tendency of experiencing apprehension, anxiety, envy, and regret more often as well as engaging more in social comparison and counterfactual thinking might lead to more social media consumption and to different engagement in social media (e.g., more active usage like posting versus more passive usage like lurking). On the other hand, social media might provide a new window to experiences that

we miss out on and therefore lead to more FOMO. That is, when adopting a social media affordance perspective, social media affords increased visibility of (social) information. This may lead to increased experiences of apprehension, anxiety, envy, and regret as well as social comparison and counterfactual thinking, and therefore to more FOMO.

In his article about the history and manifestations of FOMO, Reagle (2015) describes FOMO as being an old concept that is prompted by the media in general. He used the phrase "keeping up with the Joneses" to explain how FOMO has been an important construct to media research for a long time. Thus, he and other researchers (e.g., Milyavskaya et al., 2018) have argued that media use and engagement is not caused by FOMO, but rather that FOMO is caused by repeated and extensive exposure to social cues, of which media offers a transparent but highly filtered picture. This highly transparent and filtered view is not necessarily a characteristic unique to social media. Advertisement and entertainment media offer an idealized view on other peoples' lives as well (e.g., in reality TV, by using spokespersons and influencers). However, social media extends the experience of FOMO from strangers (e.g., TV characters) to one's immediate social environment. In other words, instead of comparing one's experiences to the experiences of a celebrity, actor, or another person whom individuals are not closely related to or familiar with, social media now offers a view into the lives of individuals' friends and peers. Therefore, although FOMO might play a role in both types of comparisons (comparing to strangers versus comparing to friends), the FOMO experience will likely be more severe when comparing oneself to someone who is more similar to oneself. This is based on social norms literature (NORMS). That is, the type of reference group might be important when considering the experience of FOMO itself. Most research in FOMO so far focuses on effects of FOMO, which is triggered by experiences friends and peers might have and showcased via social media. Little research has been conducted investigating the roles of reference groups and closeness of the individuals one is comparing oneself to. One study (Browne et al., 2018) found no relationship between FOMO measures and celebrity worship. It is important to note here that this study did not measure the FOMO experience for entertainment content (e.g., reality TV).

Popular press and some recent academic research commonly proposes that FOMO is a concept based on the rise of social media, despite its having been around for a long time (Reagle, 2015). In fact, although recent studies revealed that FOMO is not solely a social media phenomenon (Milyavskaya et al., 2018), it is exacerbated by social media and its affordances to gain more insights into other peoples' lives. For example, seeing pictures posted on social media platforms about things a group of friends are doing might increase the negative feeling one has about being part of that group (Rifkin et al., 2015). That is, social media platforms could exacerbate social comparison behaviors and associated anxiety levels because social media users are exposed to the positive versions of their peers' and friends' lives on a daily basis. The constant monitoring of their friends' activities disrupts their feeling of well-being because social media users are more regularly exposed to missed opportunities in their professional and social lives.

Effects of FOMO

Compulsive and problematic social media and smartphone use

Although it was previously argued that (social) media and some of its affordances exacerbate the FOMO experience and its prevalence in our interconnected society, this effect might be recursive. That is, the increased visibility of (social) information afforded by (social) media leads to more intense and more regular experiences of FOMO, but experiencing FOMO, in turn, might then increase the use of social media. This leads to a pathological, problematic, and compulsive use of social media and networking-related technology, such as smartphones (problematic media use: games, phones, and internet). A substantial body of prior research has examined the correlation between compulsive smartphone and social media use and FOMO (e.g., Elhai, Levine, Dvorak, & Hall, 2016). By providing a window to other peoples' lives, social media is closely connected to social comparison and the need to belong (social comparison theory). Therefore, individuals who experience higher FOMO more regularly are more inclined to monitor their social environment via their smartphone and social media. This social monitoring may or may not develop into compulsive and problematic use. That is, FOMO might lead to the compulsive need to stay connected and to stay in the know about what others are doing and what experiences others are having. So much so that FOMO might lead to highly risky behaviors like texting and driving and in general using smartphones while driving. It may also lead to highly antisocial behaviors like phubbing or ignoring interpersonal conversations in order to monitor one's smartphone. This is due to the compulsive need of being aware of other peoples' lives, which prevents individuals from enjoying current and ongoing social interactions. It may also increase media multitasking (media multitasking) through the compulsion to use one's phone while doing other things like watching TV. Consequently, the fear of missing rewarding experiences that others are having and from which one is absent leads to problematic use of social media and networking-related technologies, in that ruminating on these events and being distracted by counterfactuals interferes with individuals' daily lives, effective functioning, and social relationships (e.g., Swan & Kendall, 2016). By not being able to hold uninterrupted conversations or enjoying events one is actually partaking in, and by ignoring potential risks to the self and others (e.g., by texting and driving), FOMO, and resulting compulsive use of social media and smartphones, may negatively affect mental or psychological health, well-being, and physiological health, which I will discuss next.

Effects on health and well-being

Besides effects on compulsive and problematic social media and smartphone use, FOMO has also been tied to a variety of effects on psychological and mental health, well-being, life satisfaction, and some physiological health outcomes. That is, specifically through the visibility of social information afforded by social media and by means of using smartphones, FOMO seems to be tightly connected to symptoms of

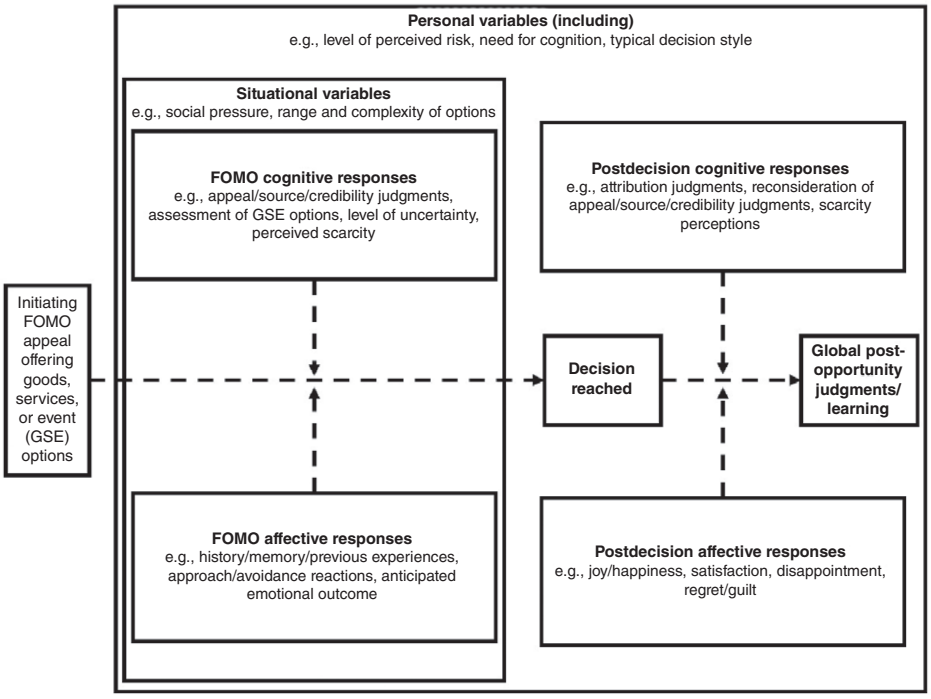

Figure 1 The FOMO response model as described by Hodkinson. Source: Hodkinson (2016, p. 24). Reproduced with permission of Taylor & Francis.

depression; decreased life satisfaction, mood, and well-being; perceived connectedness with friends and peers; and other crucial mental health outcomes (e.g., Błachnio & Przepiórka, 2018). Further, FOMO was shown to increase stress and fatigue and negatively affect healthy sleep patterns (e.g., Milyavskaya et al., 2018). In their study about college freshmen, Milyavskaya et al. (2018) found that when entering a new social environment (e.g., college), students' experiences of FOMO occurred more regularly during the weekends and further occurred more often towards the end of their first semester. Simultaneously, students in this particular study reported less sleep over the course of the semester, and experienced higher (social) stress. FOMO was not correlated with individuals' personality traits, such as extraversion, neuroticism, openness, agreeableness, and conscientiousness. Thus, the idea that FOMO might be an outcome of specific personality traits does not seem to hold. However, prior research to this point commonly agrees that the construct of FOMO, as a negative affective and cognitive experience based on social comparison, is closely related to unwanted and predominantly negative outcomes of psychological and physical health.

FOMO in marketing and advertising

When the term FOMO was coined, the popular press was considering it as a potentially powerful marketing and advertising tool. That is, since FOMO was commonly described as a motivating experience that leads to behavior, the advertising industry

identified FOMO appeals as a potential tool. With the common practice of influencer marketing on social media platforms like Instagram and Facebook, FOMO appeals seem to be prevalent strategies used. One prior research study has explicated a theoretical framework that describes the use and effectiveness of externally initiated FOMO appeals in marketing and advertising (Hodkinson, 2016). In his model (Figure 1) he describes that after a FOMO appeal has been initiated externally (e.g., by an advertisement or marketer) the way this appeal is subjectively perceived is influenced by consumers' personality characteristics, such as need for cognition (NEED FOR COGNITION), as well as situational factors, such as the availability of the product. Consumers then cognitively and affectively respond to the appeal by, for example, assessing source credibility (cognitive) and how a similar prior choice made them feel in the past (affective). These factors affect the actual decision-making process. After a decision has been made, consumers face postdecision responses, such as (dis)satisfaction with the product. This entire process then results in a learning experience that will be used for future encounters of externally initiated FOMO appeals.

For example, when an advertisement for a popular music festival posted on Instagram by an influencer, who uses appeals like "do not miss out, this is a once in a lifetime event," a FOMO appeal has been externally initiated. The decision to buy tickets then is dependent on the consumers' personal characteristics, such as sensation seeking tendency, situational factors, such as social pressure, cognitive responses, such as perceived credibility of the influencer, and affective responses, such as anticipated regret for not buying the ticket. After the decision has been made, individuals experience postdecision affective responses. For example, if the decision to buy a ticket has been made, postdecision affective responses could include regret about spending a lot of money, and postdecision cognitive responses could include reappraisal of predecision cognitive responses. However, when the decision to not buy a ticket has been made instead, individuals might experience postdecision regret and cognitive dissonance. In that, they regret not having bought a ticket and that they will not have a possibly rewarding experience their friends, who bought tickets, will now have instead. This feeling of regret might be accompanied by apprehension and anxiety when individuals imagine what they might be missing out on. Because they might hold a positive attitude toward the festival, but made the decision not to buy a ticket, they experience dissonance (COGNITIVE DISSONANCE) as a result of counterattitudinal behavior. Thus, action, as well as inaction, yields possibly negative affective and cognitive experiences.

Hodkinson (2016) also acknowledges that FOMO appeals inflict a severe cognitive load on consumers. That said, FOMO appeals need to be used with caution. The reasons for this are the negative nature of the affective component of experienced FOMO and the increased cognitive effort individuals have to invest when processing these appeals. Thus, FOMO responses seem to be very similar to fear appeals, although the effectiveness of FOMO in advertising has not been studied in depth so far. Feelings of being worse off than others, being socially excluded, and being hyperaware of experiences one misses out on, lead to rumination and negative affect, and consequently might reflect negatively on attitudes toward brands, products, and advertisements (ATTITUDES TOWARD ADVERTISEMENTS AND BRANDS).

FOMO over the life span

The older people get, the more they become aware of their mortality and begin to realize that they may be "running out of time." This realization increases their anxiety about possibly missing out on rewarding experiences. This concept is in line with terror management theory (see TERROR MANAGEMENT THEORY: MORTALITY SALIENCE). However, FOMO research has predominantly centered on young adults and adolescents. Baby boomers and the 1960s generation have to be included in the discussion, even though their triggers of FOMO might be different due to their greater number of experiences and the stage in life they are at. Broadening the scope of FOMO to include a wider age range takes a new set of experiences and life assessments into account. It is possible that the reasons for experiencing FOMO might be quite different for adolescents as compared to older adults. However, the general processes as described above (FOMO as an affective and cognitive experience) should be the same or similar for both populations. In other words, although missing out on very different things, children, adolescents, young adults, adults, and older adults experience the same set of affective and cognitive responses when they experience FOMO. For example, adolescents and young adults might fear missing out on extravagant festivals and glamorous vacations. Young adults and adults might fear missing out on career opportunities and rewarding financial investments. Older adults might fear missing out on being part of their grandchildren's lives and seeing more of the world.

SEE ALSO: Attitudes Toward Advertisements and Brands; Cognitive Dissonance; Media Multitasking; Need for Cognition; Norms; Problematic Media Use: Games, Phones, and Internet; Social Comparison Theory; Terror Management Theory: Mortality Salience

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Dominik Neumann is a doctoral student in the Department of Advertising and Public Relations at Michigan State University. He received his BSc and MSc in Management and Economics at Ruhr University Bochum, Germany. His current field of interest is effects of media on consumer behavior as well as on various health and risk behaviors. He focuses on "fear of missing out" and how this experience may impact our digital, social, health, and buying behavior. Specifically, he focuses on how FOMO appeals and messages are processed internally and what the role of social norms and perceived social exclusion are when experiencing FOMO.