



Malaysian female users' purchase intentions of celebrity-endorsed products on Instagram: A parasocial interaction perspective

* Tengku Siti Aisha Tengku Mohd Azzman Shariffadeen
taisha@iium.edu.my
International Islamic University

Aini Maznina A. Manaf
International Islamic University

ABSTRACT

A media user's imagined relationship with mediated characters and personalities can influence him/her in a variety of ways. Through celebrity-fan engagement on social media, fans can be influenced by their favourite celebrities in various ways, including wanting to practice a healthier lifestyle, considering cosmetic surgery or using certain brands. The introduction of contemporary new media, with easy access and heightened interactivity, has motivated scholars to re-examine how parasocial relationships may form online, and their effect on media users. However, little is known about how parasocial relationships influence online consumer behaviour. Accordingly, this study focuses on identifying the predictors of purchase intentions of celebrity-endorsed products among female Instagram users in Malaysia ($N = 630$). Using an online survey, they were asked to rate their social media engagement with a celebrity that they follow on Instagram as well as provide responses about the celebrity characteristics. Overall, results highlight the positive impact of parasocial interaction on the purchase intentions of celebrity-endorsed products. Specifically, findings suggest that parasocial interaction: (a) mediates the relationship between Instagram use and purchase intentions, and (b) partially mediates the relationship between attitude homophily and purchase intentions. The ramifications of these findings on parasocial interaction theory and the effect of celebrity endorsements on social media are also discussed.

Keywords: ***Attitude homophily, celebrity endorsements, Instagram use, parasocial interaction, purchase intentions***

INTRODUCTION

Online shopping is increasingly becoming a common occurrence in Malaysia. *The Star* (2019) reports that the revenue for e-commerce in Malaysia is steadily increasing at about 6% per year. Online shoppers in Malaysia tend to be young and female; Milo (2019) highlighted that more than half of the online shoppers in Malaysia are female, technology-savvy and young, between the ages of 25–34 years old. Although not as popular as desktop computers, Malaysian shoppers are also enthusiastically adopting m-commerce by using mobile devices to shop. The widespread use of mobile apps, such as UberEats, *Mudah*, and Carousel has facilitated online shopping and introduced convenience by way of normalising online payment (Marketing Magazine, 2017). As Malaysian consumers become more trusting of the online shopping environment, marketers target consumers who are also active social media users.

Due to this, it is becoming increasingly common for marketers to choose social media as a platform for their business dealings as it is considered dynamic thanks to its wider outreach and considerably low cost (Sexsmith & Angel, 2012). In a global study conducted by Williams (2019), the number of consumers engaged in social media shopping (i.e. discovering and purchasing products through social media platforms) was found to be rising. In line with this trend, Instagram recently announced that it was introducing Instagram shopping by launching a check-out feature in its mobile app, where you can store payment information to facilitate purchases (Newton, 2019). Among the 20 brands that have agreed to participate in this move include well-known brands such as MAC Cosmetics, Nike, Adidas, Michael Kors, Zara and Prada.

Additionally, marketers also attempt to attract online consumers through the use of celebrity endorsements on social media. Celebrity endorsers are any well-known individuals who have gained public recognition and utilise this public recognition to market consumer goods through advertisements (McCracken, 1989). In today's social media environment, a celebrity endorser can be any public figure who has a large number of following on social media, including non-traditional celebrities such as social media influencers on YouTube, Facebook, Twitter or Instagram. The use of celebrity endorsers in advertisements has seen higher ratings and increased purchase intentions compared to advertisements that use non-celebrity endorsers (Atkin & Block, 1983). Researchers who study the role of celebrity endorsement in Malaysia found that celebrity endorsements have a positive effect on consumers, including purchase intentions and how they perceive a brand (Abdul Rashid, Nallamuthu & Md Sidin, 2002; Chin, Choy & Pang, 2017; Syed Mat Dom, Ramli, Lim, & Tan, 2015). These studies also pointed out that celebrity characteristics such as attractiveness, trustworthiness and credibility are also important in influencing purchase decisions.

More importantly, purchase intentions of celebrity-endorsed products are influenced by the interactions formed between celebrity endorsers and their fan base. The concept of mediated characters (including celebrities) and their relatability with the audience was addressed by Horton and Wahl (1956). It has been aptly labelled as 'parasocial interaction', which alludes to the intimate relationship formed between mediated characters and their fans. When it was initially conceptualised, research on parasocial interaction focused on television and film audience; where even with limited interactions with mediated characters, media audience perceive media characters and personalities as a friend and behave as if they are engaged in a reciprocal relationship with these characters or personalities.

Most recently, the concept of parasocial interaction has been expanded by researchers in the new media environment by examining parasocial relationships on social media. As social media allows for more interactive, intimate and open communication between celebrity endorsers and their fans, it can be argued that celebrity endorsers may yield a persuasive influence over their fan base by being friendly and approachable on social media. In turn, social

media users who are deeply engaged in celebrity-fan parasocial relationships may assert their loyalty through various activities, including showing intent on purchasing products endorsed by the celebrity on social media.

However, scholars argue that there is a lack of understanding in terms of how consumers perceive relationships with celebrity endorsers, and how this affects their consumer behaviour (Chung & Cho, 2017). Therefore, to tackle this gap, this study proposes that Malaysian celebrity endorsers may influence social media users' intention to purchase celebrity-endorsed products, particularly if they feel that the celebrities are relatable, share a great deal of similarities with them and if they are actively engaged with the celebrities on social media. This has become a crucial factor considering how celebrity engagement with fans on social media are becoming more widespread, open, interactive, and reciprocal to some extent. Social media engagement between celebrities and fans may encourage fans to adopt a similar lifestyle by mimicking their behaviour, including being more inclined to purchase certain celebrity-endorsed products.

Thus, drawing upon the concepts of parasocial interaction and celebrity endorsements on social media, the main research objective of this study was to examine the relationships between Instagram use, attitude homophily, parasocial interaction and subsequently purchase intentions among female Instagram users in Malaysia. The specific objectives of this study were as follows: to analyse the mediating effect of parasocial interaction on the relationship between Instagram use and purchase intention of celebrity-endorsed products on Instagram; and to examine the mediating effect of parasocial interaction on the relationship between attitude homophily and purchase intentions of celebrity-endorsed products on Instagram.

LITERATURE REVIEW

Parasocial interaction and social media

Donald Horton and Richard Wohl first coined the parasocial interaction concept in 1956. According to them, parasocial interaction is a seemingly intimate relationship formed between mediated characters and their audience, despite having limited, actual interactions with them (Horton & Wahl, 1956). Scholars argue that these relationships are a natural by-product of time, where the more time spent and the longer viewers are exposed to these characters, the increasingly intimate the relationship becomes (Perse & Rubin, 1989). Since its conception, researchers have expanded the concept by examining parasocial bonds formed in different contexts, such as through radio talk shows (Rubin & Step, 2000), television talk shows (Rubin, Haridakis & Eyal, 2003), television series and situational comedies (Auter & Palmgreen, 2000; Chory-Assad & Yanen, 2005; Cohen, 2004; Eyal & Rubin, 2003; Hoffner, 1996), books and novels (Burnett & Beto, 2000; Schmid & Klimmt, 2010), reality television shows (Finnerty & Reynolds, 2004; Ho, 2007) and K-dramas (Hassim, Jayasainan, & Khalid, 2019).

Most recently, the proliferation of new media has encouraged scholars to revisit the concept of parasocial interaction online, where increased connectivity and interactions between media users may affect how such relationships are formed and maintained online. Social media allows users to express their support to celebrities and interact with them in many different ways, including liking their posts, commenting on their posts, reposting their posts and following them on multiple social media platforms. Khalid, Jayasainan, and Hassim (2018) argued that young social media users in Malaysia are particularly susceptible to social media 'influencers' when using Instagram, and these influencers often review products, services and social trends on their social media accounts.

Accordingly, several studies have examined the effects of parasocial interactions online between celebrities and those who 'follow' them on social media (Chung & Cho, 2017; Ding & Qiu, 2017; Kim, Ko, & Kim, 2015; Kim & Song, 2016; Schroath, 2016; Spangardt, 2017). Overall, these studies focused on the relationship between social media use and characteristics of celebrities. There were mixed findings with regards to social media use and parasocial interaction. Spangardt (2017) established that affinity for Instagram and intensity of Instagram use do not significantly influence the parasocial interaction among Instagram users with athletes whom they follow on Instagram. Conversely, Schroath (2016) found that time spent watching, reading and listening to the media involving a celebrity, either on Facebook or Twitter, significantly influence levels of parasocial interaction with said celebrity. Similarly, Kim and Song (2016) found that retweeting celebrity posts on Twitter increased social presence, and therefore, increased the parasocial interaction. Therefore, in this study we propose that for female Instagram users who religiously follow celebrities on Instagram, heavier exposure to celebrity endorsers due to frequent social media interactions will increase their parasocial bonds with their favourite celebrities. As such, the following hypothesis was proposed:

H1: Instagram use is positively associated with parasocial interaction with a favourite celebrity followed on Instagram.

Additionally, increased attitude homophily may also lead to higher levels of parasocial interaction with said celebrity. Attitude homophily refers to perceived similarities between a celebrity and their fans in terms of attitude, such as way of thinking and behaving (McCroskey, Richmond & Daly, 1975). The way people perceive each other is assumed to have a powerful influence in the communication encounter, including perceptions of credibility, attraction and degrees of parasocial interaction. As such, when social media users religiously follow their favourite celebrity online, they find common ground with their favourite celebrity in terms of lifestyle, attitude, and behaviour by constantly observing the celebrity's behaviour on social media through their daily posting of photos, videos, and Instagram stories. Having interpersonal similarities with a favourite celebrity (e.g. wearing similar apparel or believing in the same social causes) may lead to media consumers who identify more strongly with celebrities. Celebrity fans may even liken their favourite celebrity to an actual friend that they have in their social circle. For this study, it is predicted that female fans are more likely to perceive shared similarities between themselves and other female celebrities and would therefore inclined to bond with them on a parasocial perspective/level. Therefore, the following hypothesis was proposed:

H2: Attitude homophily is positively associated with parasocial interaction with a favourite celebrity followed on Instagram.

Celebrity characteristics and purchase intentions of celebrity-endorsed products

Celebrity endorsement is one of the most frequently strategies employed by marketers as a promotional tool in online business (Nugraha, Kusumawardani & Octavianie, 2018). Utilisation of celebrities who are public figures, well-known and widely recognised by the public will more likely boost a business reputation and attract customers to purchase its products. In the Malaysian context, successful celebrity entrepreneurs such as Noor Neelofa Mohd Noor and Vivy Sofinas Yusof have been known to launch and promote their own brands online and to market their lifestyle on social media. Both have a large social media following (e.g. Neelofa boasts 6.4 million Instagram followers while Vivy has 1.7 million followers on Instagram), and their own fashion brand.

Several studies have examined celebrity endorsements in Malaysia, and its impact on consumer behaviour, including purchase intentions, purchase behaviour, attitude towards the advertisements, and advertising effectiveness (Abdul Rashid et al., 2002; Chin et al., 2017; Syed Mat Dom et al., 2015). Specifically, these studies addressed the impact of celebrity characteristics on consumer behaviour. For example, Syed Mat Dom et al. (2015) found that when a celebrity endorser is perceived as credible, trustworthy and attractive, consumers are likely to perceive the advertisement as effective. Similarly, Chin et al. (2017) found that endorsers' credibility and likeability has a positive influence on purchase intentions. More interestingly, they also found that while brand credibility may not be high, the credibility of the celebrity endorser plays a more important role. Finally, according to Abdul Rashid et al. (2002), for an advertisement to be effective, it is very important to pair the right celebrity endorser to the right product. Malaysian consumers tend to perceive celebrity endorsements of products as useful, when they provide the right information about the product.

Overall, these studies demonstrate the positive impact of celebrity characteristics on consumer behaviour. Thus, in a similar vein, an endorser's perceived similarity with their fans may also have a positive influence on intention to purchase celebrity-endorsed products on social media. Also, the more relatable the celebrity is perceived to be, the more likely it is for the fan to express their support to the celebrity by having the intention to purchase products endorsed by the celebrity. Accordingly, this study predicts that when a female fan perceives an intimate relationship with their favourite celebrity, and a higher degree of perceived shared similarities, they are more likely to develop an intention to purchase products endorsed by the celebrity, as they aspire to be like the celebrity they follow on social media. Specifically, the following hypotheses were proposed:

H4: Attitude homophily is positively associated with intention to purchase celebrity-endorsed products on Instagram.

H5: Parasocial interaction with a favourite celebrity on Instagram is positively associated with intention to purchase celebrity-endorsed products on Instagram.

Social media use and purchase intentions

Social media or social networking websites (SNS) are "web-based services that allow individuals to construct a public or semi-public profile within a bounded system, to articulate a list of other users with whom they share a connection, and view or traverse their list of connections and those made by others within the system" (Boyd & Ellison, 2007, p. 2). Instagram is one of the more popular social media sites of late in Malaysia. A study by global research firm, Kantar TNS reports that Malaysians are one of the most active Instagrammers in Asia Pacific (TNS Global, n.d.). Users prefer Instagram due to its visual content and the increased use of more powerful smartphones has enabled users to upload and edit photos with ease (Lee, 2016). A study conducted by the Malaysian Communication and Multimedia Commission (MCMC) in 2017 reiterates similar results; next to Facebook, Instagram is the most widely used social networking site in Malaysia (MCMC, 2017).

Many researchers have explored the use of social media in influencing purchase intentions among Malaysian consumers. In one study on social media use and its influence on consumer purchase decisions pertaining to hotels, social media use has been found to positively influence consumer purchase intentions, because it encourages social interaction and provides an excellent opportunity for customer engagement (Liew & Song, 2019). However, other researchers found that the social influence of family and friends through social media use did not emerge as a significant predictor of purchase intentions (Sharifi Fard, Tamam, Hassan, Waheed & Zaremohzzabieh, 2016). In this study, we argue that celebrity endorsers may wield more social influence compared to family or friends among young social media users, and that

the use of social media to follow celebrities leads to increased engagement with celebrities, and this in turn will consequently affect purchase intentions. Accordingly, we suggest that:

H3: Instagram use is positively associated with intention to purchase celebrity-endorsed products on Instagram.

The mediating role of parasocial interaction

Further, as the use of social media to engage with celebrities becomes more widespread, frequent social media interactions with the celebrity may positively influence a consumer's intention to purchase products endorsed by the celebrity on Instagram. An important aspect of social media interactions is that it can be potentially intimate, frequent and invites personal self-disclosure (Chung & Ho, 2017). Thus, when a celebrity fan is immersed in a parasocial relationship with a celebrity, this has an indirect effect on the fan's behaviour, by way of repeated exposure to the celebrity through social media use, especially if the celebrity is open, expressive and personable on his/her social media account. Zhuang (2018) found evidence that parasocial interaction mediated the relationship between social media engagement and perceived interactivity and openness of celebrities. In this study, we advocate that parasocial interaction may have an indirect effect on online consumer behaviour, through social media use. Specifically, we propose that:

H6: Parasocial interaction will mediate the relationship between Instagram use and purchase intention of celebrity-endorsed products

Further, in a study among Singaporean youths, Wen found that parasocial interaction mediates the relationship between exposure to celebrity and fans' attitude towards cosmetic plastic surgery (2017). Additionally, Jeong and Park (2013) found that through entertainment-education programs in Korea, parasocial interaction has an indirect effect on intention to register as organ donors. These two studies suggest that parasocial interaction may indirectly affect fans' behaviour, when they want to mirror a celebrity's lifestyle, attitude and behaviour. Comparatively, we suggest that parasocial interaction with a celebrity on Instagram will also have an indirect effect on online consumer behaviour, through shared similarities with the celebrity. As such, the following hypothesis was proposed:

H7: Parasocial interaction mediates the relationship between attitude homophily and purchase intention of celebrity-endorsed products on Instagram.

Based on the existing literature review on parasocial interaction, social media use and celebrity endorsements, the hypotheses for this study are summarized as below:

H1: Instagram use is positively associated with parasocial interaction with a favourite celebrity followed on Instagram.

H2: Attitude homophily is positively associated with parasocial interaction with a favourite celebrity followed on Instagram.

H3: Instagram use is positively associated with intention to purchase celebrity-endorsed products on Instagram.

H4: Attitude homophily is positively associated with intention to purchase celebrity-endorsed products on Instagram.

H5: Parasocial interaction with a favourite celebrity on Instagram is positively associated with intention to purchase celebrity-endorsed products on Instagram.

H6: Parasocial interaction mediates the relationship between Instagram use and purchase intention of celebrity-endorsed products on Instagram.

H7: Parasocial interaction mediates the relationship between attitude homophily and purchase intention of celebrity-endorsed products on Instagram.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

This study predicts that female users' Instagram use and attitude homophily affect their parasocial interaction with a favourite celebrity, which subsequently will affect their intention to purchase celebrity-endorsed products on Instagram (Figure 1).

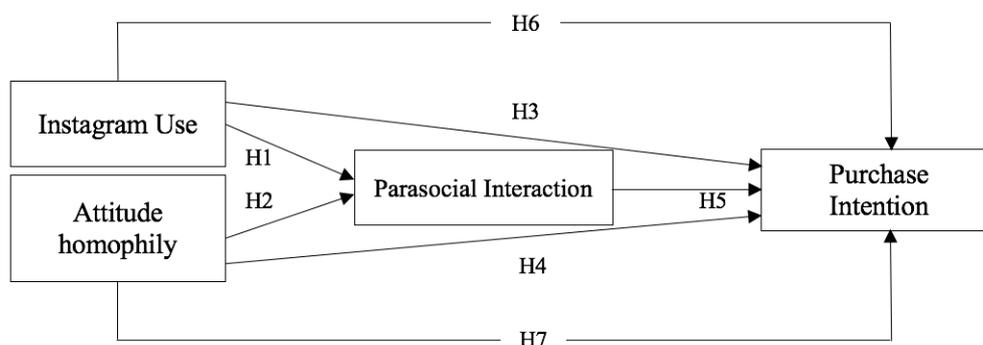


Figure 1. Conceptual framework depicting relationship between research variables

METHODOLOGY

Procedure

The sample of this study is female university students from a public university in Malaysia ($N = 630$). As statistics indicate that Malaysian females are more likely to engage in online shopping, and social media users in Malaysia tend to be young, this sample was deemed appropriate for the study. As a criterion for participation, these students will need to be regular users of Instagram. Those who were not active Instagram users were eliminated from the sample. An online survey using Google Form was distributed among undergraduate students taking introductory communication courses in a university from February–May 2017.

They were given the option to forward the research instrument to at least five other female friends studying in the same university, and those who did were compensated with course credits. The survey took 15-20 minutes to complete, and respondents were instructed to think of a favourite female celebrity they follow on Instagram, while rating their social media engagement with the celebrity and evaluating their perception of the celebrity, including attitude homophily, and their parasocial interaction with said celebrity. They also rated the celebrity behaviour in endorsing products, including types of celebrity-endorsed products on Instagram, and frequency of product mentions. At the end of the survey, all respondents were given a chance to participate in a lucky draw that would enable them to win one of ten gift cards from a local bookstore.

Measurement

The independent variables in this study included Instagram use, parasocial interaction with a favourite female celebrity, and perceived similarities with the celebrity (i.e. attitude homophily), while intention to purchase celebrity-endorsed products served as the dependent variable. Instagram use was measured by average daily time (hours) spent on Instagram. The assessment of parasocial interaction with a favourite female celebrity on Instagram was adopted from a 22-item scale created by Auter and Palmgreen (2000). In this unidimensional scale, the items assessed the fan's perception of the celebrity based on their observations of the celebrity's behaviour on Instagram; this includes how the celebrity solves problems,

similarities with an actual friend that they have in real life, relatability with the celebrity and whether they cared about the celebrity. All items on this scale were measured on a 5-point Likert scale, where responses ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). An example of an item from this scale was “I would like to meet this celebrity in person”. In their study, Auter and Palmgreen (2000) have documented the acceptable reliability for the scale ($\alpha = .84$). The mean score for parasocial interaction was computed by summing up all items and averaging the score.

Further, attitude homophily was measured by examining the extent to which a fan finds perceived similarities with a favourite celebrity based on their observations of the celebrity's behaviour, in terms of how they think and behave, and how alike or dissimilar they are with the celebrity. Attitude homophily was measured using the bipolar scale created by McCroskey et al. (1975), which they found reliable ($\alpha = .87$). The scale was designed to encapsulate the perceived similarities between the respondent and the target (i.e. favourite celebrity followed on Instagram). There were 4 items for measuring attitude homophily, and responses ranged from 1 to 7, where responses 1 and 7 indicate that the respondents have very strong feelings about the item in question, responses 2 and 6 indicate strong feelings, while responses 3, 4 and 5 indicate that the respondent has fairly weak feelings. An example of the item used for measuring attitude homophily was “My favourite celebrity is similar/different to me”. A score higher than 22 reflects a high degree of perceived similarity in attitude between the individual and their favourite celebrity. A summation of the scale was carried out to measure attitude homophily as a single variable.

Finally, purchase intention refers to the willingness of individuals to purchase a certain product or service (Ajzen & Fishbein, 1980). In this study, purchase intention refers to the purchase intention of female Instagram users for products or services that have been endorsed by their favourite celebrities on Instagram. The assessment for purchase intention was adapted from a three-item scale used in previous studies, where the scale has been found to be consistently reliable and valid (Bagozzi, 1981; Chung & Cho, 2017; Yoo & Donthu, 2001). Items were measured on a 5-point Likert scale, where responses ranged from 1 (*Highly unlikely*) to 5 (*Highly likely*). An example of an item from the scale was “I intend to purchase a product recommended by a favourite celebrity I follow on Instagram”. The mean score for purchase intention was computed by summing up all items and averaging the score. Table 1 displays the Cronbach alpha values for all the main variables used in the study, and these values indicate their internal cohesiveness and consistency (Table 1).

Table 1. Means, standard deviations and reliability of variables

| Variable | M | SD | No. of Items | Reliability (Cronbach's α) |
|------------------------|--------|-------|--------------|------------------------------------|
| Attitude homophily | 15.737 | 4.678 | 4 | .889 |
| Parasocial interaction | 3.301 | 0.659 | 22 | .929 |
| Purchase intention | 3.137 | 1.019 | 3 | .943 |

FINDINGS AND DISCUSSION

Demographic background of respondents

The respondents of this study were mainly female undergraduate students (99%). They were also relatively young; the age ranged between 18 and 36 years old ($M = 21.08$, $SD = 1.64$). A majority were students specializing in Human Sciences (70%) and did not have a fixed monthly income (95%). Table 2 below displays specific details pertaining to the respondents' demographic background.

Table 2. Demographic background of respondents

| Demographic characteristics | Category | Frequency | Percentage |
|-----------------------------|-------------------------------------|-----------|------------|
| Age group | 18 and below | 4 | 0.6 |
| | 19 – 20 years old | 243 | 38.6 |
| | 21 – 22 years old | 285 | 45.2 |
| | 23 and above | 98 | 15.6 |
| Faculty | Human Sciences & Revealed Knowledge | 440 | 69.8 |
| | Economics | 48 | 7.6 |
| | Education | 29 | 4.6 |
| | Law | 28 | 4.4 |
| | Engineering | 24 | 3.8 |
| | Others | 61 | 9.7 |
| Monthly income | No income | 600 | 95.2 |
| | Below RM500 | 18 | 2.9 |
| | More than RM500 | 12 | 1.9 |
| Level of study | Undergraduates | 623 | 98.9 |
| | Postgraduates | 7 | 1.1 |

Instagram use related to celebrities

The respondents of the study were active Instagram users; averaging almost 5 hours of daily Instagram use ($M = 4.92$, $SD = 4.27$). They used their account to follow celebrities, with almost half following at least 1–5 celebrities on their account (47%), and 20% following 6–10 celebrities. Findings indicate that respondents tended to follow very popular celebrities with a large following ($M = 1851077.37$, $SD = 2420356.23$). A majority (85%) followed local celebrities active in the entertainment industry (42%), such as singers (e.g. Siti Nurhaliza), actresses (i.e. Neelofa Mohd Nor), television hosts (e.g. Diana Amir), and radio DJs (e.g. Farah Fauzana), while almost one-third of the respondents (27%) followed non-traditional celebrities i.e. social media celebrities, such as Hanis Zalikha and Fynn Jamal. They also followed well-known businesswomen or female entrepreneurs such as Vivvy Yusuf (22%). Most of the celebrities followed can also be regarded as fashion influencers in Malaysia, as they either had their own fashion brands or were appointed as spokesperson for other fashion brands. These celebrities often posted photos of themselves wearing or using the products they endorse on social media. Also, fans appear to be actively engaged with these celebrities on social media. Specifically, these respondents occasionally (38%) visited the Instagram profile of the celebrity, or even on a frequent basis (24%), always liked or commented on their photos (18%), scrolled through their posts and a minority even followed their favourite celebrity on multiple social media platforms, e.g. Twitter, YouTube, Facebook. On the other hand, the celebrity rarely reciprocated; with most reporting that the celebrities do not follow back (96%), and never liked or commented on their posts (94%).

Celebrity endorsements on Instagram

Also apparent is the ubiquitous use of social media for celebrity endorsements. Celebrities use Instagram to endorse their own product or other well-known brands in their capacity as a spokesperson. When asked to recall celebrity mentions of products on Instagram in the past year, one-third of respondents reported that celebrities occasionally mentioned products on their account (31%), while 25% rated product mentions as either 'frequent' or 'always'. Respondents also listed the specific products that were mentioned on celebrity Instagram accounts. As fashion influencers, the most popular products endorsed by celebrities on their accounts are make-up and beauty products, followed by clothes (i.e. *abayas*) and accessories (i.e. *hijab*, scarves, shawls).

Table 3 highlights descriptive information on the respondents' Instagram use related their favourite celebrity and celebrity endorsements of products on Instagram.

Table 3. Instagram use related to favourite celebrities

| Features | Category | Frequency | Percentage |
|---|------------------------|------------------|-------------------|
| Number of celebrities followed on Instagram | 1–5 celebrities | 299 | 47.5 |
| | 6–10 celebrities | 123 | 19.5 |
| | 11–20 celebrities | 94 | 14.9 |
| | 21 or more celebrities | 114 | 18.1 |
| Celebrity industry | Entertainment | 263 | 41.7 |
| | Social media | 169 | 26.8 |
| | Business | 140 | 22.2 |
| | Medical | 20 | 3.2 |
| | Fashion | 15 | 2.4 |
| | Others | 23 | 3.6 |
| Nationality of celebrity | Malaysian | 534 | 84.8 |
| | Non-Malaysian | 96 | 15.2 |
| Followed back by a celebrity | No | 602 | 95.5 |
| | Yes | 28 | 4.5 |
| Celebrity liked/commented on Instagram | Never | 589 | 93.5 |
| | Rarely | 18 | 2.9 |
| | Occasionally | 16 | 2.5 |
| | Frequently | 4 | 0.6 |
| | Always | 3 | 0.5 |
| Follow celebrity on other social media | Only Instagram | 482 | 76.5 |
| | Twitter | 77 | 12.2 |
| | YouTube | 31 | 4.9 |
| | Facebook | 30 | 4.8 |
| | Others | 10 | 1.6 |
| Visit celebrity profile on Instagram | Never | 16 | 2.5 |
| | Rarely | 184 | 29.2 |
| | Occasionally | 241 | 38.3 |
| | Frequently | 141 | 22.4 |
| | Always | 48 | 7.6 |
| Liked/commented on celebrity post | Never | 39 | 6.2 |
| | Rarely | 131 | 20.8 |
| | Occasionally | 193 | 30.6 |
| | Frequently | 152 | 24.1 |
| | Always | 115 | 18.3 |
| Celebrity mention of products in 2017 | Never | 127 | 20.2 |
| | Rarely | 147 | 23.3 |
| | Occasionally | 196 | 31.1 |
| | Frequently | 108 | 17.1 |

| | Always | 52 | 8.3 |
|---|--|-----|------|
| Celebrity-endorsed products on Instagram* | Make-up & beauty products | 188 | 42.0 |
| | Accessories, i.e. hijab/scarves/shawls | 170 | 37.9 |
| | Clothes | 88 | 19.6 |
| | Food/Drink | 32 | 7.1 |
| | Others | 58 | 12.9 |

* Respondents allowed multiple responses on this question

Relationship between Instagram use, attitude homophily, parasocial interaction and purchase intention of celebrity-endorsed products on Instagram

Zero-order correlation was employed to establish the relationship among the four variables in the study: Instagram use, attitude homophily, parasocial interaction and purchase intention. Table 4 shows that there is a moderate, positive relationship between parasocial interaction and purchase intention ($r = .487, p < .001$), and between attitude homophily and parasocial interaction ($r = .589, p < .001$). There is also a weak, positive relationship between attitude homophily and purchase intentions ($r = .345, p < .001$), and a very weak, positive relationship between parasocial interaction and Instagram use ($r = .143, p < .001$), and between Instagram use and purchase intention ($r = .133, p < .05$). Therefore, these results indicate that there is empirical support for hypotheses 1–5, and accordingly, they were accepted. Overall, there is a significant, positive relationship between the independent variables (with the exception of attitude homophily and Instagram use), the mediating variable and the dependent variable, and the relationships range from very weak to moderate.

Table 4. Zero-order and partial correlations

| Control | Variable | IG use | Attitude homophily | Parasocial interaction | Purchase intention |
|------------------------|------------------------|-----------------------|----------------------|------------------------|--------------------|
| None | IG use | 1 | | | |
| | Attitude homophily | $r = .060, p = .141$ | 1 | | |
| | Parasocial interaction | $r = .143, p = .000$ | $r = .589, p = .000$ | 1 | |
| | Purchase intention | $r = .133, p = .000$ | $r = .345, p = .000$ | $r = .487, p = .000$ | 1 |
| Parasocial interaction | IG use | 1 | | | |
| | Attitude homophily | $r = -.033, p = .412$ | 1 | | |
| | Purchase intention | $r = .073, p = .073$ | $r = .056, p = .165$ | 1 | |

Partial correlations were also used to study the mediating role of parasocial interaction in the effects of Instagram use, attitude homophily and purchase intention of celebrity-endorsed products on Instagram among the respondents. The results show that when controlling for parasocial interaction, the moderate, weak and very weak relationships shown in the zero-order correlation were reduced to a negative and even negligible relationship. Specifically, the relationship between Instagram use and attitude homophily ($r = -.033, p = .412$) has been rendered negative and insignificant, implying that parasocial interaction mediated the relationship between Instagram use and attitude homophily. The remaining results also present negligible outcomes for the relationships between Instagram use and purchase intention ($r = .073, p = .073$), and between attitude homophily and purchase intention ($r = .056, p = .165$),

thus also implying mediation. Without parasocial interaction, there is a negligible relationship between Instagram use and purchase intentions. Similarly, the relationship between attitude homophily and purchase intention has been rendered insignificant. These findings imply that parasocial interaction mediates the relationship between Instagram use and purchase intentions (H6) and mediates that between attitude homophily and purchase intentions (H7).

To further supplement these findings, two separate hierarchical regression analyses were conducted (Table 5 and Table 6). Overall, the results of the regression analyses corroborate and supplement the results from the zero-order and partial correlations. In Table 5, results indicate that parasocial interaction fully mediates the relationship between Instagram use and purchase intention ($t = 1.716, p = .073$). There is a beta reduction from .133 to .064. Therefore, hypothesis 6 is accepted.

Table 5. Hierarchical regression analysis for Instagram use and purchase intention with parasocial interaction as a mediator

| Model | Variable | Unstandardised coefficient | Standardised coefficient β | t | p |
|-------|--|----------------------------|----------------------------------|--------|------|
| 1 | Constant | 2.982 | | 47.710 | .000 |
| | Instagram use | .032 | .133 | 3.317 | .001 |
| | F=11.002, p=.001; R=.133; Adjusted R ² =.016; R ² change=.018; F change=11.002, p=.001 | | | | |
| 2 | Constant | .582 | | 3.161 | .002 |
| | Instagram use | .015 | .064 | 1.796 | .073 |
| | Parasocial interaction | .752 | .485 | 13.635 | .000 |
| | F=100.133, p=.000; R=.498; Adjusted R ² =.246; R ² change=.230; F change=185.199, p=.000 | | | | |

Similarly, parasocial interaction partially mediates the relationship between attitude homophily and purchase intentions. There is a beta reduction from .345 to .088. Thus, there is partial support for hypothesis 7. Detailed results are displayed in Table 6.

Table 6. Hierarchical regression analysis for attitude homophily and purchase intentions with parasocial interaction as a mediator

| Model | Variable | Unstandardised coefficient | Standardised coefficient β | t | p |
|-------|--|----------------------------|----------------------------------|--------|------|
| 1 | Constant | 1.955 | | 14.590 | .000 |
| | Attitude homophily | .300 | .345 | 9.199 | .000 |
| | F=84.622, p=.000; R=.345; Adjusted R ² =.117; R ² change=.119; F change=84.622, p=.000 | | | | |
| 2 | Constant | .611 | | 3.363 | .001 |
| | Attitude homophily | .077 | .088 | 2.051 | .041 |
| | Parasocial interaction | .673 | .435 | 10.128 | .000 |
| | F=100.440, p=.000; R=.493; Adjusted R ² =.033; R ² change=.124; F change=102.571, p=.000 | | | | |

CONCLUSION

A main objective of this study was to examine the relationship between Instagram use, attitude homophily, parasocial interaction, and purchase intentions among Malaysian female university students. To test the hypotheses, zero-order correlations and hierarchical regression were conducted. Findings indicate that there is a moderate relationship between parasocial interaction and purchase intentions (H5), and a moderate relationship between attitude homophily and parasocial interaction (H2). There is also a weak relationship between attitude homophily and purchase intention (H4), and a very weak relationship between Instagram use and parasocial interaction (H1), and between Instagram use and purchase intention (H3). Also, parasocial interaction has been found to mediate the relationship between Instagram use and purchase intentions (H6), and partially mediates the relationship between attitude homophily and purchase intentions (H7).

Overall, findings appear to support the general assertion that, to some extent, social media use and attitude homophily do affect parasocial interaction, which subsequently affects purchase intentions. These findings offer some useful insights into the role of parasocial interaction in the online environment, where it is found to have a positive impact on consumer behaviour (e.g. Schroath, 2016). Specifically, the parasocial relationship formed online between celebrities and their fans can be regarded as an effective social media marketing strategy. The female respondents in this study followed relatively young, local celebrities who can arguably be perceived as approachable, friendly and accessible, very much akin to a friend that they may actually have in real life. Also apparent is the importance of perceived shared similarities between fans and celebrities, as it helps to cement the parasocial bond between celebrities and fans. In sum, when fans can identify with their favourite celebrities through perceived similarities, and continuously connect with them via social media, they may be more inclined to adopt similar behaviours and/or lifestyle, including having the intention to purchase similar clothing, makeup, beauty products or accessories, endorsed by the same celebrity.

Finally, findings also suggest that celebrity endorsements positively influence purchase intentions of consumer products and services, as found in previous research (e.g. Chin et al., 2017; Syed Mat Dom et al., 2015). It is therefore crucial that companies ponder upon celebrity endorsement to distinguish their products and increase awareness among Malaysian consumers. For instance, there should be a concerted effort by marketers to ensure the right fit between the celebrity endorsers and the brands/types of product they endorse (Abdul Rashid et al., 2002). Another interesting note is that perhaps consumer purchase intentions are not only influenced by the celebrity spokesperson endorsing the product, but also the types of products being endorsed. The products endorsed by celebrities in this study are low-involvement products and are perceived as something that also fits comfortably within their own lifestyle (i.e. useful, affordable, trendy and within a certain price range) but still has the prestige of being associated with a favourite celebrity that they may aspire to emulate. This assertion is supported by the respondents' background; despite having relatively low purchasing power (i.e. based on the relatively low figure for fixed monthly income), they were still interested to purchase products endorsed by the celebrity.

Limitations and future research

A primary limitation of this study is in terms of its main sample; as reiterated earlier, the participants of this study were mainly undergraduate students with low purchasing power due to the lack of a stable monthly income. The researchers attempted to circumvent this problem by recruiting additional sample through the main sample; however the additional sample also possessed similar characteristics to the main sample. Future studies should consider focusing on young working women in Malaysia who use social media and have higher purchasing

power, as they may have different consumer habits when it comes to purchase intention of online products and when perceiving celebrity-endorsed products.

Additionally, the study context, i.e. Malaysia, may also have a bearing on the study findings due to cultural differences. For instance, Malaysia is considered as an extremely high power-distance country, which refers to the extent to which less powerful members of organisations and institutions in a society (e.g. family, community) are accepting of power inequality (Hofstede, 2011). Thus, in a high-power distance society, when power inequities are the norm, those who occupy a high status due to their socio-economic position in the society (e.g. celebrities) have a large fan base and may wield greater social influence. Subsequently, celebrity endorsers may influence their young fans in terms of purchasing behaviour due to cultural influence, and for this reason, parasocial interaction has a positive effect on purchase intentions and can mediate the relationship between Instagram use and purchase intentions. Accordingly, future studies should consider controlling for individual cultural value dimensions when examining the impact of celebrity endorsers on purchase intentions.

Finally, worth noting is the cross-sectional data in which the study is based on. The results are based on correlational analyses and should not imply causation. Furthermore, surveys are also affected by memory and recall issues. For example, respondents may have overestimated their habits when it comes to social media use related to celebrities, or their recall of product mentions. Therefore, it is recommended that future studies employ various types of research design, such as combining quantitative methods with those that are more qualitative in nature, such as using in-depth interviews or focus group discussions among celebrity fans, when examining social media habits, and other pertinent variables related to celebrity endorser characteristics (i.e. credibility, trustworthiness, attractiveness, likeability) that may also impact intention to purchase celebrity-endorsed products on social media.

In summary, as technology continues to evolve, m-commerce and social media shopping may become a widespread norm among online consumers in Malaysia. Therefore, marketing strategies should be tailored to attract online consumers, including using approachable and social media-friendly celebrity endorsers to market products and services on social media.

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Tengku Siti Aisha Tengku Mohd Azzman Shariffadeen

is an Assistant Professor at the Department of Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia (IIUM). She has been with IIUM since 2004. In 2014, she obtained her PhD in Communication Studies from Kent State University, Ohio, USA. Her research interest lies mainly in cultural diversity and media use, and the use of social media and new communication technology in interpersonal communication.

Aini Maznina A. Manaf

is an Associate Professor at the Department of Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia (IIUM). She obtained her PhD in 2012 from the University of Queensland, Australia. Her research interest is in organisational communication, communication in Islam, intercultural communication and media studies.
