



**Acceptance of product placement in social networking sites:  
The mediating role of materialism**

Journal:	<i>Global Knowledge, Memory and Communication</i>
Manuscript ID	GKMC-04-2021-0073.R2
Manuscript Type:	Article
Keywords:	Marketing communication, Materialism, Product placement, Social networking sites, Social media, Sri Lanka

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## Acceptance of product placement in social networking sites: The mediating role of materialism

### Abstract

**Purpose:** This study examines the predictors of product placement acceptance in social networking sites and mediating role of consumer materialism in the relationship between social networking sites usage frequency and product placement acceptance.

**Design/methodology/approach:** A survey was conducted with a structured questionnaire for a sample of 327 social networking sites users in Sri Lanka. The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with Smart PLS to test the hypotheses derived.

**Findings:** The results revealed that social networking sites usage frequency and consumer materialism positively predict the acceptance of product placement in social networking sites and materialism partially mediates the relationship between social networking sites usage frequency and product placement acceptance in social networking sites.

**Originality:** This study fills the gap in the existing literature by finding the factors that predict the acceptance of product placement in social networking sites and the mediation effect of consumer materialism in the relationship between social networking sites usage frequency and acceptance of product placement in social networking sites.

**Keywords:** Marketing communication, Materialism, Product placement, Social networking sites, Social media, Sri Lanka

**Article classification:** Research paper

## Introduction

Behavioral patterns that prevailed in the pre-digital era, have drastically changed with the spread of digital technology. Social networking, a tradition of the distant past, revived in the digital epoch in a different form called online social networking or commonly identified as Social Networking Sites (SNS). In 2020, there were over 3.6 billion social media users and this trend is expected to grow even further (Clement, 2020). Thus, SNS has acquired an essential part of modern communication (Olufadi, 2016).

The contemporary business community has gradually started using SNS to develop a close bond with customers, expecting that it would leapfrog traditional media (Holt, 2016). Placing products act as an integral part of user experience is a commonly used potent strategy in mass media (Yang and Wang, 2008) and is a non-traditional method to reach consumers (Srivastava, 2015). World product placement revenues raised for the 10<sup>th</sup> successive year in 2019, with a total value of 14.5% to \$20.57 billion (Quinn, 2020). Though product placement in SNS is becoming a popular trend, it lacks a sufficient theoretical explanation (Ashley and Tuten, 2015; Liu et al., 2015; Eagle and Dahl, 2018). Scholars have addressed different aspects of product placement in social media (Liu, Chou, and Liao, 2015; Eagle and Dahl, 2018; Fossen and Schweidel, 2019). Subsequently, the researches that have investigated the acceptance of product placement in SNS are limited.

According to Idid, Ahmed, and Souket (2017) people consider traditional media (i.e., TV, newspaper, and radio) as the credible source for information whereas the Internet is ranked as the least credible source. Individuals who use new media to access news have less trust in those (Jones, 2020). This indicates that existing knowledge is not sufficiently adequate to explain consumer response to marketing cues appearing in SNS. Empty self-theory, which is relevant for understanding the consumer self and responding to communication content is hardly applied in the new media context. As such, from a theoretical perspective, this gap is required to address to explain the consumer response to marketing cues and to test the applicability of empty self-theory in the context of new media. In addition, the effort that companies made on social media marketing has had only a little payoff since digital technologies dramatically altered how culture works (Holt, 2016). Therefore it is a must to understand consumer response to product placement strategies in order to get a fruitful outcome from the social media marketing budgets.

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5 SNS usage frequency and consumer materialism can be considered as predictors of the  
6 acceptance of product placement in SNS. Media exposure (De Gregorio and Sung, 2010) and  
7 consumer materialism which refers to value placed on the acquisition of material objects  
8 (Burroughs and Rindfleisch, 2002) found to be significant predictors of product placement  
9 acceptance in traditional media (Manyiwa and Brennan, 2016). The present study endeavors to  
10 examine the role of materialism in the predictor effect of SNS usage frequency on consumer  
11 response to product placement based on the theoretical foundation of Empty Self Theory. Thus,  
12 the aim of this study is two-fold. First, is to identify the predictors of acceptance of product  
13 placement in SNS, and second, to examine the role of materialism in the predictor effect of  
14 SNS Usage Frequency dimension on acceptance of product placement in SNS. As such, the  
15 study addresses the following two research questions;

- 24 • What are the predictors of acceptance of product placement in SNS?
- 25 • What is the role of consumer materialism in the relationship between SNS usage  
26 frequency and acceptance of product placement in SNS?

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30 The literature review section derives hypotheses to address these two research questions.

## 31 32 33 34 35 **Literature review**

### 36 37 *Empty Self and SNS Usage*

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40 The self-concept in this study is viewed as a cognitive schema that organizes abstract and  
41 concrete memories about the self and controls the processing of self-relevant information  
42 (Campbell, 1990). In addition, the self-concept is structured into two components as knowledge  
43 components and evaluative components (Campbell, et al., 1996). It is a self that seeks the  
44 experience of being continually filled up by consuming products (eg., goods), experiences, etc.  
45 (Cushman, 1990). Accordingly, the claim that makes in the SNS context is that ‘who I am’ and  
46 ‘How do I feel about myself’ are basically influenced product placements in SNS.

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49 Because emptiness is, an absence of communal forms and beliefs, individuals are thus  
50 particularly vulnerable to influence from cultural forms such as advertising and the advertising  
51 has been recognized to fill and heal the empty-self (Cushman, 1990). The contemporary empty-  
52 self attempts to master the environment for one’s own needs (Reeves, Baker, & Truluck, 2012).  
53 As such, SNS of this Internet age can be exerted to influence and control empty self. That is

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3 the empty self is attempted to fill and heal by SNS. Subsequently, we can postulate that SNS  
4 help to construct selves that are the subjects of control and to develop techniques that are the  
5 means of control.  
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### 10 11 ***Product placement in SNS and consumer materialism***

12 Product placements appeared for over a century as it provides an opportunity for personal  
13 communication with commercial messages (Eagle and Dahl, 2018). SNS is being widely  
14 considered as a new media platform in product placements. Each medium may generate its own  
15 sets of meanings through which consumers interpret and react to the content that it transmits  
16 (Gould and Gupta 2006). Product placement on SNS can be effective since social networking  
17 leads to reaching consumers across cultures. The product placement in SNS can be defined as  
18 “any post—including text, photos, videos, Instant Articles, links, 360 videos, and Live  
19 videos—from media companies, celebrities or other influencers that features a third-party  
20 product, brand or sponsor” (Facebook, 2016). It consists of a writer producing some engaging  
21 content incorporated with a promotional message in order to promote the product (Liu et al.,  
22 2015). As such, it can be viewed as the inclusion of a brand name product, package, signage,  
23 or other trademark merchandise in SNS.  
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35 Materialism plays a critical role in consumers’ daily consumption activities. Therefore,  
36 consumer materialism has become a popular topic among consumer behavior scholars  
37 (Gentina, et al., 2018). Materialized people value possessions and give priority to acquiring  
38 them (Richins and Dawson, 1992), and believe possessions are the main source of success  
39 (Belk, 1984). According to Richins and Dawson (1992, p. 307), “consumer materialism is  
40 importance a person places on, possessions and their acquisition as a necessary or desirable  
41 form of conduct to reach desired end states, including happiness”. Digital possessions are  
42 playing a substantial part in consumers’ everyday lives as same as their material counterparts  
43 (Denegri-Knotte et al., 2013; Lehdonvirta, 2013), not just supplanting material equivalents yet,  
44 in addition, presenting new forms of possessions (social networking profiles) (Watkins and  
45 Molesworth, 2012). Kirk and Sellen (2010) suggest that digital possessions play similar roles  
46 as material possessions. Further, it can be said that for both functional and emotional purposes,  
47 individuals might consider digital possessions (Kubat, 2018). As such, the present study relies  
48 on the conceptualization of Richins and Dawson (1992).  
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### ***SNS usage frequency and acceptance of product placement***

Media exposure has been identified as a significant predictor of human behaviors and cognitions (Mangleburg and Bristol, 1998). SNS usage frequency and response to product placement suggest a correspondence between one's self-concept and product selection (Usakli and Baloglu, 2011). Frequent movie watching and seeing the placed product is related to how a viewer sees himself as a consumer and less usage frequency means less likely to see the product placement (Gould, Gupta, and Grabner-Kräuter, 2000). This rationale can be equally applicable to SNS usage and seeing placed products in SNS. Indeed, individuals can maintain and enhance self-concept by increasing SNS usage and thereby looking at more placed products, which are related to the self-concept. Further, Shrum et al. (2013) noted that services, experiences, and relationships are also influencing materialistic values. In modern digital trade, SNS experience and SNS friends influence the materialistic values among users.

This rationale was supported by empirical studies of traditional media and suggests a positive association between media usage frequency and response to product placement (De Gregorio and Sung, 2010). Kamal et al., (2013) conclude that social media usage positively and significantly relates to attitudes toward social media advertising. Accordingly, it is postulated that media exposure in SNS as the frequency of SNS usage and acceptance of product placement in SNS as the willingness to accept any post in SNS that used to promote products.

### ***Materialism and acceptance of product placement in SNS***

Product involvement is higher among highly materialized consumers (O'Cass, 2004). Materialized consumers like shopping (Singh, 2016) and positively respond to advertising (Mirmehdi, Sanayei, and Dolatabadi, 2017). Individuals have self-identity motives namely self-esteem (maintain and enhance a positive concept), continuity (maintaining identity across time and situation), distinctiveness (sense of differentiation from others), belonging (feelings of closeness or acceptance by others), efficacy (feelings of competence and control), meaning (need to find significance or purpose in one's own existence) (Vignoles, Regalia, Manzi, Golledge and Scabini, 2006). Consumers endeavored to satisfy their distinct motives via more or less materialistic means (Shrum et al., 2013). Consumers who use more materialistic means may have a tendency to accept a promotional message (e.g. photos and videos) than non-materialistic consumers. Empirical evidence has shown a positive association between

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3 materialism and product placement acceptance in traditional media (Manyiwa and Brennan,  
4 2016).  
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### 8 ***SNS frequency and consumer materialism*** 9

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11 Peer communication and idealized media images are important sources of social comparison  
12 (Schiffman and Kanuk, 2004). SNS facilitate both of these requirements. Idealized media  
13 images can stimulate the desire for more by leading to compare the self with those images and  
14 increasing individuals' expectations (Richins, 1995) and SNS is full of idealized media images  
15 (i.e. massively shared human achievements with brands). Peer communication positively  
16 relates to materialism (Duh et al., 2015) and SNS encourages peer communication through e-  
17 word of mouth by breaking the geographical barriers.  
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24 Empirical evidence advocate consumer who watches TV quite frequently, see the real world as  
25 the TV world (O'Guinn and Shrum, 1997). Thus, it suggests that a positive association between  
26 TV viewing frequency and consumer materialism (Potter and Chang, 1990; Shrum et al., 2005).  
27 Contemporary consumers are shifting to new media i.e. SNS. The daily SNS usage amounted  
28 to 144 minutes per day in 2019, up from 142 daily minutes in 2018 (Clement,2020). In the  
29 context of social media, Kamal et al. (2013) suggest a positive relationship between social  
30 media usage and user materialism.  
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### 37 ***Mediation role of consumer materialism*** 38

39 The emptiness of life can be soothed by exacerbating personal fear through consumption  
40 (Cushman, 1990). Advertising is presenting lifestyle solutions by emphasizing consumers'  
41 empty-self which can be fulfilled with gloriousness, by the celebrities who are featured in the  
42 advertisements. Heavy SNS users might overcome their emptiness by increasing their desire  
43 for more and finding solutions to their deficits by looking at products presented by various  
44 influential groups (i.e. celebrities). Indeed, heavy SNS users, have more opportunities to see  
45 idealized images and communicate with peers. This will lead to increase their desire more and  
46 encourage them to accept promotional messages on SNS. In addition, there is evidence to  
47 support a partial mediation effect of identity confusion and materialism in the relationship  
48 between excessive SNS usage and online compulsive buying (Sharif and Khanekharab, 2017).  
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## Study Design and Methods

### *The Study Sample and Data Collection*

Sri Lanka is an island in the Indian Ocean with a population of around 23 million (The World Factbook, 2021). The Internet penetration was 47% and social media penetration was 30% in January 2020 (Kemp, 2020). According to the Networked Readiness Index 2020, Sri Lanka is a leading country in the South Asian region (rank 83) (Dutta and Lanvin, 2020) indicating a feasible location for social media studies. Undergraduates are the most suitable population for e-commerce related studies given that they have more opportunities to use the internet for communication and commercial matters (Shaouf, Lü and Li, 2016). The present study focuses only on Facebook, due to its popularity among researchers (Alalwan, Rana, Dwivedi, and Algharabat, 2017) and users (Dhir and Tsai, 2017). Facebook's daily average users were 1.48 billion for December 2020 (Facebook, 2021).

There are 15 state universities in Sri Lanka, which are directly administered by the University Grants Commission, Sri Lanka. A survey was employed to collect data from undergraduates of seven state universities, out of the 15 state universities in Sri Lanka which are located in different provinces of the country.

A self-administered structured questionnaire was used as the data collection tool of the study. The questionnaire translation process followed three steps as cultural translation, back-translation iterative process, and pretest (Su and Parham, 2002). Accordingly, first, the questionnaire was developed in English by one of the researchers of the present study and then translated to Sinhalese (mother tongue of Sri Lanka), by one of the academic members of a state university in Sri Lanka. A back translation to the English version of the questionnaire was done by one of the researchers in order to validate the translation of the questionnaire. In addition, based on the pretest findings some alterations were made to the questionnaire before conducting the final survey. As recommended by Podsakoff, Mackenzie, and Podsakoff (2012) some procedural remedies (i.e. psychological separation between predictor and criterion, improving scale items to reduce uncertainty, and including negative items) were employed in the questionnaire to overcome the common method bias. Additionally, Variance Inflation



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3 Factors (VIF) was below 3.3 in a full collinearity test indicating there is no critical issue of  
4 common method bias in the current study (Kock, 2015).  
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8 The questionnaire consists of two sections. The first section of the questionnaire consists of  
9 questions to measure the main constructs (i.e. SNS usage frequency, consumer materialism,  
10 product placement acceptance) with Likert type scale, where the respondents were asked to  
11 rate their level of agreements (i.e. strongly agree, agree, no idea, disagree and strongly  
12 disagree). The second section of the questionnaire was used to address the demographic factors  
13 of the respondents.  
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19 A total of 550 questionnaires were distributed among the respondents using the convenience  
20 sampling technique. A total of 363 were collected and 33 questionnaires out of 363  
21 questionnaires were dropped due to the incompleteness of the responses. Finally, 327  
22 questionnaires were used in analysis resulting in 59.45% of accepted responses for a social  
23 science study (Baruch, 1999). Table 1 shows the sample composition of the study.  
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30 Two types of nonresponse can occur in a study namely total non-response and item non-  
31 response (Fraenkel & Wallen, 1993). The first refers to failing to submit the questionnaire and  
32 the second refers to submitting incomplete questionnaires (Sax et al., 2003). To overcome the  
33 item non-response, a missing data remedy (mean substitution) was used in the analysis of data.  
34 Moreover, the time of response analysis (Porter & Whitcomb, 2005) was used to address the  
35 total non-responses. Based on the continuum of resistance model (Lin & Schaeffer, 1995) this  
36 approach assumes that late respondents are similar to the non-respondents. Following the  
37 guidance of the time of response analysis approach, the present study compares the first 10%  
38 of the questionnaires with the last 10%. The comparison was done by using an independent  
39 sample t-test. The t-test results revealed that no significant differences between early  
40 respondents and late respondents. The time of response analysis approach indicates that there  
41 is no non-respondent bias in the present study.  
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### 55 ***Study Constructs and Measures***

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57 A total of nine items were adopted from Richins (2004) with three measures for each dimension  
58 to operationalize materialism, namely success, centrality, and happiness, while six items from  
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Gupta and Gould (1997) were adapted for acceptance of product placement in SNS and seven items from Smock et al. (2011) for SNS usage frequency. Table 2 shows the study constructs and measures of each construct.

### ***Hypotheses Development***

The review of knowledge contribution in the domain of acceptance of product placement in SNS and mediating role of consumer materialism in the relationship between SNS usage frequency and product placement acceptance facilitates in order to develop the following hypotheses.

Accordingly, the impact of predictors of acceptance of product placement in SNS (i.e. SNS usage frequency and materialism) are addressed through the following three hypotheses.

$H_1$  - There is a positive impact of SNS usage frequency on product placement acceptance in SNS

$H_2$  - There is a positive impact of materialism on acceptance of product placement in SNS

$H_3$  - There is a positive impact of SNS usage frequency on user materialism

The following hypothesis is developed to investigate the mediating role of consumer materialism in the relationship between SNS usage frequency and product placement acceptance.

$H_4$  - Materialism mediates the relationship between social networking sites usage frequency and acceptance of product placement in social networking sites

### **Data Analysis and Results**

#### ***Measurement Model Evaluation***

All the reflective constructs were observed through multiple indicators and materialism was observed as a second-order latent variable. The focus of the present study is to identify key driver constructs and not to test a theory, or confirm a theory or compare alternative theories. As such, Partial Least Squares Structural Equation Modeling (PLS-SEM) was used with Smart-PLS 3.2.7 (Hair, Ringle & Sarstedt, 2011). PLS-SEM is a superior approach to estimate mediation (Sarstedt, Hair, Nitzl, Ringle & Howard, 2020). Skewness and kurtosis values were between -1 and +1 indicates there was no critical issue in normality (Sarstedt, Ringle, and Hair,

2017). A few items were dropped from the study due to low indicator outer loadings (Hair, Hult, Ringle, and Sarstedt, 2014). All others were above 0.7 and thereby an indicator explains more than 50% of the indicators' variance (Table 2).

[Table 2 near here]

Both Cronbach's alpha and Composite Reliability (CR) are necessary for internal consistency reliability assessment (Sarstedt et al., 2017). Higher Cronbach's alpha coefficient value means good internal consistency of items in the scale (Gliem and Gliem, 2003). Composite reliability should be higher than 0.7 to establish internal consistency reliability (Hair et al., 2011). The average variance extracted (AVE) (Fornell and Larcker, 1981) is the commonly used method to assess the convergent validity and the adequate level is 0.5 (Bagozzi and Yi, 1988). Cronbach's alpha, CR and AVE values were above the threshold, providing sufficient evidence to establish internal consistency reliability and convergent validity. Fornell-Larcker criterion (Fornell and Larcker, 1981) was used to assess the discriminant validity of the study construct. The square root of each latent variable's AVE was higher than the latent variable correlations (Table 3).

[Table 3 near here]

Alternatively, Heterotrait- Monotrait Ratio (HTMT) value for each latent construct was below 0.9 (Table 4) indicating the satisfactory level of discriminant validity (Henseler, Ringle and Sarstedt, 2015). Both of them indicate that the discriminant validity of the study construct is achieved.

[Table 4 near hear]

### ***Structural Model Evaluation and Hypotheses Testing***

Structural model evaluation starts with collinearity assessment. Accordingly, all the VIF values were below the value of 5, which suggests that there is no indication of collinearity between each set of predictor variables (Sarstedt et al., 2017). Second, it was required to assess the significance and relevance of the structural model relationships (Hair et al., 2014). A 5000 subsamples option in bootstrapping is used to test the significance of the paths as recommended by Sarstedt et al., (2017). The widely used cut-off value for the two-tailed test is 1.96 (Hair et

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3 al., 2014). All the path coefficients were above 1.96 indicating that all paths are statistically  
4 significant (Table 5). The final structural model is shown in Figure 1.  
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7 [Table 5 near here]  
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10 The third is the assessment of the coefficient of determination ( $R^2$ ) (Wong, 2016). The  $R^2$  value  
11 of 0.20 can be accepted as a satisfactory level in consumer behavior studies (Hair et al., 2014).  
12 The  $R^2$  values of both materialism (0.147) and acceptance of product placement SNS (0.067)  
13 were below the threshold level indicating low predictive accuracy (Table 6). Next, it was to  
14 assess the effect of  $f^2$  where values of 0.02, 0.15, and 0.35 are, considered as small, medium,  
15 and large effects respectively (Sarstedt et al., 2017). As per Table 5, SNS usage frequency –  
16 materialism had a medium level  $f^2$  effect and the other two relationships (materialism-  
17 acceptance of product placement in SNS and SNS usage frequency - acceptance of product  
18 placement in SNS) were weak. Finally, it was to evaluate the predictive relevance ( $Q^2$ ) of the  
19 model.  $Q^2$  values larger than zero for an endogenous construct demonstrate that the path  
20 model's predictive accuracy is satisfactory for that construct (Sarstedt et al., 2017). Overall,  
21 Table 6 illustrates that the model demonstrates sufficient predictive relevance.  
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37 Forth hypothesis proposes the mediating role of materialism in the relationship between SNS  
38 usage frequency and acceptance of product placement in SNS. Smart-PLS results suggest a  
39 significant direct effect and data were suitable for further processing. Bootstrapping procedure  
40 (with the mediator) was applied with 5000 samples and the Standard Deviation of indirect  
41 effect was 0.022. The  $t$  value of the indirect effect was calculated by dividing the indirect effect  
42 (0.383 \* 0.132=0.050) from the bootstrapping standard deviation (0.050/ 0.022= 2.27). The  
43 result indicates that the indirect effect is significant. Total effect (direct effect + indirect effect)  
44 is 0.23. Thus, the VAF (indirect effect/total effect) is = 0.05/0.23= 0.22. That is only 22% of  
45 SNS usage frequency's effect on acceptance of product placement in SNS can be explained via  
46 the materialism mediator. Partial mediation prevails when VAF exceeds 0.2 and full mediation  
47 prevails when it exceeds 0.8 (Hair et al., 2014). As such, hypothesis 4 is partially accepted.  
48 The summary of the hypothesis testing results is presented in Table 7.  
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5 Materialism plays a substantial role in an individual's day-to-day life and the study confirms  
6 that materialism can be patronized by SNS usage frequency. It indicates that in real-life heavy  
7 SNS users give priority to acquiring material possessions and they respond positively to  
8 marketing cues appearing in SNS platforms. Further, individuals fill the emptiness of their real-  
9 life by seeing products presented by influential groups such as celebrities in SNS to a certain  
10 level.  
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17 [Table 7 near here]  
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### 23 Discussion

24 SNS usage frequency, materialism, and acceptance of product placement in SNS are among  
25 the critical factors to be examined in formulating product placement strategies in the context  
26 of SNS. The first research question of the present study was to identify the predictors of  
27 acceptance of product placement in SNS. The empirical evidence confirmed the first hypothesis  
28 showing a significant positive impact of SNS usage frequency and acceptance of product  
29 placement in SNS. It is consistent with previous studies related to traditional media and product  
30 placement (De Gregorio and Sung, 2010). Indeed, individuals use SNS to a greater extent to  
31 see the placed products related to their self-concept.  
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39 Further, we found a positive impact of materialism on acceptance of product placement in SNS  
40 (H<sub>2</sub>). This finding provides further justification for how individuals satisfy their identity  
41 motives via more materialistic means (Shrum et al., 2013). In addition, the finding concurs  
42 with previous studies, which have focused on product placement in traditional media (Manyiwa  
43 and Brennan, 2016). Product involvement is more with highly materialized people and they  
44 focus on product information. Medium is only a platform to get this information. This might  
45 be the reason for similar results between traditional and new media.  
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52 The second research question of the present study was to identify the mediating role of  
53 consumer materialism in the relationship between SNS usage frequency and product placement  
54 acceptance. The self-concept links consumer materialism as the self (i.e., consumer) seeks the  
55 experience of being filled up by consuming products. Product placement acceptance even links  
56 to the self-concept as it is seen as self-relevant information. The SNS usage frequency and  
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3 product placement acceptance can be taken as a part of the self-concept which may have an  
4 association with consumer materialism. Thus, we assumed SNS usage frequency would  
5 influence the level of consumer materialism. The present study results confirmed the  
6 assumption by supporting previous studies in traditional media (Duh et al., 2015; Potter and  
7 Chang, 1990; Shrum et al., 2005). In addition, Kamal (Kamal et al., 2013) concluded social  
8 media usage increases the level of materialism among American and Arabic social media users.  
9 Similar results were found in the Sri Lankan context too and it indicates that SNS usage  
10 increases materialism in contrasting cultural contexts. Further, results found that consumer  
11 materialism plays a partial mediation role in the relationship between SNS usage frequency  
12 and acceptance of product placement in SNS. This is an original contribution to product  
13 placement and new media literature by supporting the empty self-theory in the context of new  
14 media. Frequent SNS users tend to overcome their deficits by increasing their desire for more  
15 and thereby looking at placed products, that can be soothed their emptiness.

### 26 27 **Conclusion**

28 We found SNS usage frequency and consumer materialism positively predict the acceptance  
29 of product placement in SNS and materialism partially mediates the relationship between SNS  
30 usage frequency and acceptance of product placement in SNS. However, the predictive  
31 accuracy of materialism and SNS usage frequency on acceptance of product placement in SNS  
32 were limited. Further, SNS usage frequency had only a weak effect on materialism. This  
33 indicates that SNS usage frequency and materialism are not strong antecedents to predict the  
34 endogenous variables of acceptance of product placement in SNS. Further, SNS usage  
35 frequency is weak in determining consumer materialism. However, they were strong predictors  
36 of traditional media.

### 46 ***Contribution to the existing SNS literature***

47 Though, product placement in SNS becoming a popular trend, existing product placement  
48 literature was not updated to explain the consumer response to new media. We filled the gap  
49 in the existing literature and update it by finding predictors for acceptance of product placement  
50 in SNS. Further, we found a partial mediation effect of consumer materialism by confirming  
51 the theoretical foundation of Empty Self Theory. Besides, adapted scales were validated  
52 through proper validity and reliability techniques by providing an opportunity to replicate them  
53 in future studies.



### ***Managerial Implications***

Though the SNS of this Internet age can be exerted to influence and control empty self, business firms need to think differently in product placement in SNS. Subsequently, we cannot directly postulate that SNS help to construct selves that are the subjects of control and to develop techniques that are the means of control in a culture where a high level of materialism exists. This is due to the low predictive accuracy of materialism and SNS usage frequency in predicting acceptance of product placement in SNS. Hence, we suggest individuals with a high level of materialism and heavy SNS usage might be only one potential audience for product placement strategies in SNS. In high materialistic cultures, product placement in SNS can be considered as an effective approach in communication strategy formation since consumers with high materialistic value respond positively to these communication cues. Further, SNS usage is gradually increasing among consumers to accelerate this trend. However, still, advertisers cannot rely only on this method and need to focus on traditional media as well. This is important for international companies operating in emerging economies where living standards are increasing.

### ***Limitations and Direction for Future Studies***

The findings of the current study are limited due to the low predictive accuracy of materialism and SNS usage frequency. There might be unique factors that only relate to consumer responses to marketing cues in new media i.e., SNS. Further studies need to identify these unique consumer behavior patterns in new media usage. Further, respondents of the present study are undergraduates from a single country. In order to generalize the findings, it is suggested to replicate the study in other cultural settings. In addition, a qualitative study might help to explore every nuance of SNS usage.

### ***Author Disclosure Statement***

No competing financial interests exist.

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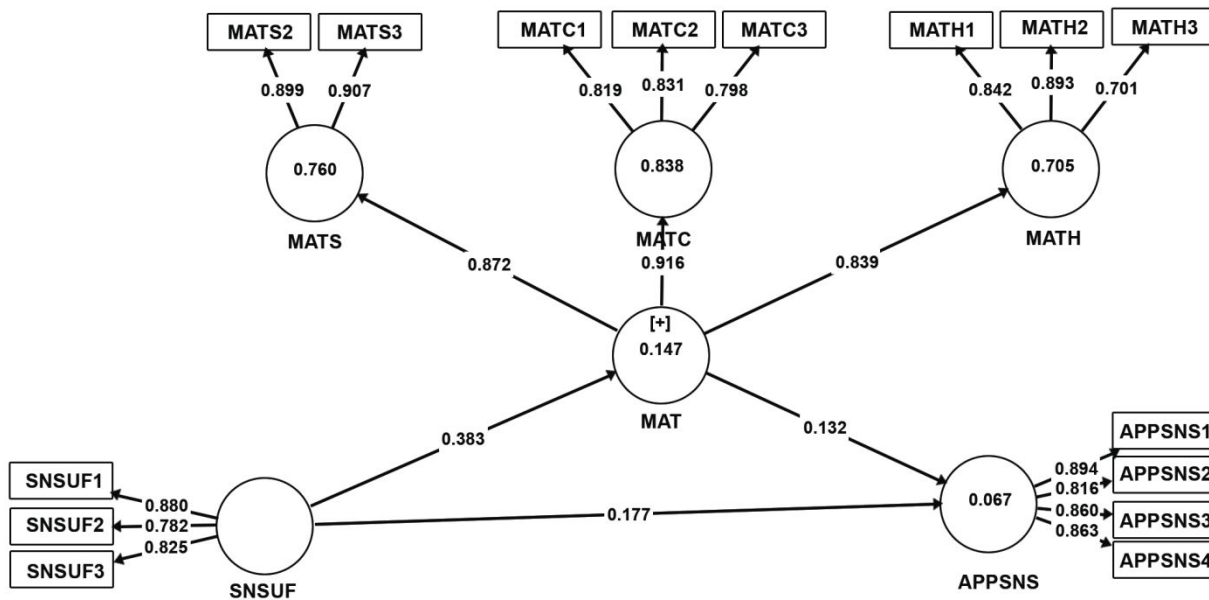


Figure 1: Final Structural Model

Key: SNSUF-SNS usage frequency, MAT- materialism, APPSNS- Acceptance of product placement in SNS

Table 1. Sample description

Variable	Category	Study sample (n =327)	
		Frequency	Percentage
Gender	Male	130	39.8
	Female	197	60.2
Study discipline	Management	44	13.5
	Arts	27	8.3
	Science	49	15
	Medicine	17	5.2
	Law	16	4.9
	Agriculture	50	15.3
	Engineering	26	8
	Computer	46	14.1
	Political Science	19	5.8
	Geography	18	5.5
SNS usage per week (Hours)	Marine Science	15	4.6
	<2	29	8.9
	About 6	115	35.2
	About 10	111	33.9
	>15	72	22
Connected SNS groups	5<	28	8.6
	6-10	88	26.9
	11-15	118	36.1
	>15	89	27.2
SNS friends	<250	15	4.6
	251-500	88	26.9
	501-1000	100	30.6
	>1000	124	37.9

Table 2. Measurement scale assessment and indicator reliability

Latent variable	Indicator	Mean	SD	Loadings >0.7	Indicator reliability >0.5
<b>SNS usage frequency</b>		3.41			
	I use				
SNSUF1	Status update in SNS	3.266	0.553	0.880	0.774
SNSUF2	Comments in SNS	3.532	0.720	0.782	0.611
SNSUF3	Wall posts in SNS	3.461	0.681	0.825	0.680
<b>Materialism</b>		3.45			
<b>Success</b>					
MATS2	The things I own say a lot about how well I'm doing in life	3.220	0.450	0.899	0.808
MATS3	I like to own things that impress people	3.409	0.588	0.907	0.822
<b>Centrality</b>					
MATC1	I try to keep my life simple, as far as properties are concerned (R)	3.189	0.464	0.819	0.670
MATC2	Buying things gives me a lot of pleasure	3.514	0.589	0.831	0.690
MATC3	I like a lot of luxury in my life	3.574	0.631	0.798	0.636
<b>Happiness</b>					
MATH1	My life would be better if I owned certain things I don't have	3.685	0.656	0.842	0.708
MATH2	I'd be happier if I could afford to buy more things	3.483	0.615	0.893	0.797
MATH3	It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like	3.547	0.619	0.701	0.491
<b>Acceptance of product placement in SNS</b>		3.44			
APPSNS1	Any type of product placement in SNS is totally acceptable to me	3.253	0.531	0.894	0.799
APPSNS2	I don't mind if celebrities receive money or other benefits from manufacture for placing brands in their profile picture	3.470	0.574	0.816	0.665
APPSNS3	Any type of product placement in SNS should be banned (R)	3.522	0.600	0.860	0.739
APPSNS4	I hate seeing products with brand names in SNS if they are placed for commercial purpose (R)	3.538	0.568	0.863	0.744

Note: All items for materialism and APPSNS shared a common prompt: "Indicate how much you agree with each option by marking the appropriate response" and were measured with a 5-point Likert-type scale ranging from "Strongly Disagree" to "Strongly Agree". SNSUF was measured by the frequency of usage at a five point scale ranging from never to frequently.

Table 3. Validity and reliability

Latent variable	Acceptance of product placement in SNS	Materialism	SNS usage frequency	Cronbach's alpha	CR	AVE
Acceptance of product placement in SNS	<b>0.859</b>			0.883	0.918	0.738
Materialism	0.200	<b>0.734</b>		0.875	0.902	0.539
SNS usage frequency	0.227	0.383	<b>0.830</b>	0.784	0.861	0.688

Table 4: Heterotrait-Monotrait Ratio (HTMT)

Construct	Acceptance of product placement in SNS	Materialism
Materialism	0.227	
SNS usage frequency	0.249	0.438

Table 5. Path coefficients of the structural model and significance testing results

Path	Hypothesis	Path coefficient	T value	P value	f <sup>2</sup>
SNS usage frequency – Acceptance of product placement in SNS	1	0.177	2.969	0.003	0.028
Materialism – Acceptance of product placement in SNS	2	0.132	2.221	0.026	0.026
SNS usage frequency – Materialism	3	0.383	8.056	0.000	0.172

Table 6. Results of coefficient of determination ( $R^2$ ) and predictive relevance ( $Q^2$ )

Endogenous Latent Variable	$R^2$ Value	$Q^2$ Value
Acceptance of product placement in SNS	0.067	0.042
Materialism	0.147	0.073

$Q^2$  is the “1-SSE/SSO” value as shown in the “Construct Crossvalidated Redundancy” section in blindfolding.



Table 7: Summary of hypotheses testing results

Hypothesis	Relationship	Result
1	SNS usage frequency–Acceptance of product placement in SNS	Accept
2	Materialism – Acceptance of product placement in SNS	Accept
3	SNS usage frequency – Materialism	Accept
4	Mediation effect of materialism	Partially Accept