

Research Paper

The Influence of Social Media on Nutritional Behavior and Purchase Intention Among Millennials

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ABSTRACT

The purpose of this exploratory cross-sectional study was to investigate the effect of social media on dietary behavior, and to identify motivations and behavioral outcomes of peers and influencers communication in social media regarding food purchase behavior. The theory of consumer socialization was used as the theoretical framework for this study. Data was collected from 462 social media Saudi millennials through an online survey. Results showed that when Millennials communicate with peers or influencers in social media, the main motivations appeared to be similar for both socialization agents. Both interaction and social integration and remuneration motivations appeared to have significant impact with the greatest impact for influencers. The increasing popularity of social media as a new form of communication especially among young consumers should be taken into consideration. The power of peers and influencers in consumers purchase decisions implies that managers should consider concentrating in using peer and influencers as an important form of marketing communication. This research paper contributes to the scarce literature investigating the effect of social media on dietary behavior of both peers and influencers communication in social media regarding food purchase behavior.

Keywords: Social media; shopping behavior; dietary behavior; peer communication; influencers

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1. INTRODUCTION

Social media have changed communication landscape and have clearly affected the marketing communication, where it becomes one of the most common daily activities for consumers. This increase in popularity of social media sites and platforms has steered academic researchers to investigate why and how people use social media and how it affects consumer behavior (Cao, et al., 2011, Kietzmann, et al., 2011, Rayan, 2016, Hajli, 2013). Specifically, the investigation of this phenomenon is more important for the younger generation or the millennials as they are digital natives (Prensky, 2001), and their dependence in using social media has affects their lives and work profoundly (Bennett et al., 2009). Few studies have been conducted to explore the influence of social media on food choice and dietary behavior (Baldwin et al., 2018, Muralidharan et al., 2015). Most previous studies were exploratory in nature and were conducted using qualitative research design to investigate this new phenomenon (Sogari, G., et al., 2018, Deliens, et al., 2014). This study attempts to add to the literature in this under researched area by borrowing from previous literature using the social learning theory (Bandura, 1977) as the theoretical framework for this study.

Social media has been defined by Ryan et al., (2016) as: "the umbrella term for web-based software and services that allow users to come together online and exchange, discuss, communicate and participate in any form of social interaction" (p. 121). Social media users can communicate through different types of media, where they can generate fresh content, recommend and share current content, review and rate products and services, chat on trending subjects, pursue hobbies, interests, and passions, and share knowledge and expertise (Rayan, et al., 2016). Any site that allows social interaction is a means of social networking such as Facebook, Twitter, MySpace and gaming sites and video sites like YouTube and blogs (O'keeffe, et al., 2011).

Despite the dominance of social media on various aspects of our lives and specifically their impact on our dietary choices and our food shopping behavior through peer communication and social media influencers, this topic is still under researched where no previous studies were found examining this topic. This study aims to investigate the impact of social media such as Snapchat, Instagram, Whatsapp and Twitter on dietary behavior and test the influence of socialization agents (i.e. peers and social media influencers) through motivations (Integration and social interaction, information, and remuneration) on food shopping behavior.

The following sections of this research paper are structured as follow: reviewing the literature regarding the main study variables including the influence of peers and influencers communication through social media on food shopping behavior well as the theoretical background for the study. The next section describes the methodology used for conducting the study, followed by presentation of the results of the research hypothesis. Various conclusions drawn from the study results were then discussed. The last section discusses theoretical and managerial implication, future research, and limitations of the study.

2. LITERATURE REVIEW

2.1 Social media usage in Saudi Arabia

Saudi Arabia is a developing country with young population. According to the Saudi General Authority for Statistics (2018), 50 percent of the population is under the age of 35. With rapid proliferation of internet and social media adoption, it is important to understand how social media usage by generation Y influence their dietary choices and food shopping behavior. The use of social media has shifted from being a means of communication only to a very effective force for social change in Saudi society and elsewhere. The Saudi government is also effective in using social media to communicate with citizens and raise public awareness. The number of Internet users in Saudi Arabia has risen rapidly to reach (30 million) by the beginning of 2018. Internet penetration in Saudi Arabia now stands at 91% (Global Media Insight, 2018), with active media accounts of 25 million and Internet accounts 30.25 million (Global media insight, 2018). In addition, the country has the highest global rise 32% in the use of social media since 2017, compared to 13% for the global rate (Smart Insights Statistics, 2017).

Social learning theory (Bandura, 1977) delineates that a person can learn in multiple ways. People create decisions based on self-reflection; however, environmental factors affect their behavior and their learning. Individuals can learn or adopt behaviors from their environment through the process of observational learning where they observe performed actions wither in real life or in traditional or social media then imitating their behavior. Hence, it is important to understand consumer socialization process via peers and influencers in online communities and its influence in food purchase behavior borrowing from the consumer socialization theory. Thus, this study investigate social media usage motivations such as integration and social interaction, information, and remunerations antecedents influence of peers and influencers' communication (socialization agents) on food shopping behavior (outcome). Peers and influencers were examined in this study as they constitute the majority of millennials online social networks.

Consumer socialization research has decreased in the past few decades, though, technological advances especially using the internet as a communication and shopping channel has sprung this research area particularly with young users as they rely heavily in technology to understand the changing nature of consumer socialization in online communities. Since millennials constitute a large segment in Saudi population and they are either new entrants to the labor market or will join in few years, it is important to understand how they learn and influenced by environmental factors. This is even more relevant to food choice and consumption as it is directly related to consumers' health and well-being.

2.2 Peer influence

Peer influence is described as the extent to which an individual's attitudes, believes, and behaviors are influenced by peers (Wang, et al., 2012). From a consumer behavior perspective, peers influence on individual behavior is generally exhibited in the types of products or services bought by individuals (Sheu et al., 2017). Social media allows users to communicate with their peers by adding them to friends' network, making networking easier (Zhang et al., 2009). Lee et al., (2013) found that information through social media from peers, friends, and family members was the most factor that influence individuals prejudgment and attitude towards a product or service. Although the influence of peers on purchase decision in both

mass media (Bearden & Etzel, 1982, Bristol & Mangleburg, 2005) and social media (Zhu, 2013, Muralidharan, et al., 2015) have been investigated, only few qualitative exploratory studies have investigated peer influence on dietary habits and food choices in offline communities.

To the knowledge of the researchers, no previous studies have been conducted to understand how peers or influencers influence dietary behavior and food purchase intention in online social networks. The most relevant research area was the influence of peers on health related issues such as seeking out health-related information and promoting physical activities. Recent efforts by Zhang et al., (2015) concluded that the online social impact of peers has the biggest influence of promotional messages in improving physical activity. Foster et al., (2010) reported that social communication programs such as Facebook can stimulate physical activity by means of creating a competitive social environment. In addition Wang et al., (2012) concluded that social communication through social media affects the purchasing decisions in two ways: direct through peer compatibility and indirect through promoting product participation. Cavallo et al., (2012) investigated the effectiveness of intervention to increase physical activity between two groups. The results indicated that the steps recorded in the social situation in which the participants see their peers and their comments were more than the steps recorded in the non-social situation. Peers can provide motivational factors to each other through comments and interaction through social networking programs. The results of Zhang et al., (2015) study support Cavallo et al., (2012) namely, that social impact of anonymous peers on social media is more successful than promotions to increase physical activity. Borrowing from the literature related to the influence of peers on purchase intention, the following hypothesis was proposed:

H1: There will be a statistical significant impact for motivations for using social media including (a) integration and social interaction, (b), information, and (c), remuneration on peer communication.

2.3 Social media influencers

Recent advances in online social network sites and platforms have steered to a new phenomenon called influencer marketing which is replacing traditional marketing. Ryan et al., (2016) defined influencers as people with an above-average capacity to influence their ideas and views on others. Their impact on prospective customers

can span one or more regions, generally across various touch points of interaction. In simple terms, an influencer or opinion leader is someone who has constructed up enough credibility with a certain crowd to have an impact on what they spend their cash on. While McCracken (1989) defined influencers as people who are trustworthy, attractive and enjoy public appreciation. They are highly influential people whose attitudes and actions are watched and often emulated by wide audiences (Hoffman et al., 2017). Horton et al.,(1956) developed a theory called para-social interaction, the theory of interaction between the public and celebrities, defined as a nonreciprocal relationship in which one person (i.e. fan or follower) cares deeply about another and the other person (i.e. celebrity) is unaware. Consequently, the follower imitation could include actions, statements and beliefs of the celebrity or the influencer (Kelman, 1961).

Consumers tend to make purchasing decisions based on images and symbolic aspects rather than product use, so influencers have a significant impact on consumer decisions. Cao et al., (2014) conducted a study examining the influence of peers, celebrity bloggers and fashion brands on the three stages of buying in social network sites. The results showed significant differences in the importance of social media sources between the various stages of the purchase process, the images published by the celebrity bloggers inspire fans more than friends or fashion shows. The role of celebrities in advertising effectiveness was examined by Muda et al., (2014), where credibility of celebrities including attractiveness, experience, and trustworthiness may positively affect the effectiveness of advertising including attitude toward advertising, brand attitude, and intent to purchase. The results showed that the credibility of both celebrities and advertising has a positive impact on attitude towards advertising and brand. In addition, Kim et al., (2015) found indications that the semi-social relations of the user and influencers have a positive relationship with the intentions of the purchase. Hence, influencers' reputations and semi-social relationships might increase social media users' purchase intention, since social media gives influencers greater and stronger opportunity to influence purchase decisions.

Since no previous literature was found on the impact of influencers on dietary habits and food choices on consumers, borrowing from the literature related to the

influence of celebrities on purchase intention, the following hypothesis was proposed:

H2: There will be a statistical significant impact for motivations for using social media including (a) integration and social interaction, (b) information, and (c), remuneration on social media influencers.

2.4 Social media and dietary behavior and food choice

Although previous research have investigated the use of social media as a medium for health and nutrition-related intervention such as (Swindle, et al., 2014, Neuenschwander, et al., 2013), however, only few recent efforts have investigated the influence of social media on dietary habits and food choice. Through a series of focus groups and individual interviews, Vaterlaus et al., (2015) investigated the effect of social media on health behaviors, namely nutritional behavior and exercises in young adults. This study concluded that social media can be a barrier or a catalyst for exercise and provide easier access to food choices through food recipes. Gaber (2014) proposed that young adults are affected by the fast food announcement on Facebook. Baldwin et al., (2018) reported similar results, where a relationship exists between social media and food consumption despite the different methodology used for both studies. Interaction in social media with food and beverage brands is associated with frequent consumption of unhealthy foods and beverages among youth.

A recent qualitative study by Fathelrahman et al., (2018) was conducted to investigate the behavior of consumers in the United Arab Emirates towards the use of food online ordering and the impact of social media on increasing knowledge of food quality information. A strong correlation was reported between the frequency of ordered food and the number of consumers who obtained information about food quality. With this understanding the following hypotheses were proposed.

H3: There will be a statistically significant influence of peer communication on food shopping behavior.

H4: There will be a statistically significant influence of social media influencers on food shopping behavior.

Figure 1 demonstrates the hypothesized model for consumer socialization for peer communication and social media influencers regarding food shopping behavior.

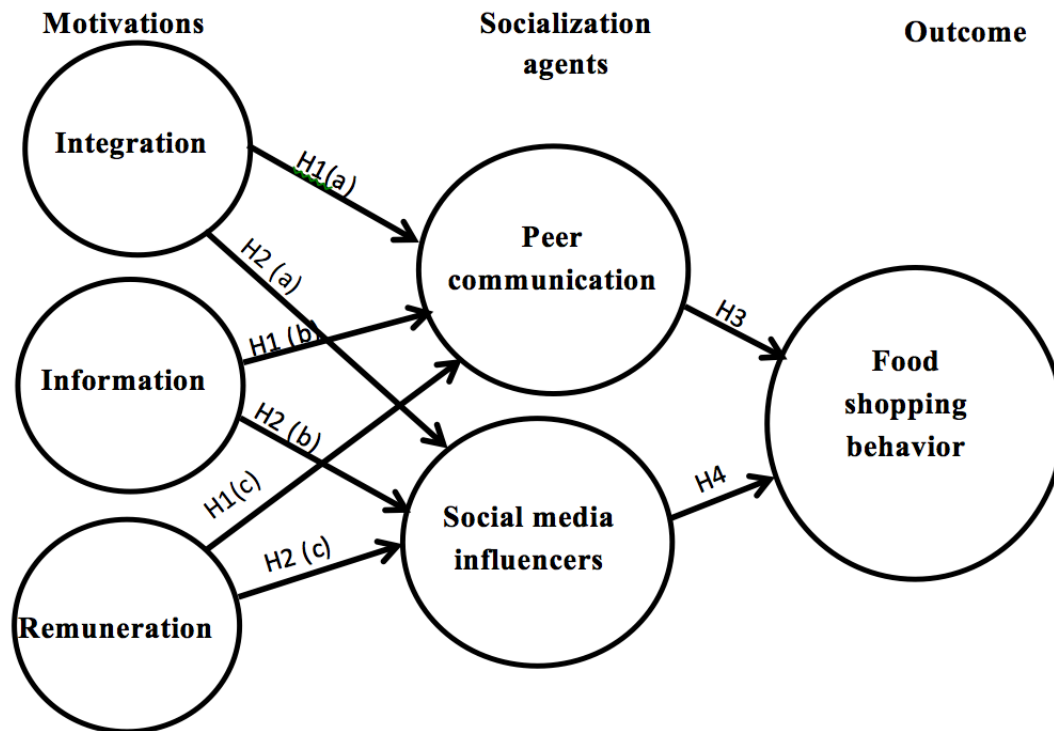


Figure 1 - Hypothesized model

3. METHODOLOGY

3.1 Measures

Measurement scales were adopted from previous literature on consumer socialization and then modified to fit the research objectives. Social media motivations were adapted from Muntinga et al., (2011), including; Integration and social interaction, information, where each construct was measured using three items, and remuneration construct was measured using one item. Socialization agents including social media peers and influencers communication regarding food products and outlets was adopted from Wang et al., (2012), where each measured using five items. The outcome construct, social media shopping behavior was adopted from (Patwardh and Yang, 2003) was measured using five items. A seven-point Likert scale was used to measure research constructs where (1 = strongly disagree) and (7 = strongly agree). Reliability Cronbach's Alpha statistical test was used to measure survey constructs reliability, where Alpha coefficients were all within acceptable level and ranged between (0.70) for information to (0.95) for integration and social interaction.

3.2 Data collection

A web-based survey was used to collect data from Saudi Millennials who were recruited using various social media applications such as WhatsApp and Telegram. Prior to actual implementation of the survey, the link was sent to a pilot of 15 participants to test its validity, where few wording adjustment were made for clarity of survey items. Data was collected on a two-week period on February, 2019 from 462 participants. Table 1 presents demographic profile of the study sample.

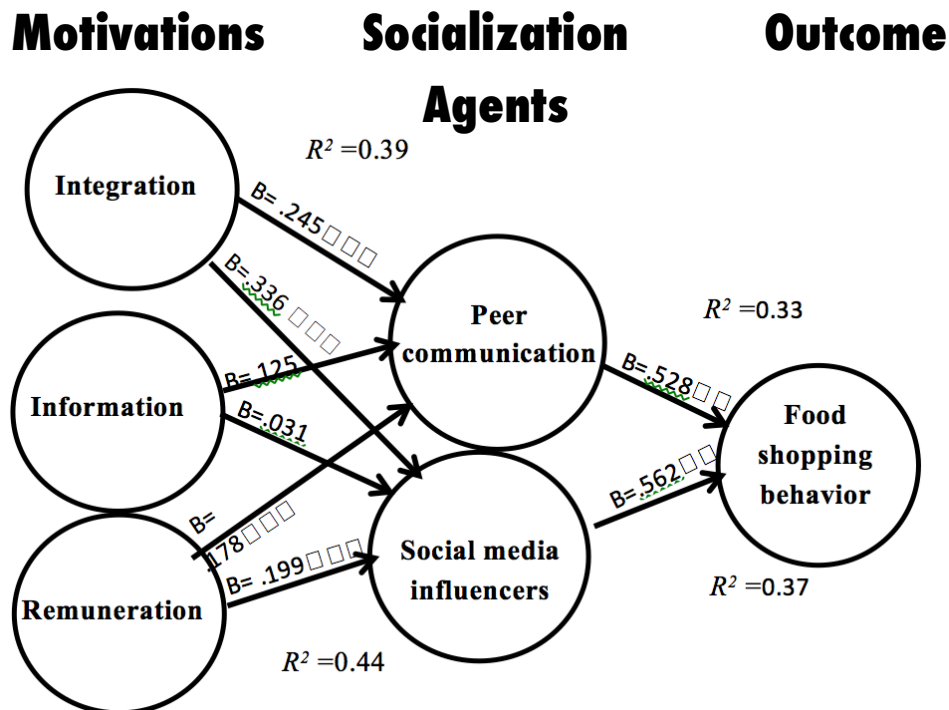
Demographic Variables		N	%
Gender	Female	383	82.9
	Male	79	17.1
Age	Between 18 and 21 years	121	26.2
	Between 22 and 25 years.	108	23.4
	Between 26 and 29 years	67	14.5
	Between 30 and 35 years	166	35.9
Household income	Less than 5000 SAR	57	12.3
	Between 5000 and 10000 SAR	157	34.0
	Between 10001 and 20000 SAR	157	34.0
	Between 20001 and 30000 SAR	41	8.9
	More than 30000 SAR	50	10.8
Employment status	Student	183	39.6
	Employee	138	29.9
	Unemployed	141	30.5
Social status	Single	253	54.8
	married	188	40.7
	Divorce	12	2.6
	other	9	1.9
Daily time spent on internet	Less than two hours	31	6.7
	2 hours to 4 hours	189	40.9
	6 hours to 8 hours	183	39.6
	9 hours or more	59	12.8

Table 1 - Demographic data of participants (n=462)

4. RESULTS

The proposed relationships were tested using multiple linear regressions, in addition to *t* test which were employed to explore the difference in influence between the two socialization agents and food shopping behavior.

Figure 1 provides a detailed analysis of regression results to determined factors associated with Millennials' dietary habits and food shopping behavior. Hypothesis H1 was partially supported as H1a ($\beta = 2.45$, $P < .01$) and H1c ($\beta = .178$, $P < .01$), indicating that seeking integration and social interaction and remuneration motivations were significant predictors for using social media to communicate with peers, while seeking information motive was not a significant predictor. Similarly, Hypothesis H2 was partially supported as H2a ($\beta = .336$, $P < .01$) and H2c ($\beta = .199$, $P < .01$), while H2b was not a significant predictor ($R^2 = .39$). Similar finding for motivation of using social media to communicate with influencers, where seeking integration and social interaction and remuneration motivations were significant predictors, while seeking information motive was not a significant predictor ($R^2 = .44$).



*** p-value < 0.1%

Figure 2 - Regression coefficients for the effect of peers and social media influencers on food shopping behavior

The mean effects of peer communication and social media influencers were tested using linear regression. Hypotheses H4, H5 were supported showing a direct positive effect on these two socialization agents on food behavior. Peer communication has a coefficient value of ($\beta = .528, P < .01$) and ($R^2 = .33$) while the coefficient value for social media influencers showed higher effect on food behavior ($\beta = .562, P < .01$) and ($R^2 = .37$). See figure (2).

Hence, a post hoc hypothesis was developed to further test the difference between the two socialization agents on Millennials food shopping behavior:

H5: There will be a statistically significant difference between peer communication and social media influencers on food shopping behavior.

The difference between peer communication and social media influencers was tested using T test. The results showed that social media influencers have more significant influence than peers on food shopping behavior (Table 2).

Socialization agents	Mean difference	St. deviation	T test	Sig
Peer communication- Social media influencers	1.477	1.455	21.845	0.001

Table 2 - Mean difference between the two socialization agents on food shopping behavior

5. DISCUSSION

The purpose of this study was to investigate the effect of social media on dietary behavior, and to identify motivations and behavioral outcomes of peers and influencers communication in social media regarding food purchase behavior where the theory of consumer socialization posed as a firm backbone for this study. Though, it needs to be stressed that this study is an initial attempt to measure the impact of motivations and food purchase behavior of two socialization agents. Various conclusions can be drawn from the study results.

When communicating with peers or influencers in social media, the main motivations for using social media among Millennials appeared to be similar for both socialization

agents. Both interaction and social integration and remuneration motivations appeared to have significant impact with the greatest impact for influencers. This indicates that the motivation of interacting with like-minded and socializing has the greatest impact. This finding supports the results of previous studies that they use social media for social motivations (Genner et al., 2017) and social support (Shaw et al., 2004; Foster et al., 2010; and Zhang et al., 2015). Moreover, this finding coincides with previous literature where collectivist cultures such as Korea and China retain stronger social relations with their online social networks more than users from individualistic cultures such as Americans (Chu and Choi, 2011, and Muralidharan et al., 2015). Hence, it appeared that cultural differences affect the main drivers for social media use. Regarding remuneration, results revealed that Saudi millennials are communicating with peers and influencers to gain economic value such as discount codes and promotions; with influencers have more impact, which might be due to retailers in Saudi Arabia rely more on influencer marketing more than paid social media or traditional marketing. This finding is consistent with previous studies such as (Muralidharan et al., 2015), which concluded that consumers from both collectivist and individualistic cultures communicate with peers to achieve economic benefits. Results also revealed that Saudi millennials do not rely on social media as a source of information for food products from both social media influencers and peers. This finding is contrary to results of previous studies such as (Muralidharan et al., 2015), which might be attributed to either cultural differences or might be product specific.

Among the tested two socialization agents, both have a significant effect on food shopping behavior yet, social media influencers have a greater impact than peers. Previous research concluded that credibility of celebrities has a positive impact on attitude towards both advertising and brand (Muda et al., 2013). Similarly, Kim et al., (2015) stressed that the para-social relations of users and celebrities have a positive relationship with purchase intentions. The reputation of celebrities on social media gives them a greater and a stronger opportunity to influence their followers' purchase decisions. It appears that having a well-known and credible person can positively influence consumers' attitudes to purchase products more than paid social media or traditional advertising.

6. CONCLUSION, THEORETICAL AND MANAGERIAL IMPLICATION

Consumer socialization theory can be used to explain Food shopping behavior through socialization agents such as peers and social media influencers, resulting from internal motivations such as interaction and social integration, information and remuneration. Social media influencers have large impact on purchase behaviors in general and food shopping behaviors in particular, which were highlighted in the current study. Though, these results should be taken with caution as estimating the effect of peers and influencers' communications in social media regarding food product is not an established practice in current marketing research.

In terms of managerial contribution, the increasing popularity of social media as a new form of communication especially among young consumers should be taken into consideration. The power of peers and influencers in consumers purchase decisions implies that managers should consider concentrating in using peer and influencers as an important form of marketing communication. Managers have to understand which motivations are important for consumers when communicating with peers and influencers about food products. Other managerial implication should be addressed to Ministry of Health and Saudi Food and Drug Authority (SFDA) as social media plays an important role in influencing consumers' dietary behaviors. Hence, the power of social media influence must be harnessed to protect consumers from advertisements for unhealthy diets to raise awareness about healthy food consumption.

Although the previously mentioned theoretical and managerial implications, this study has some limitations that need to be addressed. Only three motivations were examined in this study, where inclusion of other antecedents may give more explanation on how other motivations in using social media to communicate with peers and influencers effect food shopping behavior. In addition, this research examined social media platforms in general and did not regard a specific social media platform such as Twitter or Snapchat. Focusing in one social media platform could shed more light on how different socialization agents influence Millennials purchasing behavior through the use of this specific platform. Future research should be conducted to validate these findings as research on the influence of social media on food purchase behavior is very limited. Other motivations should be also tested to understand how millennials communicate with peers and influencers regarding products and how they influence their food purchase decisions.

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