Validation of Self-Determination Scale: An Experiential Consumption Perspective

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Abstract

Purpose – *Previous studies have not underscored the importance of employing a self-determination scale in the experiential marketing and consumption domain. It is thus valuable to validate such a scale to encompass the essence of the concept of self-determination and capture all the relevant conceptual meanings for the scale to be examined in a broad nomological experiential consumption framework.*

Method – *The current study follows a typical scale validation procedure. Studies 1 and 2 conduct the initial exploratory factor analysis, test model fit, and examine the convergent as well as discriminant validity of the adapted self-determination scale. Study 3 tests the nomological validity of self-determination in an experiential consumption context and establishes that self-determination mediates the relationship between fear of missing out (FoMO) and purchase intentions regarding experiential products.*

Findings – *The scale of self-determination regarding experiential consumption has been validated, and its applicability can be extended to various types of experiential products. Moreover, self-determination, particularly the autonomy and competence dimensions, mediates the relationship between FoMO and purchase intentions regarding experiential products.*

Limitations – *The average age of the participants across the three studies is 24.28 years old, which represents young generations, such as millennials, and Generation Z. Future studies can test the scale among older generations, such as Generation X and baby boomers. Another limitation is that the causal role in this relationship remains unclear. Future studies should employ an experimental design to examine the antecedent role of FoMO in relation to self-determination.*

Implications – *Managers should design experiential products that can better fulfill individuals' basic psychological needs in terms of how experiences can constructively produce feelings of fulfillment of one's personal potential and self-actualization. Marketers should also seek a good fit between consumers' experiences with products and consumers' specific types of psychological needs—specifically connected to autonomy,*

competence, and relatedness — and the fulfillment of personal goals. Based on the study results, companies have social responsibilities regarding shaping experiences that can ameliorate positive emotions. It is important for marketers to promote activities that are related to personal fulfillment to relieve individuals' feelings of FoMO, such as experiences or activities that involve feelings related to one's purpose or the meaning of life; positive emotions; and personal goals related to growth, uniqueness, self-enhancement, and self-care.

Originality – *The current paper provides a new understanding of self-determination in the context of experiential consumption through the validation of an adapted self-determination scale. The validated scale can be applied in a variety of experiential contexts to assist in the understanding of new schemes of experience production and consumption in the modern era, such as digital experiences, tourism and hospitality, sensory marketing, and collaborative buying and sharing. The contribution of the current study is twofold. First, the self-determination scale that is formed by the three dimensions of self-determination motives has been validated across three studies in terms of model fit along with convergent, discriminant, and nomological validity. Second, this study demonstrates an example of an assessment of the association between self-determination and other constructs, such as FoMO and purchase intentions regarding experiential products, in a nomological framework. The results complement previous findings that FoMO is related to low levels of fundamental need satisfaction and that self-determination can relieve the feeling of FoMO.*

Introduction

Self-determination theory is a widely employed theoretical model in various research contexts, such as marketing, organizational behavior, health psychology, education, and physiology (e.g., Wilson et al., 2008; Niemiec & Ryan, 2009; Gagne & Deci, 2005; Dholakia, 2006). In recent years, the trend of the experience economy and perceptions of experiences in consumption contexts have propelled a wave of research into the psychological mechanisms (e.g., self-determination) underlying the experiential consumption context in which individuals seek intrinsic motivations and general psychological well-being. For example, studies on a recently widely observed phenomenon of "fear of missing out" (FoMO) have utilized self-concept to describe the context in which individuals observe a gap between the self and others or their own expected psychological state and fear that they cannot consume the wonderful

experiences that others are consuming (e.g., Zhang et al., 2020). Alternatively, individuals' cravings for leisure and experiential consumption reflect a trend of a shift in attention away from the consumption of physical goods to that of experiences instead (Scott et al., 2013). Consumers are considering not only the functional or practical benefits of products, services, or experiences but also how these things relate to self-identity and self-determination (e.g., Schembri et al., 2010). Generation Z, for example, appears to be concerned with how individuals can present themselves and realize optimal self-image through consuming digital experiences (Bassiouni et al., 2014) and tourism experiences (Robinson & Schanzel, 2019).

However, previous studies have not underscored the importance of employing a self-determination scale in the experiential marketing and consumption domain as most of the previous studies have emphasized empirically investigating the effect of the construct in a grand nomological framework based on the relationship between self-determination and outcome constructs. It is, however, valuable to validate such a scale to capture the essence of the construct and encompass all the relevant conceptual meanings so that the scale can be further examined in relation to consumers' purchase intentions regarding experiential products. To achieve this research goal, the present study is composed of the following three parts: the first concerns the conceptualization of the self-determination construct in the experiential consumption context in terms of how experiential consumption involves motivational drivers and how three dimensions of self-determination are integral to understanding the actual consuming process of experiential products for personal psychological gratification and well-being. The second part, which is composed of studies 1 and 2, conducts the initial exploratory factor analysis (EFA), tests model fit and examines the convergent as well as discriminant validity of the adapted self-determination scale. The third part, study 3, tests the nomological validity of self-determination in an experiential consumption context and supported the notion that self-determination mediates the relationship between FoMO and intention regarding purchasing an experience.

The contribution of the current study is twofold. First, the self-determination scale that is formed by the three dimensions of self-determination motives (autonomy, competence, and relatedness) has been validated across three studies in terms of model fit along with convergent, discriminant, and nomological validity. Particularly, the validated scale can be applied in a variety of experiential contexts to assist in the understanding of new schemes of experience production and consumption in the modern era, such as digital experiences, tourism and hospitality, sensory marketing, and collaborative buying and sharing. Secondly, as the scale implies the motivational facets of self-identity and self-enhancement in exploring experiences, this study demonstrates an example of an assessment of the association between self-determination and other constructs, such as FoMO and purchase intentions regarding experiential products, in a nomological framework. The results complement previous findings that FoMO is related to unsatisfied fundamental psychological needs

(Przybylski et al., 2013) and the discrepancy between an individual's current state and expected state (Zhang et al., 2020).

Literature Review

Self-Concept and Experiential Consumption

Self-concept reflects how individuals perceive themselves with respect to their mental and physical characteristics (Lawrence, 2006). Self-concept is crucial to human beings because individuals carry around a mental picture of who they are, what ideals they would like to meet, how distinctive they are from others, and so on (e.g., Epstein, 1973; Oyserman et al., 2012). To enhance their perception of self, individuals are motivated to consume products that are coherent with their current or expected self and social identities (Malhotra, 1988; Tian & Belk, 2005). For example, individuals have preferences for certain brands because those brands fit into their existing beliefs regarding self-enhancement and assist consumers in developing a positive image of themselves (Graeff, 1997). Marketers, for their part, create products that have a consistently great fit with consumers' self-identity or self-image in order to satisfy those consumers (Hoyer et al., 2016). An illustrated example can be found in an individual who is motivated to purchase a luxury item as the associated luxury brand matches their personality and becomes part of their "extended self." This self-congruence or self-match is widely discussed in the previous literature (e.g., Jamal & Goode, 2001; Jacob et al., 2020; Su & Reynolds, 2017).

Furthermore, previous studies have suggested that experiences, by their distinctively personalized and hedonic nature, are more likely to be identified as ways of enhancing individuals' self-concept (e.g., Gazley & Watling, 2015; Woodruffe-Burton & Wakenshaw, 2011). Experience-related products embody intrinsically meaningful, emotional, and aesthetic values (Tsai & Wang, 2017) that can form consumers' perspectives of their identities through interactivities between experiential products and themselves (Perez & Bosque, 2015). More importantly, the experiential aspects within the product purchases and usages promote an individual's values of self-growth (Knobloch et al., 2017) as well as self-determination when the individual is integrating a concrete and memorable experience into their own identity. This process is well explained by self-determination theory, which links individuals' self-concept with their internal motivations, as discussed below.

Role of Self-determination in Shaping Experiential Marketing

Previous studies have suggested that to realize intrinsic motivations and consumer happiness, individuals tend to seek out experiences that aim to facilitate self-determination needs (Guevarra & Howell, 2015). This point of view is underpinned by

the self-determination theory proposed by Deci and Ryan (1985). Self-determination theory proposes that the basic psychological needs, competence, autonomy, and relatedness, support an individual's optimal self-functioning as well as psychological satisfaction and growth (Deci & Ryan, 1985, 2013). As discussed before, individuals are prone to setting goals to achieve their ideal selves when they are aware of the gap between their actual selves and ideal selves (Malhotra, 1988; Tian & Belk, 2005). In this regard, the ideal self can serve as an essential goal that individuals strive to attain to maintain their optimal psychological well-being and self-functioning; and this perception is closely aligned with self-determination motives, as self-determination enables individuals to take actions toward the attainment of self-directed goals (Agran et al., 2000). Essentially, to act in a self-determining manner involves expressing one's inner thoughts, interests, preferences, and values, which constitute an individual's self-perception or identity in response to their constantly changing surroundings (e.g., Deci and Ryan 2013, Rodgers and Scott 2008). Furthermore, previous studies have argued that the self-concept consists of an amalgam of roles that include thoughts, personalities, needs, etc. (e.g., Acevedo 2018, Phau and Lo 2004), which implies that the underlying psychological needs are fundamental to the self-concept. Therefore, in order to investigate how individual self-concept relates to various psychological needs and subsequent consumption patterns, self-determination theory is employed to provide a theoretical basis for understanding. Based on self-determination theory, three psychological needs are particularly relevant for consideration: autonomy, competence, and relatedness (Deci & Ryan, 1985, 2013). Among the three psychological needs, autonomy is defined as one's capability of controlling or taking charge of one's own actions toward goals, competence refers to the active control of the performance of the task that is related to one's goal, and relatedness is a social need that links oneself with others (Deci & Ryan, 2012).

The intrinsic motivations underpinning experiential consumption led to greater satisfaction and positive emotions (e.g., Gilovich et al., 2015; Milman & Tasci, 2018). Previous studies have suggested that products or brands that individuals perceive as satisfying their autonomy, competence, and relatedness needs are associated with positive market outcomes, such as higher purchase intentions (Guevarra & Howell, 2015) and persuasion (Blair 2021). Even in an online shopping or social media environment, brands, and products can achieve positive results provided they satisfy the self-determination needs of consumers (Ki et al. 2020, Gao et al. 2018). Within the context of experiential consumption, specifically, experiences involving engagement physically and mentally provide opportunities for self-growth, especially when those experiences can satisfy individuals' self-determination needs (Buzinde, 2020). In the present study, within the experiential consumption domain, autonomy is further defined as the capability to be responsible for consuming one's own experiences, including, for example, deciding which experiences to consume, and maintaining responsibility for the progress of the experiences consumed, etc. To put it another way, experiential consumption can become a space in which individuals are in charge of the

hedonic, fun, or emotional experiences of their own choice to satisfy their intrinsic autonomy needs. Competence is referred to as the capability to successfully undertake experiential consumption tasks to achieve certain personal goals or outcomes. To further explain, competence motivates individuals to engage in challenging experiences and to persevere at them until their goals are achieved. Relatedness, in contrast, is defined as a need to be socially connected with others during the process of consuming experiences. Particularly, the experience of belonging to one's social group when engaging in experiential activities tends to be enhanced when individuals feel connected with significant others. Interestingly enough, these three fundamental psychological needs relate to the concept of relationality and optimization whereby personal and social needs contribute to an individual's sense of self and the capacity to adapt to a constantly changing environment (Ryan and Guardia 2000), and in this case, changing experiences and consumption activities related to these experiences. Consequently, the theoretical basis of the self-determination construct has been developed, and this construct as well as its three components, autonomy, competence, and relatedness, will be examined empirically in the research methodology section.

Research Methodology

Study 1

The purpose of Study 1 is to initially validate the self-determination scale. The scale was adapted from the three-factor self-determination scale developed by Vlachopoulos and Michailidou (2006). Because the original scale was used to determine the basic psychological needs in an exercise and health context, its validation in experiential consumption remains unknown. The adaptation of the scale was based on a close analysis of the items that the relevance of the experiential consumption context defines. Each dimension of self-determination was assured to represent the meaning and the definition of self-determination and its three aspects, as discussed in the previous section. The set of scale items in an adapted version for each dimension was then generated. Each dimension equally has four items that were rated on a seven-point Likert scale, from 1—"strongly disagree" to 7—"strongly agree."

The sample included two hundred and nine American adults (104 females and 105 males; average age = 23.7 years) and was collected from a Qualtrics data panel, a provider of consumer panels in the United States. The questionnaire contains all three dimensions of the adapted scale items mentioned above. After reading the questionnaire instructions, the participants were asked to read each item statement of the scale and rate the item based on the extent to which they agree or disagree that the item describes themselves.

Data Analysis and Results

The data were initially analyzed with EFA. The extraction method of principal component analysis and the Oblimin Rotation Method was selected. The EFA results are shown in Tables 1 and 2. Particularly, Table 1 shows the four items retained as the dimension termed "autonomy," four items retained as the dimension termed "competence," and four items retained as the dimension termed "relatedness." The three factors or dimensions accounted for 77.38% of the variance, as shown in Table 2. The eigenvalue of each dimension is greater than 1. The above confirms the existence of a three-dimensional dimension of the self-determination construct.

The reliability of the construct was assessed using Cronbach's alpha. In the further analysis, Cronbach's alpha and item-to-total correlation coefficient were reported for each item, as shown in Table 3. The Cronbach's alpha of each factor was above .85, which indicates high reliability and internal consistency. The item-to-total correlation coefficients were calculated for all the items of each factor, and the results yielded an excellent level of internal consistency of measures for all the factors.

Table 1: Initial EFA Factor Loadings of the Three Dimensions of the Self-determination Scale in Study 1

Items	Factors			Mean	SD
	1	2	3		
Self Determination - Autonomy					
A1 The experiences I want to consume is highly compatible with my choices and interests	0.81			5.54	1.25
A2 I feel very strongly that the way I consume experiences fits perfectly the way I prefer to do	0.90			5.29	1.16
A3 I feel that the way I consume experiences I definitely an expression of myself	0.86			5.34	1.23
A4 I feel very strongly that I have the oppourtnity to make choices with respect to what I experiences I want to consume	0.77			5.41	1.23
Self Determination - Competence					
C1 I feel I have been making a huge progress towards my experiential goals		0.85		4.92	1.36
C2 I feel that I execute very effectively the experiences I want to gain to approach the goals of gaining experiences		0.87		5.05	1.32
C3 I feel that consuming experiences are activities I do very well		0.72		4.86	1.33
C4 I feel that I can manage experiential consumption to approach experiential goals		0.68		4.87	1.29
Self Determination - Relatedness					
R1 I feel extremely comfortable when consuming experiences with my social groups			0.90	5.17	1.40
R2 I feel that I associate wht my social groups in a very friendly way when I consume experiences			0.89	5.15	1.38
R3 I feel there are open channels of communication with my social groups when consuming experiences			0.85	5.21	1.25
R4 I feel very much at ease with my social groups when consuming experiences			0.82	5.22	1.41

Table 2: Summary of the EFA in Study 1—Variance Explained

Component	Total	Variance (%)	Cumulative(%)
Initial Eigenvalues			
1	6.51	54.31	54.31
2	1.59	67.57	67.57
3	1.18	77.38	77.38
4	0.54	81.85	81.84
5	0.44	86.52	85.52
6	0.34	88.36	88.36
7	0.31	90.92	90.92
8	0.28	93.22	93.22
9	0.24	95.19	95.19
10	0.22	96.98	96.98
Extraction Sums of Squared Loadings			
1	6.52	54.31	54.31
2	1.59	67.57	67.57
3	1.18	77.38	77.38

Table 3: Reliability Analysis of Study 1—Item-to-total Correlation of the Items and Cronbach's Alpha

Items	Item-to-total Correlation	Cronbach's alpha
Autonomy		0.891
A1	0.862	
A2	0.897	
A3	0.871	
A4	0.844	
Competence		0.860
C1	0.824	
C2	0.877	
C3	0.841	
C4	0.815	
Relatedness		0.929
R1	0.915	
R2	0.924	
R3	0.883	
R4	0.913	

To further confirm the three-dimensional structure and test the model fit, the scale was examined using confirmatory factor analysis (CFA). The results confirmed the initial results of EFA and showed good model fit of the three-dimensional construct (χ2 = 138.454; degrees of freedom [df] = 51; $p < 0.001$; Tucker–Lewis index [TLI] = 0.937; comparative fit index [CFI] = 0.951; normed fit index [NFI] = 0.925; goodness of fit index [GFI] = 0.891) (Kenny, 2015).

Study 2

The purpose of study 2 is to evaluate the convergent validity and discriminant validity of the self-determination scale. The data were again collected using a Qualtrics data panel, a provider of consumer panels in the United States. A total of one hundred and thirty-six participants (American adults; 80 females and 56 males; average age = 24.38) were included in the study. After reading the instructions of the survey, participants were asked to evaluate the self-determination scale on a seven-point Likert scale, from 1—"strongly disagree" to 7—"strongly agree," as previously in study 1.

Data Analysis and Results

To test convergent validity, the composite reliability (CR) of the whole construct as well as its three dimensions were calculated, as shown in Table 4. The results showed that a value of 0.961 for the entire construct yielded a high level of convergent validity, which is above the recommended 0.80 threshold (Fornell & Larcker, 1981). The CR value of each dimension was also above the 0.80 thresholds, which supported high convergent validity. Furthermore, a second test of convergent validity involves the calculation of average variance extracted (AVE) value. As Table 4 shows, the AVE values for the whole construct and all three dimensions are above the 0.50 threshold, which also provides evidence to support a strong convergent validity. Furthermore, the correlation results in Table 6 indicated that the construct self-determination is highly correlated to its three dimensions, autonomy (Pearson correlation coefficient = .790, $p < .01$), competence (Pearson correlation coefficient = .866, $p < .01$), and relatedness (Pearson correlation coefficient = .833, $p < .01$), meaning that the construct has strong convergent validity.

Table 4: The Composite Reliability (CR) and Average Variance Extracted (AVE) of the Self-determination Construct and Its Three Dimensions

Construct	Item	Factor Loadings	t	Composite Reliability	Average Variance Extracted
Self Determination				0.961	0.672
Dimension 1-Autonomy				0.873	0.633
	A1	0.846	57.404		
	A2	0.861	59.317		
	A3	0.744	50.892		
	A4	0.722	59.270		
Dimension 2-Competence				0.878	0.641
	C1	0.739	48.132		
	C2	0.809	48.276		
	C3	0.839	44.695		
	C4	0.813	45.400		
Dimension 3-Relatedness				0.919	0.741
	R1	0.798	42.893		
	R2	0.899	43.380		
	R3	0.847	47.551		
	R4	0.895	41.591		

Discriminant validity was tested by comparing the self-determination scale and the scale of another construct, existential insecurity, in the measurement model. Existential insecurity refers to anxiety engendered by the awareness of one's mortality (Rindfleisch et al., 2009). The threatening image of existential insecurity is well explained by terror management theory (Greenberg & Arndt, 2011), which posits that self-protection or self-preservation, as the fundamental human condition, can be triggered in response to the awareness of one's own mortality. In essence, existential insecurity manifests the notion of a self-ameliorating mechanism to buffer the threat of existential insecurity and to enhance the individual's self-image. (Alicke & Sedikides, 2011). Previous studies have proposed that to protect themselves from existential insecurity, individuals exhibit the behavior of a strong self-brand connection and a higher intention of materialistic purchases (Rindfleisch et al., 2009), which supports the view that both self-determination and existential insecurity reflect individuals' perspectives of self-value and self-image for satisfying their intrinsic needs. Thus self-determination and existential insecurity are similar but distinctive constructs that can be examined for their discriminant validity.

Table 6: Discriminant Validity Assessment of Self-determination, Its Three Dimensions, and Existential Insecurity

Items	1	2	3	4	5
1. Self Determination	-				
2. Self Determination - Autonomy	0.790**[-0.725, 0.944]	-			
3 Self Determination - Competence	0.866**[0.929, 1.131]	0.603**[0.416, 0.656]	-		
4 Self Determination - Relatedness	0.833**[1.007, 1.263]	0.437**[0.221, 0.457]	0.565**[0.371, 0.615]	-	
5 Existential Insecurity	0.079[-0.043, 0.118]	-0.025[-0.098, 0.073]	0.143[-0.014, 0.176]	0.068[-0.066, 0.155]	-

Note: ** $p < .01$

To evaluate existential insecurity, participants were also asked to what extent they agree or disagree with the statements regarding an existential insecurity scale, such as "The very idea that my entire personality will disappear forever with my death appalls me"; "The idea that my body will disappear after my death disturbs me." The whole scale of existential insecurity is cited from Wittkowski's (2001) MODDI-F inventory. To test discriminant validity, EFA was conducted to elicit the factor loadings of autonomy, competence, relatedness, and another construct, existential insecurity. The EFA factor structure among the items showed that the items that are theoretically belonging to the construct were loaded more highly on their own respective construct than the other construct, as shown in Table 5. Furthermore, discriminant validity was also tested by a comparison between the square root of the AVE of self-determination and the corresponding squared correlation estimates between self-determination and existential insecurity (Fornell & Larcker, 1981). The results showed that the AVE value for the whole construct and the values for the three dimensions are all higher than the corresponding squared correlation estimates between self-determination and existential insecurity as well as the three dimensions and existential insecurity. To further validate discriminant validity, the confidence intervals around the estimates of the correlation between self-determination and existential insecurity as well as the correlation between the three dimensions and existential insecurity were calculated, and the results showed that the confidence intervals of the correlation coefficients did not include one, as shown in Table 6. The correlation results also indicated that the construct self-determination and its three dimensions are not correlated with existential insecurity, indicated by the insignificant p values. It can therefore be concluded that the construct possesses good discriminant validity.

Study 3

The purpose of Study 3 is to evaluate the nomological validity (e.g., Bearden and Netemeyer 1999) of the self-determination scale in an experiential consumption-related framework. The assessment of nomological validity requires that the construct be put in a nomological framework that is theoretically and empirically expected to be related to other constructs of researchers' interest. In this study, self-determination is expected to be tested in a hypothesized relationship between FoMO and purchase intentions regarding experiential products.

The phenomenon of FoMO has become of increasing interest in recent years, particularly as it relates to the young generations (millennials, Generation Z, etc.). Self-determination provides a solid theoretical ground for understanding this phenomenon with respect to its explanation of the motivation and social development underlying the situation in which individuals are reluctant to miss out on news, experiences, information, and so on (e.g., Przybylski et al., 2013; Zhang et al., 2020). Particularly, individuals who have a high level of FoMO are usually unhappy with their self-

regulation in terms of competence and autonomy as well as relatedness needs, and the actions of keeping up with a trend, information, or news are considered to be self-regulation tools to satisfy self-determination needs (Przybylski et al., 2013). Furthermore, the deficit in self-determination needs reflects a self-perceived gap between the current self and the expected self (Zhang et al., 2020). It can thus be predicted that the actions that resolve the psychological needs can relieve the symptoms of FoMO in a self-discrepancy setting.

The relationship between self-determination and FoMO has not been well studied and examined in an empirical test in the experiential consumption domain. Though previous studies have supported the notion that FoMO and self-determination are linked to brand, and social media engagement (e.g., Elhai et al., 2018), whether an individual has intrinsic motivation for consuming or purchasing experiences on account of high FoMO and strong motivation for fulfilling psychological needs remains unknown. This study proposes that experiences in which consumers are involved during experiential purchases will fulfill their psychological needs and enhance their self-concept. In other words, individuals engage in experiential consumption to fill the gap between their current self and expected self in an unsatisfied need situation such as FoMO. Thus it is hypothesized that

Hypothesis: Self-determination mediates the relationship between FoMO and experiential consumption.

A data sample of one hundred and forty-three American adults was collected from a Qualtrics data panel (69 females and 74 males; average age = 24.75 years). Participants were asked to rate the FoMO scale and the self-determination scale. The FoMO scale was taken from the two-dimensional scale (personal and social) of Zhang et al. (2020). Specifically, participants were asked to rate the extent to which they agree with nine statements, such as "I believe I am falling behind compared with others when I miss events or opportunities"; "I think I am excluded by my social groups when I miss events or opportunities." Additionally, the same self-determination scale with three dimensions used in the previous studies was adopted.

Moreover, participants were asked to evaluate a scenario in which they imagined that their birthdays were coming up and that they decided to purchase a gift for themselves. Then, participants were told that because of budget limitations, they could choose to purchase a short trip that they could go on with their families or a physical product for themselves. Then they were asked to evaluate their purchase intentions regarding the short trip or the physical product. For the purchase intention of the short trip, they were asked to what extent they considered the statement, "How likely are you to consider purchasing this short trip?" on a seven-point Likert scale, from 1—"very

unlikely/definitely not intend to/impossible" to 7—"very likely/definitely intend to/possible." For the purchase intention of the physical product, they were asked to what extent they considered the statement, "How likely are you to consider purchasing a physical product for yourself?" on a seven-point Likert scale, from 1—"very unlikely/definitely not intend to/impossible" to 7—"very likely/definitely intend to/possible."

Data Analysis and Results

A mediation analysis was conducted following the procedure introduced by Hayes, A. F. (2012). A conceptual model of the mediation analysis is shown in Figure 1, in which self-determination is theoretically hypothesized as the mediator between FoMO and purchase intention regarding an experience (and in this study, the short trip).

Figure 1: Mediation Model for Study 3
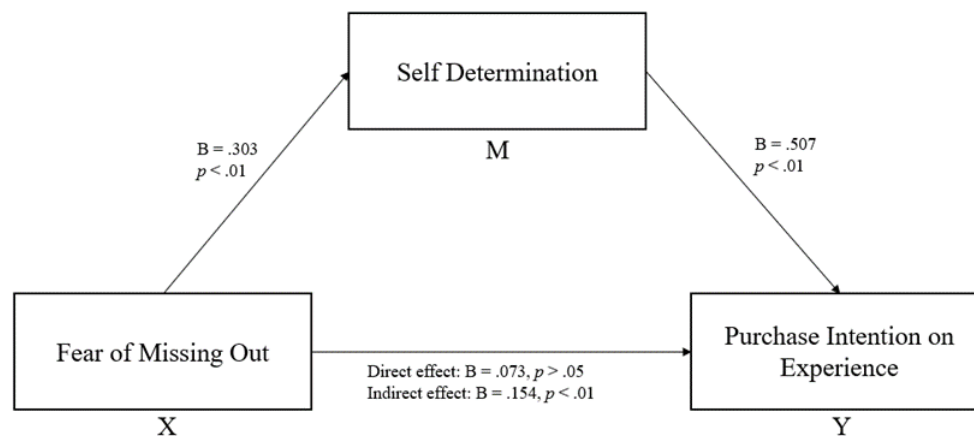
Thus mediation results showed that when entering purchase intention regarding experiences (the short trip) as the dependent variable, self-determination as the mediator and FoMO as the independent variable, the total effect of the model was significant (B = .227, p <.05), with the bootstrap CI between .0466 and .4072. The indirect effect model was also significant (B = .154), with the bootstrap CI between .050 and .064. Furthermore, the complete standardized indirect effect of self-determination on purchase intention regarding experience showed a significant level, with the bootstrap CI between .051 and .239, which indicated a complete mediation role of self-determination between the relationship of FoMO and purchase intention regarding experiences. Clearly, the result of the above analysis supports the hypothesis that self-determination plays a mediating role in the relationship between FoMO and experiential consumption. Furthermore, as empirical confirmation of the theoretical relationships between constructs is a sign of nomological validity (e.g., Bearden and Netemeyer 1999), the nomological validity of self-determination has been supported.

The source of the mediation was further tested when entering purchase intention regarding experiences (short trip) as the dependent variable, FoMO as the independent variable, and each dimension of the self-determination construct as the mediator, respectively. The results showed that when autonomy functioned as the mediator in the model, both total effect (B = .227, p < .05, bootstrap CI between .047 and .407) and indirect effect (B = .145, bootstrap CI between .054 and .246) were significant. The completely standardized indirect effect of autonomy on purchase intention regarding experiences is also significant (B = .131, bootstrap CI between .047 and .229), which indicated a complete indirect effect. The same effect occurred when competence was the mediator in the model, with the total effect (B = .227, p <.05, bootstrap CI between .047 and .407), indirect effect (B = .126, bootstrap CI between .063 and .235), and completely standardized indirect effect (B = .114, bootstrap CI between .038 and .213) all significant. However, when relatedness worked as the mediator, the effect was not significant. The results only showed a significant direct effect of FoMO on purchase intention regarding experiences (B = .308, p < .05). The above results showed that the source of the mediation effect comes from the autonomy and competence dimensions of self-determination. This is consistent with previous studies finding that experiential consumption was intrinsically motivated and more related to individuals' personal goals rather than social goals (Guevarra & Howell, 2015).

The mediation effect was also tested when purchase intention regarding physical goods (the physical gift for self) was the dependent variable, self-determination was the mediator, and FoMO was the independent variable. The results showed that neither the total effect, the indirect effect, nor the direct effect was significant, which indicated that both the FoMO and the self-determination constructs fit well in the experiential consumption context rather than the physical consumption context. The adapted scale of self-determination is best applied in experiential consumption settings.

Study 4

Considering the recent trend of consuming online experiences, it may be worth investigating whether self-determination motives can be applied in the context of digital experiences (e.g., Guo et al. 2021). For the purpose of exploring consumers' feelings regarding their digital experiences and the underlying self-determination motivations, this study will utilize online reviews, as the previous studies suggested that online reviews can be used to identify users' experiences and their links to service offerings and are considered to be valuable information that can assist prospective consumers in determining which experiences they may enjoy and what experiences they would like to enroll in (e.g., Chen and Chang 2018, Ju et al. 2019). The online review data was gathered from hundreds of public reviews posted on Airbnb.com, as previous studies have indicated that downloading public reviews or posts do not qualify as research involving human subjects (e.g., Cheng and Jin 2019, Kozinets 2010, Hookway 2008). Specifically, a manual collection of data was conducted in August 2022

using reviews of three types of popular digital experiences posted on Airbnb's website, including a magical show, a digital travel tour, and an instructional cooking class. The above three types of digital experiences were selected because of the following reasons: 1) the strength or impact of the three dimensions of self-determination varies according to the experience type of category; for example, taking a digital tour of the world may be considered more autonomous, while demonstrating cooking is considered more competence-building, and digital shows can be utilized to enhance relatedness among a group of individuals; 2) various types of digital experiences were considered in order to avoid biases in favor of one or more dimensions of self-determination, particularly if certain aspects of the self-determination motives are correlated with specific forms of digital experiences. For each experience, approximately 150-200 reviews were collected. These reviews were posted by users on the Airbnb website between June 2021 and August 2022. The reviews were chosen randomly in order to ensure that the sample reflects the overall opinion of digital experiences. Table 7 illustrates the details regarding how many reviews were collected for each digital experience and the average number of words included in each review.

Table 7: The Overall Information Gathered from the Airbnb Reviews

Type of Digital Experience	Number of the Reviews Collected	Average Number of Words for Each Review
Magic Show	163	45.11
Digital Travel Tour	193	46.46
Cooking Class	172	42.06

In the next step, the data were analyzed using software called Linguistic Inquiry and Word Count (Pennebaker et al. 2007) which analyzes words within a text and determines the percentage of those words that are found in the selected dictionaries. It was determined that two dictionaries were used: LIWC 22 Dictionary (English) for words related to "affiliation", "achieve", and "power" and self-determination and self-talk dictionary (Oliver et al. 2008) which includes terms related to "autonomous" and "controlling". Based on a comparison between the text and the related terms in the dictionary, the percentage of the words that appeared in each review was then determined, and the total scores was generated automatically as a result of the calculation of the percentages of the related texts in all the reviews. Table 8 presents information on how the word categories were used to measure the three dimensions of self-determination, along with the total score resulting from the word comparison for each digital experience.

Table 8: Information on the Usage of the Word Categories and the Sum Score Resulting from the Word Comparison

Type of Digital Experience	Self-Determination Dimension	Word Dictionary	Key Category in the Dictionary	Total Score
Magic Show				
	Autonomy	Self-Determination and Self Talk Dictionary	Autonomous	0.35
		Self-Determination and Self Talk Dictionary	Controlling	0.31
	Competence	LIWC 22 Dictionary	Achieve	1.77
		LIWC 22 Dictionary	Power	0.17
	Relatedness	LIWC 22 Dictionary	Affiliation	5.90
Digital Travel Tour				
	Autonomy	Self-Determination and Self Talk Dictionary	Autonomous	0.35
		Self-Determination and Self Talk Dictionary	Controlling	0.31
	Competence	LIWC 22 Dictionary	Achieve	1.13
		LIWC 22 Dictionary	Power	0.43
	Relatedness	LIWC 22 Dictionary	Affiliation	3.44
Cooking Class				
	Autonomy	Self-Determination and Self Talk Dictionary	Autonomous	0.38
		Self-Determination and Self Talk Dictionary	Controlling	0.76
	Competence	LIWC 22 Dictionary	Achieve	1.27
		LIWC 22 Dictionary	Power	0.34
	Relatedness	LIWC 22 Dictionary	Affiliation	5.12

In the following step, an ANOVA analysis was conducted in order to determine how the independent variable, which is the type of the digital experience, affect the dependent variables, which are the measures of self-determination motives. The ANOVA results with p-values of the dependent measures are shown in Table 9.

Table 9: ANOVA Results: Mean Value, Standard Deviation, and Significance Level

Dependent Variable	Independent Variable	Mean	Std. Deviation	Sig. Level
Affiliation				$p < .05$
	Magic Show	5.90	4.61	
	Digital Tour	3.43	3.83	
	Cooking Class	5.12	4.05	
Power				$p < .05$
	Magic Show	0.17	0.63	
	Digital Tour	0.43	1.00	
	Cooking Class	0.34	0.95	
Autonomy				$p > .1$
	Magic Show	0.23	0.74	
	Digital Tour	0.35	0.93	
	Cooking Class	0.38	1.14	
Achievement				$p < .05$
	Magic Show	1.77	4.61	
	Digital Tour	1.13	3.83	
	Cooking Class	1.27	4.05	
Controlling				$p < .05$
	Magic Show	0.64	4.61	
	Digital Tour	0.30	3.83	
	Cooking Class	0.76	4.05	

It is evident from the results that satisfaction with relatedness needs differs significantly across various types of experiences. In particular, the magic show (M = 5.90, p < .05) has been found to be the most effective in satisfying relatedness needs. It may be attributed to the nature of the magic show, which is intended for entertainment purposes and enjoyed by a broad range of social groups. The digital tour (M = 3.43), on the other hand, satisfies the lowest level of relatedness needs since it provides a more

experiential means of obtaining personal pleasures and hedonic benefits. There are no significant differences regarding autonomy among the three types of digital experiences (p > .1). In terms of competence, the results are mixed: when measured by the dimension of power, the digital tour fulfills the highest competence needs (M = .43, p < .05); when viewed from the perspective of achievement, the magic show scores the highest (M = 1.77, p < .05); when reflected by the dimension of control, the cooking class is rated highest (M = .76, p < .05). Considering that self-determination dictionary (Oliver et al. 2008) states that the controlling dimension is most representative of competence, controlling is the primary factor considered in determining competence. Accordingly, the cooking class meets the highest competence needs, which is in agreement with the definition and concept of competence, in that it represents an ability to perform tasks in order to acquire and promote certain skills. On the basis of the above results, it can be concluded that self-determination can also be achieved through the consumption of digital experiences. It is important to note, however, that the degree to which self-determination needs can be satisfied is determined by the types of experiences one has encountered.

Results and Discussion

The scale of self-determination in an experiential consumption context has been validated in the present study, and its applicability should be extended to various types of experiential products. The adapted self-determination scale is especially useful when researchers would like to explore consumers' perceptions of how experiences fulfill fundamental psychological needs and complete individuals' self-fulfillment and self-identity. It is valuable to apply the self-determination scale in the experiential domain because, consistent with previous studies (e.g., Guevarra & Howell, 2015), experiences can effectively satisfy psychological needs such as autonomy and competence and lead to positive well-being outcomes. The self-determination scale in this study can also assist both researchers and practitioners in understanding how experiences can be designed and created for the development of personal well-being.

Generally, self-determination needs, particularly autonomy, and competence, are met through the intrinsic stimulants of the product or services, so the fulfillment of the autonomy or competence needs should predict a better success rate and more positive customer feedback regarding an experiential product. Additionally, the relationship between self-determination and FoMO has been validated in the current study. Supporting the findings of Zhang et al. (2020), the role of self-determination in resolving feelings of FoMO relies on the personal aspects of the self-concept, which are autonomy and competence rather than relatedness. Though previous studies have supported the social needs of individuals and their effect on consumer well-being and have argued that the initiation of FoMO is from a social comparison of "do not want to miss out when others are able to do" (Przybylski et al., 2013), this study supports a different view of FoMO: FoMO is related to personal goals of achievement when an individual

observes a self-discrepancy, and self-determination-oriented activities reflect individuals' needs for experiences that are related to personal goals. Accordingly, it is effective for businesses to promote activities that are related to personal fulfillment to relieve individuals' feelings of FoMO, such as experiences or activities that involve feelings related to one's purpose or the meaning of life; positive emotions; and personal goals of growth, uniqueness, self-enhancement, and self-care. According to the present study, experiences associated with autonomy and competence needs that can improve individuals' understanding of their personal goals would lead to higher purchase intentions and potentially other market outcomes.

Managerial Implications

It has been discussed previously that experiences are capable of satisfying psychological needs such as autonomy and competence and leading to positive outcomes associated with well-being. One implication for managers, in this regard, is to design experiential products that can better fulfill individuals' basic psychological needs in terms of how experiences can constructively produce feelings of fulfilling one's personal potential and self-actualization. Marketers should also seek a good fit between consumers' experiences with products and consumers' specific types of psychological needs—specifically connected to autonomy, competence, and relatedness—and personal goals and the fulfillment of these. A further consideration is that certain types of experiential consumption, such as luxurious experiential purchases, have the potential to be influenced by self-determination. As previous studies have shown that perceptions of desirability have a stronger influence on outcomes of luxury consumption (Kuo and Nagasawa 2020), managers may want to elucidate consumers' psychological needs and self-determination in advertising campaigns in order to enhance their perception of desirability and the corresponding marketing results. In addition, marketers should deliver enhanced experiences in an effort to provide the brand experiences that are consistent with consumers' current or expected self-image so that consumers create positive feelings during their experience encounters; the value of products or services should emphasize the enhancement of autonomy and competence goals in the consumer experience co-creation process and consumers with strong autonomy and competence should be given the opportunity to participate in the creation of their own experiences; an individual with a strong need for autonomy should be provided with the most complete information regarding all options and the potential implications of their purchase decisions on experiential products.

The current study suggests that self-determination plays an essential role in consumers' purchase intentions regarding experiences as experiences impact consumer emotions. To increase consumers' interest and engagement in experiences and related behavioral intentions, companies need to specifically shape the autonomy or competence aspect of experiences that can ameliorate positive emotions. To date, most research on FoMO and certain purchase tendencies, such as impulsive buying, have

been examined solely from the perspective of negative emotions (Parsad et al. 2019, Aydin et al. 2021, Celik et al. 2019). A self-determination behavior may relieve feelings of FoMO during experiential consumption, decrease negative emotions while increasing positive emotions, and therefore improve certain negative purchasing habits such as impulsive purchases. While the underlying psychological factors are likely to differ from consumer to consumer based on their values, needs, preferences, etc. brands and products should be designed based on a thorough understanding of consumers' intrinsic personal and social needs. For example, to increase the experiential engagement of customers, marketers can personalize or customize the experiences to fulfill customers' emotional needs for personal achievement; marketing practices should focus on the promotion of the autonomy- or competence-related benefits and how these benefits can relieve emotional stress and disturbance in product appeals, especially when products have a high concentration of experiential content.

Furthermore, as consumers place a greater emphasis on experiential consumption in an online environment, marketers should pay attention to how self-concept and self-determination affect consumers' behavior when consuming digital experiences. Supporting the conclusion that self-determination can be met through the consumption of online experiences in the current study, previous studies have demonstrated that marketing strategies for experiential consumption can be applied within the context of digital marketing environments (e.g., Sülük and Aydin 2019, Schmitt and Zarantonello 2013); therefore, there are several marketing strategies marketers can apply based on the current study and previous findings. For example, taking into consideration the service features of experiential products, it would be important for marketers to enhance reliability and responsiveness to meet the autonomy and competence needs and interactive features to meet the relatedness needs, thereby resulting in a more positive consumer experience; as consumers' purchase intentions are always influenced by the availability of online experiences, marketers need to focus on inciting purchase intentions by offering a wide range of alternatives to consumers who have a high degree of autonomy; changing marketing concepts from product-centrism to experience-driven in a digital environment may even be more necessary in order to provide a consistent level of consumer experience and improve consumer satisfaction, and so on.

Limitations and Future Research

The present study focuses on validating a self-determination scale in an experiential consumption setting and demonstrates the strong reliability and validity of the scale in relation to experiential consumption constructs such as purchase intentions regarding experiences. In future studies, this scale can be further extended to be tested in other experiential contexts, such as gaming, hospitality, and e-services. This study provides a good example of adjusting the scale in a general experiential consumption

setting so it can be used in various service- or experience-oriented industries without further adjustment.

The present study adopted three samples from Qualtrics data panels. Though previous studies have suggested that the representativeness is fair when the samples are taken from crowdsourcing websites such as Amazon's Mturk or Qualtrics panels (Thomas & Clifford, 2017), the average age of the participants across the three studies is 24.28 years old, which represents young generations, such as millennials and Generation Z. Future studies can test the scale among older generations, such as Generation X and baby boomers, and evaluate whether the validity of the scale still holds. Furthermore, when participants recruited from Qualtrics data panels self-select into the panel population and the specific studies according to the screening criteria, self-selection bias may occur (Cheung et al. 2017), despite the fact that Qualtrics data panel provides researchers with easy access to heterogeneous populations with a diverse range of demographic as well as occupational characteristics. Previous studies have suggested that the self-selection bias among online data panel participants can be reduced with experimental manipulations (e.g., Woo et al. 2015). Experimental studies should be conducted in the future to further validate the self-determination scale, considering the fact that experimental studies in an experiential consumption setting are very suitable for validating the scale.

Another limitation is that though the present study supports a relationship between self-determination and FoMO, which is also supported by previous studies, the causal role in this relationship remains unclear. Future studies should employ an experimental design that can best identify the causal relationship between the two variables to further support the antecedent role of FoMO in relation to self-determination. While the current study employed text analysis to examine how self-determination can be fulfilled through consuming online experiences, it would also be worthwhile to examine the scale of self-determination as well as the relationship between self-determination and FoMO within a digital experiential environment through experimental designs. Furthermore, future studies should also examine other experience-related outcome variables, such as emotional attachment toward experiences and loyalty to experiential products, for example, to further validate the essential role of self-determination and intrinsic motivation in the nomological experiential consumption framework.

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Appendix A: Definitions of Fear of Missing Out

Author (Year)	Definition
Przybylski et al. (2013)	Consistently keeping in touch with what others are doing as well as a pervasive fear that others may be experiencing rewarding experiences that one is not participating in
Riordan et al. (2015)	One feels uneasy and often consumed by the feeling that friends or others are having a rewarding experience while one is absent
Zhang et al. (2020)	An emotional reaction to missing an experience that is related to one's private or public self
Gil et al. (2015)	A concept describing the feeling that something is taking place on social networks, but you are not able to take part in it

Appendix B: Demographic Information for Studies 1 to 3

Study	Data Source	Sample Size	Gender	Average Age
1	Qualtrics Data Panel	209 American Adults	104 Females and 105 Males	23.70 Years
2	Qualtrics Data Panel	136 American Adults	80 Females and 56 Males	24.38 Years
3	Qualtrics Data Panel	143 American Adults	69 Females and 74 Males	24.75 Years

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