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A cross cultural study of gender differences in omnichannel retailing contexts

Abstract

This research examines gender difference in omnichannel experience in modern shopping malls, combining personal, physical and virtual encounters. It proposes a new theoretical model: the gender-based shopping mall omnichannel experience model. Data was collected using 1,139 questionnaires completed by millennial shoppers in the United Kingdom and United Arab Emirates. Data was analysed using partial least squares. The results showed a shift in males shopping behaviour as they pay more attention to peer interaction on social platforms, service excellence, convenience, diversity and personalisation in shopping malls than female shoppers, while aesthetics and privacy are more important for female shoppers.

Keywords: Omnichannel experience; shopping malls; service encounters model; trust commitment theory; cross-national research; gender

1. Introduction

Over the years, shopping malls have made a considerable influence on the economic and social welfare of both consumers and communities (Haj-Salem et al., 2016; Katrodia and Soni, 2018). Despite their substantial impact on the economy, there is a major drop in the number of shoppers visiting physical stores at an alarming rate. By 2022, it is expected that one out of every four shopping malls in the United States could go out of business (Sanburn, 2017). This is largely due to the advent of online and mobile shopping which have led to a dramatic change in consumer shopping behaviours and preferences.

In the past few years, shopping malls have been striving to provide unique shopping experiences to respond to the different desires of shoppers (Gong and Janssen, 2015). To counter this change

in shoppers' preferences, shopping malls are shifting to omnichannel retailing. This strategy, named omnichannel retailing, involves the integration of different technologies such as: mobile applications, artificial intelligence, virtual reality, augmented reality and biometrics (Morgan, 2018). The growing popularity of omnichannel retailing in recent years has significantly transformed the retail landscape (Herhausen et al., 2015).

Omnichannel shopping malls bring together the offline and online channels, where a shopper's experience is seamlessly enhanced via the simultaneous use of accessible distribution channels, regardless of the path used to make a purchase (Agius, 2019; Gerritsen et al., 2014). However, the majority of previous studies either focused on the brick-and-mortar shopping experience (offline) (e.g. El-Adly, 2007; Keng et al., 2007; Kim et al., 2015; Merrilees and Miller, 2019) or the online customer experience (e.g. Verhagen et al., 2019; Zhang et al., 2019). However, there is a gap in existing knowledge on customer experience in the modern and innovative types of malls, namely: modern shopping malls in which customers enjoy an omnichannel shopping experience, integrating virtual and physical environments. In this type of shopping malls, providing a positive shoppers' experience plays an important role in their sustainability (Gong and Janssen, 2015). In order to provide a positive omnichannel experience to shoppers, marketers need to understand differences between shoppers with reference to different factors namely: gender and cultural differences (Mosquera et al., 2018). Gender has been found as an important factor in the field of marketing and shopping intentions (Walsh et al., 2017). However, there is an absence of theoretical frameworks that examined male and female shoppers' behaviour in omnichannel shopping malls. Additionally, previous studies highlighted the importance of studying cross-cultural differences which can have a significant impact on consumer behaviour (Ameen et al., 2018). Hence, investigating the pivotal role of cross-cultural differences in omnichannel shopping mall experience is important from both practical and theoretical perspectives.

Hence, the main aim of this research is to analyse gender differences among millennials in customer omnichannel shopping malls, combining personal, physical and virtual encounters, in a cross-cultural context. Cross-cultural differences between the United Kingdom (UK) and United Arab Emirates (UAE) are evaluated in this study as the two countries are different in their cultural characteristics (Hofstede, 2019). These two countries are different in terms of shopping cultures and behaviours, in addition, both are frontrunners in the adoption of omnichannel retailing and they both have some of the most advanced shopping malls in the world in terms of the integration of technologies in customers' shopping experiences. Hence, we empirically test the model proposed in this study using customers of two advanced shopping malls in these two countries: Westfield London (UK) and Dubai Mall (UAE).

One of the primary market segments for shopping malls is millennials. Millennials, also known as "Generation Y", refer to the generational cohort born between 1980 and 2000 (Ferri-Reed, 2010). Millennials are distinct segment that is characterised by their immense purchasing power, their high involvement towards technological innovations, and their aspiration towards personalised experiences (Sepher and Head, 2017). This group of shoppers is unique not only in terms of motivations and behaviours (Thomas et al., 2016) but also is anticipated to have a higher spending power than all previous generations (Fleming, 2016). Shopping through omnichannel shopping malls is rapidly growing among this group of shoppers, thus our study suggests that this segment of customers 'millennials' is open to embracing omnichannel retailing more than any other generational cohort.

The study offers theoretical contributions. First, the study proposes a new model: the GSOE model which addresses a gap in the literature in understanding the omnichannel experience for different segments of customers in modern shopping malls. This model is tested in two different countries. Second, it extends knowledge by providing a better understanding of gender differences in millennials customer experiences in modern shopping malls combining personal

interactions, physical environment and virtual environment encounters. In addition, the study has practical implications for shopping mall management and retailers since it explains how to connect with this highly attractive segment of millennials via creating unique omnichannel shopping experiences.

Section two offers a background on the theoretical background and conceptual model. Then, a set of hypotheses is presented. Then, the methodology, results and discussion are provided. Lastly, the theoretical contributions, practical implications and limitations and future work are provided.

2. Theoretical background and conceptual model

2.1 Shopping and shopping malls in cross-cultural contexts

Existing studies have focused on shoppers' experience in shopping malls in terms of interaction with physical environments, service providers and stores in these malls (Keng et al., 2007; Calvo-Porrá and Lévy-Mangin, 2019). These studies highlighted the importance of providing customers with a pleasant experience which extends beyond shopping. In fact, shopping malls were found to help older shoppers to overcome loneliness and younger shoppers to be more socially engaged (Pyyry, 2016). In reality, shoppers use different types of technologies as part of their shopping experience in modern and advanced shopping malls (Gilliland, 2019).

Previous studies emphasised the role of cultural differences between developed and developing countries play in how customers perceive the services they receive in shopping malls (Malhotra et al. 2005; Diallo et al., 2018; Thomas and Carraher, 2014). Hence, retailing strategies should vary according to these differences (Thomas and Carraher, 2014). One of the main areas of cultural contexts that has been focused on and validated in previous studies is considering Hofstede's cultural dimensions (Hofstede, 2001) and their effects on how customers perceive

the quality of the services offered as part of the physical environments in shopping malls (Diallo et al., 2018).

Culture” refers to the system of collective values shared by the members of a group or society, which can be operationalized on Hofstede’s (2001) five dimensions, with the possible addition of a sixth dimension (Hofstede 2020). These dimensions are: power distance. Individualism vs collectivism, long-term orientation vs short-term orientation, uncertainty avoidance, masculinity vs femininity and indulgence (Hofstede 2020). Uncertainty avoidance refers to “The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these” (Hofstede, 2020a). Power distance refers to “The extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally” (Hofstede, 2020a). Individualism vs collectivism refers to “The degree of interdependence a society maintains among members of a culture” (Hofstede, 2020a). Masculinity vs femininity refers to “What motivates people, wanting to be the best (Masculine) or liking what you do (feminine)” (Hofstede, 2020a). Long-term vs short-term orientation refers to “maintaining time-honoured traditions and norms while viewing societal change with suspicion.” (Hofstede, 2020a). Indulgence refers to “a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun” (Hofstede, 2020a).

These dimensions have been examined in existing cross-cultural studies (e.g. Ameen et al., 2020; Diallo et al., 2018). However, Ackerman and Tellis (2001) explained that measuring the cultural effects on consumer behaviour can be problematic as some cultural norms and values may not be easily measured and quantified and they may not be captured accurately through the use of Hofstede’s cultural dimensions. Hence, some studies focused on the effects of cultural differences on consumer shopping behaviour by studying acculturation, cultural orientation, language and ethnicity (Ackerman and Tellis, 2001). Other studies focusing on differences in

cultural norms found that although consumers' reactions to mall shopping environment are not universal across cultures, the decision-making process of consumer mall shopping behaviour is universal regardless of the cultural orientation (Laroche et al., 2005). Despite the existence of cross-cultural studies in retail and mall environments, there is a gap in research studying gender differences in a cross-cultural context in the context of omnichannel shopping mall experience.

Within the context of this research, despite that the UK and UAE have some of the most advanced shopping malls in terms of omnichannel shopping experiences, they are different in term of their cultural norms, language and cultural dimensions. For example, the two countries score differently in terms of Hofstede's cultural dimensions. The UAE scores 90 in power distance, 25 in individualism, 50 in masculinity and 80 in uncertainty avoidance (Hofstede, 2020b). This indicates that the country has a high level of power distance, hence individuals accept hierarchical orders in the society. The society can be classified as collectivist, where decisions are made collectively and the sense of belonging to a group is high among individuals. In addition, this society is classified to be neither masculine nor feminine as individuals balance between wanting to be the best and liking what they do but they avoid uncertainties. However, the UK scores 35 in power distance, 89 in individualism, 66 in masculinity, 35 in uncertainty avoidance, 51 in long-term orientation and 69 in indulgence (Hofstede, 2020b). Hence, the society in the UK believes that inequalities among people should be minimised, believes in individualism. It is also a highly success oriented and driven culture. In addition, individuals in this society do not fear uncertainty and they are able to take chances. In addition, the country's core in long-term orientation indicates that a dominant preference in British culture cannot be determined. Furthermore, the British society scores high in indulgence, indicating that individuals in this culture have a desire to enjoy without restraints. Given the cultural differences between these two countries, the empirical examination of the model proposed in this research

helps in reaching a better understanding of how the model fits in different countries, cultures and shopping malls.

2.2 Conceptual model

Existing literature on shopping mall patronage mixed diverse factors including distance and population density (Bucklin, 1967). Later, Huff (1964) and Huff and Rust (1984) created a model for forecasting shopping mall patronage. This particular model was grounded on evaluating price (accessibility) verses utility (size). Nevertheless, Mason and Moore (1969) revealed that these models assume similar mall patronage choices are produced by shoppers despite their various demographics for example income, age, education and gender. Then, the inference theory was introduced by Ross and Nisbett (1980) which means that shoppers depend on salient and accessible information cues (such as local mall layout as well as atmospherics). Investigation on mall patronage had an increasing focus on shoppers' behaviour along with other important elements in shopping mall patronage like picture characteristics as well as motives (Houston and Nevin, 1980), picture (Hunter, 2006) along with situational variables (Zhuang et al. 2006). Later, Bakhshizadeh et al. (2016) proposed the achievement model for shopping malls, consisting of preparation, financing, construction as well as rates which does not concentrate on the customer's side.

Market trends show that the role of customer experiential value has attracted increasing attention among practitioners in the retail industry (Varshneya et al., 2017). Experiential value is the value that customers derive from an experience. The notion is based on the theoretical concept of value defined by Holbrook (1994; 2000). Mathwick et al. (2001, p. 41) conceptualised experiential value as the value derived from an experience via “interactions involving either direct usage or distanced appreciation [indirect observation] of goods or services”. Experiential value (Mathwick et al., 2001) is conceptualised in terms of four main dimensions: playfulness, aesthetics, service excellence and consumer return on investment

(CROI). Shopping mall experiences are categorised as: experiences perceived through the senses; and experiences created through entertainment or dramatic effects (Holbrook, 1994, 2000). Playfulness refers to potential amusement and the emotional worth of the shopping process (Mathwick et al., 2001). Service excellence refers to the generalised consumer appreciation of a service provider that demonstrates expertise and reliability (Holbrook, 2000). CROI reflects the utilitarian aspects of shopping and describes active investment in the economic, temporal, behavioural and psychological resources and emotions that yield rewards (Holbrook, 2000; Mathwick et al., 2001).

The service encounter model refers to the communication between a service receiver and service provider (Solomon et al., 1985; Bitner, 1990; Bitner et al., 1997). Customer service encounters possess an influence on the capacities of service diversity, quality control, and customer satisfaction (Chang and Chang, 2008). The effect of the service encounters can be divided to two main aspects: personal interactions with the service provider and physical environment encounters in shopping malls (Bitner, 1990; Wu and Liang, 2009). The model has been used in previous research studying service experience (e.g. Ang et al., 2018; Sharma et al., 2018; Li, Zhang and Laroche, 2019). However, the majority of studies which used or extended the service encounter model have mainly focused on personal interaction encounters and physical environment encounters.

The trust-commitment theory explains that trust and relationship commitment are key components in relationship development between customers and retailers (Morgan and Hunt, 1994). The model has been used in previous studies on customers' trust and brand relationship management (e.g. Zhang et al., 2018; Vohra and Bhardwaj, 2019). Wang et al. (2019) explained that trust helps towards building a relationship commitment between customers and retailers online and on social media. They highlighted the role of privacy issues including privacy control which may raise concerns especially that consumers have a low level of control over

how their data is used by retailers. The theory states that trust and relationship commitment are affected by different factors (Morgan and Hunt, 1994).

Our proposed model combines the service encounters model (Solomon et al., 1985; Bitner, 1990; Bitner et al., 1997) and the trust-commitment theory (Morgan and Hunt, 1994). Combining both models provide better understanding of customer omnichannel experience in modern shopping mall, integrating personal interactions, physical environment encounters and virtual environment encounters. Our proposed framework focuses on four main aspects of Wang et al.'s (2019) model related to the virtual environment encounters namely: privacy, trust, relationship commitment and consumer peer interaction. In addition, modern shopping malls are incorporating the latest technologies which should provide shoppers with a personalised experience (Chung and Shin, 2008). Hence, our model includes personalisation as an additional factor. *Personal interaction encounters* include service excellence and efficiency, while *physical environment encounters* include aesthetics, convenience, diversity and luxury. Personal and physical environment interactions are particularly important in cultures with a high level of uncertainty avoidance and classified as collectivistic (Furrer et al., 2000). In addition, we integrate *virtual environment encounters* including personalisation, privacy, consumer peer interaction, relationship commitment and trust. We also include gender as a factor moderating the relationships between these factors and customers' behavioural intention towards shopping in modern shopping malls.

A few studies have focused on gender differences in conventional shopping malls. For example, Haj-Salem et al. (2016) analysed gender loyalty differences in shopping malls and found that there are significant differences between men and women in their shopping preferences. While El Hedhli et al. (2016) found that there are no gender differences in shoppers' experience in shopping malls. Interestingly, Lucia-Palacios et al. (2018) found that gender differences in shopping experience in shopping malls only exist among more frequent

shoppers and among negative low-arousal shoppers. Katrodia and Soni (2018) found that there are significant gender differences in average time spend in shopping in shopping malls. Shopping has been typically stereotyped as a female activity (Sohail, 2015). Women are often more likely to shop for items like grocery and clothing than men, while men are shoppers of specialised items like cars (Chebat et al, 2014; Sohail, 2015). Nevertheless, other studies explained that these differences are changing as females' roles in the society are changing, which in turn is affecting their shopping behaviour and preferences (Sohail, 2015). Therefore, this study aims to bridge this gap by attempting to understand gender differences among shoppers in their omnichannel experience in modern shopping malls. By exploring the differences in gender shopping behaviour and preferences, malls' management may offer unique shopping experiences.

3. Hypothesis development

This section outlines the hypotheses developed in this research. Figure 1 below depicts the proposed model.

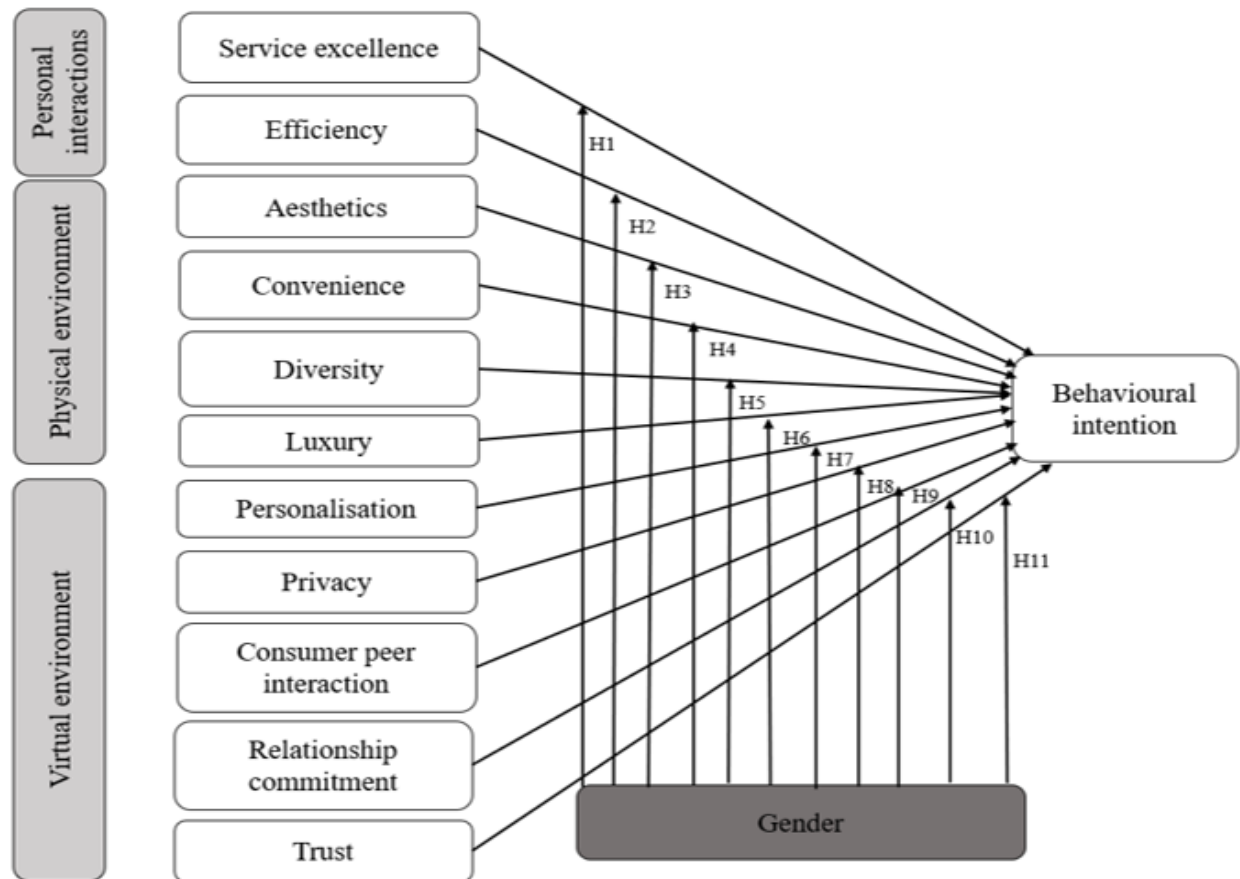


Figure 1.

The gender-based shopping mall omnichannel experience (GSOE) model

3.1 Personal interaction encounters

Personal interaction encounters refer to the time during which customers interact with the service personnel (Wu and Liang, 2009). Customers' assessment of the quality of these encounters as part the personal interaction is based on the service provider's competence, listening skills and level of dedications (Keng et al., 2007). Personal interaction encounters include efficiency and service excellence (Keng et al., 2007).

3.1.1 Service excellence

Service excellence refers to the politeness, attitude, experience and sociability of personnel, which can have an important influence on customers' intention towards shopping in malls (Keng, et al., 2007; Calvo-Porrall and Lévy-Mangin, 2019; Haj-Salem et al., 2016). Previous

studies showed that there are considerable gender differences among shoppers in the interpretation of service excellence (Mathies and Burford, 2011). The quality and excellence of services offered to millennials were found important determinants of their intention and satisfaction (Nowak et al., 2006). For female customers, interaction quality and the processes of the service are essential elements of customer service, while male consumers focus on the outcome and consider efficient problem solving as an essential element of customer service (Mathies and Burford, 2011). The quality of service is more important for female shoppers because they are more interested in gathering information and there is a higher chance for them to assess it after taking part in full examination of the service provided (Mansoor, 2017). This is also applicable to female millennial shoppers (Sharkey, 2020). Accordingly, excellent service quality provided in shopping malls is possibly more important among female shoppers than male shoppers. Hence, we propose:

H1. Gender will moderate the effect of service excellence on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.1.2 Efficiency

Efficiency is one of the dimensions of customer experiential value (Keng et al., 2007; Varshneya et al., 2017). It refers to customers' return on investment (CROI) from their shopping experience, including economic, time, temporal, behavioural and emotional properties that can cause a positive shopping experience (Keng et al., 2007). Previous research on shopping mall experience emphasised the significance of this factor (Keng et al., 2007; Wu and Liang, 2009; Varshneya et al., 2017). Female millennials are more skilled in navigating in shopping malls than males as males are able to complete their shopping in less time, obtain a lower number of items, but they spend more on shopping (Bogomolova et al., 2016). Hence, the efficiency of the service provided in modern shopping malls can be more significant for

female shoppers who shop for a longer time and carefully consider offers and resources available in the mall (Ramprabha, 2017). Hence, we hypothesise:

H2. Gender will moderate the effect of efficiency on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.2 Physical environment encounters

The shopping mall physical environment refers to the general atmosphere of the shopping mall as viewed by customers, namely: the outside appearance, the shape and internal atmospherics, decorations or aroma, the colour and lighting and the store windows (Calvo-Porrall and Lévy-Mangin, 2019). Previous studies explained that the physical environment may provide cues regarding the influence the image of brands and shopping malls because it increases customer satisfaction (Wu and Liang, 2009). Following the work conducted in Keng et al. (2007) and El-Adly's (2007) studies, the shopping mall physical environment factors included in this study are: diversity, luxury, aesthetic and convenience.

3.2.1 Aesthetic

Aesthetic is a response to the harmony of a physical object, or performance (Veryzer, 1993). In the context of retail marketing, aesthetics can be viewed as relevant visual aspects of the retail atmosphere (Mathwick et al., 2001). Previous studies highlighted the impact the aesthetics of shopping malls on shoppers' experience (Chebat et al., 2014; Wu and Liang, 2019) and particularly on millennial shoppers' experience (Calienes et al., 2016). Michon et al. (2008) highlighted the impact of this factor on female shoppers. Product characteristics, packaging, display, retail atmosphere, and ecosystem have significant influence on female' interactions with retailers and their intention to shop in shopping malls (Michon et al., 2008). Male millennial shoppers pay less attention to mall atmosphere than female shoppers as they tend to be more focused on buying their favourite items (Sullivan et al., 2012). Therefore:

H3. Gender will moderate the effect of aesthetics on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.2.2 Convenience

Convenience refers to the convenience and ease of access to facilities, stores and retailers of shopping malls (Keng et al., 2007). El-Adly (2007) provided examples of how the shopping mall's physical environment can be made convenient: enlarging shopping malls' tenant mix to include a supermarket, having good layout and adequate directions inside the mall, using outside signage to guide shoppers to malls, providing shuttle buses services and operating late working hours. It has been found as an important factor in retail service convenience to save time and efforts (Gupta and Sharma, 2017). It also has a significant positive impact for retailers as it affects customer satisfaction and brand loyalty (Gupta, 2015). The growing intrusion of the internet into conventional retail marketplaces indicate that convenience offers evident ways to ensure the continued existence of modern shopping malls (Reimers and Clulow, 2000; Sohail, 2015). Previous studies highlighted the importance of the shopping convenience in malls due to changes in shoppers' lifestyle including increasing time scarcity, working millennial female shoppers and discerning male shoppers (Reimers and Clulow, 2000). Thus, we hypothesise that convenience would be an important factor among both millennial male and female shoppers with no significant differences. This is because the roles of men and women have started to gradually overlap (Sohail, 2015). Thus:

H4. Gender will not moderate the effect of convenience on behavioural intention towards shopping in modern shopping malls such that there will be no significant differences between male and female customers.

3.2.3 Diversity

The diversity of shopping malls' physical environment refers to the diversity in restaurants, stores, food and cinemas to meet the needs of shoppers from various cultures, nationalities, and backgrounds (El-Adly., 2007; Kusumowidagdo et al., 2016). This diversity in shopping malls helps towards ensuring customers' overall satisfaction of the shopping atmosphere (El-Adly., 2007). It also refers to the range of brands, variety of types of companies, fashionable and prestigious brands offered, level of price and quality of options (González-Hernández and Orozco-Go´mez, 2012). This factor has been found significant in previous studies on retailer and shopping mall experience (e.g. El-Adly, 2007, Kusumowidagdo et al., 2016). Ensuring diversity in shopping malls enables mall managers to plan suitable strategies to meet the needs of each segment (El-Adly, 2007). Previous studies on shopper behaviour emphasised the dominant male shopping characteristics, showing male shoppers to be task orientated towards shopping (Teller and Thomson, 2012), while female shoppers, more specifically millennial female shoppers, are more concerned with the diversity in prices, brands, advertisements and cultures (Polkes, 2019). Therefore:

H5. Gender will moderate the effect of diversity on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.2.4 Luxury

Luxury is the sum of visual and semantic cues of the shopping mall (Mathiowetz, 2010). The luxury of the shopping mall's physical environment was found an important factor determining customers' shopping intentions (Singh and Prashar, 2014). Previous studies highlighted the significant role luxury plays in customer experience with retailers in shopping malls (El-Adly, 2007; Singh and Prashar, 2014; Varshneya et al., 2017). Women are associated with quality, distinctiveness and social value as key motives for luxury brand shopping (e.g., Wiedmann, et

al., 2009). As women perceive the values offered by luxury brands as important, they have a more optimistic view towards luxury brands than male customers (Stokburger-Sauer and Teichmann, 2013). Females link to luxury of physical appearance more than males and they use luxury consumption as a self-promotion strategy and a lifestyle practice (Stokburger-Sauer and Teichmann, 2013) which is also linked to luxury of shopping malls. In fact, Wu et al. (2015) reported that female customers are emotionally attached to luxury retailing even those on a low-income level which is also applicable to millennial female shoppers. Thus:

H6. Gender will moderate the effect of luxury on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.3 Virtual environment encounters

In the era of new advanced technologies, shopping malls are no longer be described as the offline shopping experience as digitisation is transforming the retailing ecosystem for shopping malls (Park and Kim, 2018). The smart shopping mall's virtual environment integrates different technologies including mobile applications, smart boards, social media, virtual reality and artificial intelligence (Park and Kim, 2018). In this study, the factors included as part of the shopping mall virtual environment encounters are: personalisation, trust, privacy, consumer peer interaction and relationship commitment which were found significant in previous studies on online retail environments (Wang et al., 2019).

3.3.1 Personalisation

Personalisation refers to the way in which the service is designed to meet the preferences of customers and it can lead to a positive shopping experience (Bilgihan Kandampully and Zhang, 2016). It can also be based on how the service provided to customers is tailored through data mining techniques to meet their needs and preferences, which leads to a higher level of interest

in shopping (Chung and Shin, 2008). Personalisation was found important in online shopping and mobile shopping (Trivedi and Trivedi, 2018; Xu et al., 2008). In addition, personalisation was found important in other contexts of retail shopping for example, when using technologies for clothing shopping (Dennis et al., 2009), mobile games shopping (Ha et al., 2007) and creating technology profiling (DeYoung and Spence, 2004) where personalisation based on gender differences was highlighted as an important factor to be considered.

The use of technology to provide customers with a personalised shopping experience can enhance informativeness, credibility, intention and pleasure (Kim and Han, 2014). Similarly, a personalised virtual environment encounter through the use of advanced technologies in modern shopping malls is an important factor determining millennial shoppers' attention towards these malls. Some studies found that female customers place more emphasis on personalisation as a factor determining their intention to purchase (Riquelme and Román, 2014). Other studies found that there are no major variations between male and female shoppers in their preferences in receiving a personalised service in virtual environments (Aichner and Coletti, 2013). This is due to their attention to detail while receiving services from retailers and shopping mall service providers (Ramprabha, 2017). Hence, features such as a personalised customer service, customer reviews, messages, campaigns and offers from favourite brands are important to this segment of customers. Therefore:

H7. Gender will moderate the effect of personalisation on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.3.2 Privacy

Privacy is part of consumers' ethical perception and it is a significant element for determining the use of technology while shopping (Limbu et al., 2011). Consumers share personal and

financial data with shopping malls and retailers during all points of interactions with technology and they expect a confidential treatment of their information (Martin and Murphy, 2017). Previous studies showed that female shoppers are more sensitive to misuse of credit card, loss of privacy, fraudulent sites than male shoppers (Garbarino and Strahilevitz, 2004). In addition, female shoppers perceive higher risk level to shopping in virtual environments and thus they would be more cautious in such environments (Lim and Yazdanifard, 2014). One might argue that shoppers tend to disclose more personal information when shopping (Stern, 2004). Interestingly, Riquelme and Román (2014) found that the high preference of female shoppers for a personalised, engaging interaction with different technologies as part of their shopping experience tends to override their privacy concerns. Hence, such experiential or social value-seeking behaviour can make female shoppers to perceive trust which occurs as a result of the interactivity or communication features of the virtual environment.

Consistent with the findings of prior research suggesting that female shoppers are more sensitive to privacy issues when shopping using different technologies (Garbarino and Strahilevitz, 2004; Lim and Yazdanifard, 2014), we suggest that millennial female shoppers would be more sensitive to privacy issues associated with the use of virtual environment encounters in modern shopping malls than male shoppers. Thus:

H8. Gender will moderate the effect of privacy on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.3.3 Consumer peer interaction

Consumer-peer interaction refers to shoppers' perceived power of social interactions with their peers (Chai et al., 2011; Wang et al., 2019). This factor stems from the trust-commitment theory and it acknowledges the power of customers' social interactions in shopping and building brand

value (Morgan and Hunt, 1994). Since consumers provide feedback on their shopping experience and share it with other consumers online and on social media, shopping malls and retailers can record and analyse such data to provide an improved, better quality customer service (Wang et al., 2019). Shoppers share stories of their shopping experiences and communicate with other shoppers on social commerce platforms to share product/service information. This leads them to develop and maintain close relationships with each other to satisfy their need for feeling related (Wang and Li, 2016). When consumers share their experiences in modern shopping malls and provide feedback, whether positive or negative, other consumers' intention to use these malls can be affected as they can be influenced by the opinions of others, hence it is an important marketing issue for retailers and shopping malls (Libai et al., 2010).

Extant research showed that females are more likely than males to make use of social media platforms to see others' images, reviews, brand and mall recommendations and they compare themselves with others (Hogue and Mills, 2019). In addition, millennial women tend to spend more time on social media platforms and they are more likely than men to inform other individuals about the products they find interesting (Thompson and Loughheed, 2012). This links to a variety of factors such as image, comparison with other women and other social factors (Nielsen, 2011). Hence, consumer peer interaction may have a higher effect on intention towards shopping in modern shopping malls among female shoppers than male shoppers. Accordingly, we propose the following hypothesis:

H9. Gender will moderate the effect of consumer peer interaction on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.3.4 Relationship commitment

Relationship commitment refers to consumers' belief that the relationship with the brand is an important factor to make them committed and make efforts for that brand, in addition to their feeling that this relationship is worth working on to maintain (Morgan and Hunt 1994). Previous studies in the area of marketing emphasised the important effect of this factor as it increases customers' behavioural intention to buy from the retailers they feel they have a strong connection with and it is linked to brand loyalty (Kim et al., 2008). This sort of relationship has been found particularly important in technology-mediated communications between brands and customers (Park and Kim, 2018; Wang et al., 2019). Similarly, consumers can be committed towards their relationship with modern shopping malls via the use of different technologies as part of the virtual environment. Previous studies on brand commitment show that millennial women have higher level of relationship commitment with brands than men (Tifferet and Herstein, 2012). This is because women tend to be different in the way they build and maintain friendships and commitment and they are more self-disclosed than men. Women are highly affected by their own behaviours in relation to a brand or what the brand is offering them when assessing brand relationship quality and they develop commitment based on this using different virtual platforms (Zhang et al., 2015). Therefore:

H10. Gender will moderate the effect of relationship commitment on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

3.3.5 Trust

From a marketing standpoint, in comparison to conventional commerce, where the items of customers' trust are not retailers only, customers in e-commerce must believe in not only the site but additionally the technology as well as brand behind the site (Beldad et al., 2010). Previous research offered insights into consumer behaviour and trust of the processes in a

digital environment (Park and Kim, 2018). Since shopping malls' virtual environments integrate different types of technologies, trust can be a significant determinant of behavioural intention towards modern shopping malls, especially for millennial shoppers (Salpini, 2017). Male shoppers are more assertive when using technologies for shopping while females are less trusting of virtual environments (Sethna et al., 2017). Hence, trust was found to be more significant in shaping behavioural intention for females than for males (Shaouf and Altaqqi, 2018). Thus:

H11. Gender will moderate the effect of trust on behavioural intention towards shopping in modern shopping malls such that its effect is more significant among female customers than male customers.

4. Methodology

4.1 Sampling and data collection

Data was collected via a questionnaire distributed face-to-face using purposive sampling. This method allows researchers to collect data from young shoppers in the two target shopping malls: Westfield London shopping mall in the UK and Dubai Mall in the UAE. Westfield London is one of the largest and most advanced shopping malls in Europe, located in the UK (Hendriksz, 2018). The management of Westfield shopping mall announced the 2028 vision for the mall (Hendriksz, 2018). It predicts that the role of digital in the customer retail experience will become increasingly important in the upcoming years (Westfield, 2019). In addition, the UAE has some of the most advanced shopping malls in the world that integrate both physical and virtual environments (Gulfnews, 2018). For example, Emaar (a real estate development company) launched a new 'tech-driven' mall and it will encourage 'omnichannel retailing', to provide customers the options to shop via different platforms their personal computers, mobile devices or at a retail store (Nagraj, 2018). In 2019, Dubai Mall won two top honours at the Dubai

Service Excellence Scheme for its exceptional customer service (Al Bawaba, 2019). The mall attracts over 80 million visitors annually (Saadi, 2018).

Purposive sampling proved to be effective in previous studies with target samples who had certain characteristics (Ndubisi, 2006). The respondents are selected based on certain qualities (Etikan et al., 2016). That is, they must meet certain criteria in order to be selected (Etikan et al., 2016). As such, it is different from convenience sampling, in which participants are selected based on their availability at a given time (Dörnyei, 2007). In this research, two criteria to select the participants were used. First, the participants had to be aged 23-38 to be classified as millennials (Dimock, 2019). Second, customers who shop in the two target shopping malls.

There were three reasons for selecting participants aged 23-38 years old. First, it is anticipated that by 2020, millennials will account for almost \$1.4 trillion in spending power (The Store Front, 2015). In addition, their spending pattern is different as they like to pay for experiences such as travel, entertainment and technology (The Store Front, 2015). Second, this particular segment of shoppers is challenging for shopping malls due to their lack of interest in offline (in store) shopping, instead, they are more interested in using technology to enhance their shopping experience (Skeldon, 2018). Third, the buying decision making process for millennials is different from previous generations, so they require a unique, exciting and personalised shopping experience which also makes them a challenging segment for retailers in shopping malls (Oracle, 2015). Initially a pilot study took place as we collected data from 25 UK-based customers in order to assess the of validity and reliability of the measurements. As a result, a few changes were made, and some questions were added. In addition, a team of two experts, academics in the Abu Dhabi University in the UAE, was consulted to comment on the instrument and no changes were required.

Using purposive sampling method, we distributed 700 questionnaires to participants face to face in each of London and Dubai in July and August 2019. After checking missing data, unengaged responses and outliers (Hair et al., 2014; Hair et al., 2017) and that the participants shop in the selected shopping malls, 553 completed questionnaires from the respondents in the UK and 586 in the UAE from the target age group were used in the analysis. The response rate was 79% in the UK and 84% in the UAE. Distributing the questionnaires face to face helped to achieve high response rates.

4.2 Measurements

The selection of measurement items adopted in this study was based on studies focusing on the models considered and integrated in the model proposed in this research and based on an extensive review of the literature. Hence, some measurement items were adopted from the studies carried out by Mathwick et al. (2001), Keng et al.'s. (2007) and El-Adly (2007) which focused on the service encounters model and experiential value model in retail and shopping mall environments. In addition, some of the measurement items were adopted from Wang et al.'s (2019) study which focused on the trust-commitment theory.

The items for the factors: efficiency, service excellence, aesthetics and behavioural intention were adopted from Mathwick et al. (2001) and Keng et al.'s. (2007) studies. The items for convenience, diversity and luxury were adopted from El-Adly's (2007) study. The items for personalisation and privacy were adopted from Chellappa and Sin (2005), since this study focused on these two factors in online shopping environments. The items for trust, consumer peer interaction and relationship commitment were adopted from Wang et al.'s (2019) study. Appendix A shows all factors including their measures and the publication source for each factor.

4.3 Data analysis

The initial screening and analysis were conducted through the assessment of common method bias and normality of the data (Hair et al., 2010). Common method bias exaggerates the relations in the theoretical model (Podsakoff et al., 2003). To reduce the potential of common method variance bias in this quantitative study, we conducted a Harman's test. Hence, common method bias was examined for both the UK and UAE samples using the Harman's single factor method in SPSS. Upon extraction of squared loadings, the results showed that a single factor accounted for 21% of the variance in the UK sample and 22% in the UAE sample which is lower than the threshold value of 50% (Podsakoff et al., 2003). In addition, common method bias was assessed in Smart PLS software via the inner collinearity assessment function. The results showed that inner Variance Inflation Factor (VIF) values were lower than the threshold value of 3.3 (Hair et al., 2010).

Data was also assessed in terms of normality of distribution using skewness and kurtosis in Smart PLS Version 3 software. When there are issues in terms of skewness and kurtosis, it can be concluded that the collected data are not normally distributed. Values higher than 3.0 indicate that the data is skewed (Kline, 2005) and values of 8.0 or higher indicate extreme kurtosis as recommended by West et al. (1995) and Kline (2005). The analysis showed that the collected data in the two countries was not normally distributed.

Partial least squares-structural equation modelling (PLS-SEM) was used to analyse the data (Hair et al., 2014; Hair et al., 2017). There were three motives for choosing this method of analysis. First, PLS-SEM allows the analysis of none normally distributed data which is the case of the collected data in this research (Hair et al., 2017). Second, this method is able to handle single items factors in the analysis of the structural model (Afthanorhan, 2014). Third, when used with complex models, PLS-SEM is more effective than covariance-based structural equation modelling (CB-SEM) (Hair et al., 2014). Therefore, the use of PLS-SEM in this study

was justified. The PLS-SEM analysis included the assessment of the measurement model followed by the assessment of the structural model (Hair et al., 2017). In addition, partial least squares-multi group analysis (PLS-MGA) was used for further analysis of the differences of the significance of the paths between the UAE and UK samples (Henseler et al., 2009; Sarstedt et al., 2011).

5. Results

5.1 Samples characteristics

Statistical Package for the Social Sciences (SPSS) version 24 software was used to obtain the descriptive statistics. Table 1 shows the descriptive statistics for both samples. For the UK sample, 43% were aged 23-30 years old, 57% were aged 31-38 years old, while 49% were males and 51% were females. The results also showed that 9% of the respondents in the UK shop daily in shopping malls, 81% shopped weekly, 10% shopped monthly and none of them shopped annually. Furthermore, 64% of them shopped more often offline and 36% of them shopped more often online. In terms of the types of technology used while shopping, 58% indicated that they use smartphones and mobile applications, 4% used augmented reality, 14% used virtual reality, 8% used biometrics and 16% used all of these technologies.

Table 1.

Descriptive statistics for the UK and UAE sample

	UK (%)	UAE (%)
<i>Age</i>		
23-30	43	33
31-38	57	67
<i>Gender</i>		
Male		
Female	49	52
	51	48
<i>Use of smartphones</i>		
Yes	100	100
No	0	0

<i>Frequency of shopping in shopping malls</i>		
Daily	9	3
Weekly	81	88
Monthly	10	9
Annually	0	0
<i>Use of technology for shopping</i>		
Yes	100	100
No	0	0
<i>Shopping more often</i>		
Offline	64	75
Online	36	25
<i>Type of technology used while shopping</i>		
Smartphones and mobile applications	58	56
Augmented reality	4	0
Virtual reality	14	17
Biometrics	8	8
All of the above	16	20

For the UAE sample, 33% were aged 23-30 years old, 67% were aged 31-38 years old, while 52% were males and 48% were females. The results also showed that 3% of the respondents in the UK shop daily in shopping malls, 88% shopped weekly, and 9% shopped monthly. Furthermore, 75% of them shopped more often offline and 25% of them shopped more often online. In terms of the types of technology used while shopping, 56% indicated that they use smartphones and mobile applications, none of them used augmented reality, 17% used virtual reality, 8% used biometrics and 20% used all of these technologies.

Overall, the results show that the two samples were millennials and balanced in terms of the proportion of male/female participants. In addition, the participants in both samples still shop more often in shopping malls (offline) as well as online shopping. All of the respondents in both countries used smartphones and they all used technology for shopping. Furthermore, the results show that the participants used a range of technologies while shopping.

5.2 Measurement model

The first stage of the analysis included the assessment of reliability, convergent validity, discriminant validity and factor loadings (Hair et al., 2017). Table 2 illustrates the findings of

the validity and reliability assessments of both samples. The assessment of average variance extracted (AVE) as part of convergent validity showed that there were no major issues as all values were above 0.5 (Hair et al., 2017) as they varied between 0.602 and 0.865 in the UAE sample and they ranged between 0.601 and 0.851 in the UK sample. In addition, reliability was assessed using Cronbach's alpha and Composite reliability (Hair et al., 2019). The findings revealed that there were no concerns as all values for both samples were above 0.7 (Hair et al., 2017). The values of Cronbach's alpha ranged from 0.715 to .998 and the values of composite reliability ranged from 0.701 to 0.961 in the UAE sample. In the UK sample, the values of Cronbach's alpha ranged from 0.743 to 0.967 and the values of composite reliability ranged from 0.710 to 0.977. Furthermore, some items were removed from the samples after the assessment of the factor loadings including CON2, CON3, AE5 and DI4 as they were lower than 0.7 (Hair et al., 2017).

Table 2.

Assessment of validity and reliability in the UAE and UK samples

	UAE			UK		
	Cronbach's alpha	Composite reliability	Average variance extracted	Cronbach's alpha	Composite reliability	Average variance extracted
Aesthetics	.998	.829	.865	.892	.926	.757
Behavioural intention	.870	.920	.793	.967	.918	.690
Consumer peer interaction	.778	.701	.754	.795	.867	.765
Convenience	.889	.950	.703	.950	.710	.670
Diversity	.722	.894	.737	.808	.887	.723
Efficiency	.796	.921	.659	.888	.915	.643
Luxury	.715	.818	.604	.789	.865	.683
Personalisation	.945	.958	.820	.743	.757	.616
Privacy	.894	.934	.825	.792	.933	.722
Relationship commitment	.767	.861	.676	.801	.893	.676
Service excellence	.957	.961	.803	.958	.977	.851
Trust	.763	.817	.602	.768	.719	.601

Table 3.

Assessment of Fornell-Larcker Criterion in the UAE sample

	Aesthetics	Behavioural intention	Consumer peer interaction	Convenience	Diversity	Efficiency	Luxury	Personalisation	Privacy	Relationship commitment	Service excellence	Trust
Aesthetics	.930											
Behavioural intention	.375	.891										
Consumer peer interaction	.113	.205	.868									
Convenience	.193	.165	.049	.838								
Diversity	.317	.352	.122	.151	.859							
Efficiency	.408	.447	.175	.136	.307	.812						
Luxury	.076	.134	.125	-.059	.091	.204	.777					
Personalisation	.477	.323	.135	.108	.058	.383	.096	.906				
Privacy	.221	.258	-.077	.083	.285	.152	.015	.498	.908			
Relationship commitment	.298	.301	.001	.083	.295	.227	.074	.249	.373	.822		
Service excellence	.399	.542	.085	-.049	.450	.330	.101	.022	.036	.229	.896	
Trust	.001	.198	.027	-.097	.101	.065	.099	.340	.224	.285	.190	.775

Table 4.

Assessment of Fornell-Larcker Criterion in the UK sample

	Aesthetics	Behavioural intention	Consumer peer interaction	Convenience	Diversity	Efficiency	Luxury	Personalisation	Privacy	Relationship commitment	Service excellence	Trust
Aesthetics	.870											
Behavioural intention	.370	.830										
Consumer peer interaction	.108	.192	.875									
Convenience	.162	.127	.049	.818								
Diversity	.312	.343	.113	.110	.850							
Efficiency	.467	.503	.158	.096	.448	.802						
Luxury	.052	.097	.098	-.087	.079	.175	.826					
Personalisation	.462	.063	.134	.073	.253	.336	.085	.784				
Privacy	.188	.224	-.089	.074	.245	.123	.003	.451	.849			
Relationship commitment	.289	.281	-.010	.066	.258	.176	.046	.204	.334	.822		
Service excellence	.382	.533	.056	-.068	.414	.300	.090	.014	.029	.229	.922	
Trust	-.012	.219	-.006	-.089	.133	.088	.143	.369	.248	.274	.232	.775

The discriminant validity of the sample was assessed using Fornell-Larcker Criterion (Hair et al., 2014) as shown in Tables 3 and Table 4. The results show that the square root of each construct's AVE is higher than its highest correlation with any other construct (Hair et al., 2014). In addition, the cross-loadings analysis revealed that each factor has a higher loading on its indicators than on the indicators of the other factors so there are no concerns in terms of discriminant validity (Hair et al., 2014).

5.3 Multi-group analysis

For a more accurate comparison of the differences among male and female customers in the significance of the paths, PLS-MGA was used. This nonparametric method of analysis, introduced by Henseler et al. (2009), tests the differences between the path coefficients of two groups (Henseler et al., 2009; Sarstedt et al., 2011). PLS-MGA directly compares different groups in the sample. A p value of the difference between the path coefficients of 0.05 or lower or 0.95 or higher at the 5 percent level indicates that there are significant differences between specific path coefficients across two groups (Henseler et al., 2009; Sarstedt et al., 2011). These threshold values were adopted in previous studies using PLS-MGA (e.g. Ameen et al., 2018). Table 5 and Table 6 show the results of the PLS-MGA in both the UK and the UAE samples.

Table 5.

Multigroup analysis UAE sample

Hypothesis	Relationship	p-value males vs females	t-values males	p-Values males	t-Values females	p- Values females	Results
H1	SE -> BI	0.000	5.307	0.000	1.984	0.053	Partially supported
H2	EF-> BI	0.070	0.669	0.503	1.369	0.171	Not supported
H3	AE -> BI	0.998	6.776	0.000	8.915	0.000	Supported
H4	CON -> BI	0.610	2.001	0.046	2.761	0.006	Supported
H5	DI -> BI	0.010	2.997	0.003	1.072	0.284	Partially supported
H6	LU -> BI	0.050	1.983	0.048	0.193	0.847	Partially supported
H7	PE -> BI	0.000	7.375	0.000	2.100	0.036	Partially supported
H8	PR -> BI	0.999	0.170	0.865	4.260	0.000	Supported
H9	CPI -> BI	0.063	2.626	0.009	1.595	0.111	Not supported
H10	RC -> BI	0.629	1.139	0.255	1.225	0.221	Not supported

H11	TR-> BI	0.340	1.451	0.147	1.998	0.053	Not supported
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Note: efficiency (EF), service excellence (SE), aesthetics (AE), behavioural intention (BI), convenience (CON), diversity (DI), luxury (LU), personalisation (PE), trust (TR), privacy (PR), consumer peer interaction (CPI) and relationship commitment (RC).

Table 6.

Multigroup analysis UK sample

Hypothesis	Relationship	p-value males vs females	t-values males	p-Values males	t-Values females	p- Values females	Results
H1	SE -> BI	0.050	5.032	0.000	2.137	0.000	Partially supported
H2	EF-> BI	0.064	1.906	0.057	0.812	0.417	Not supported
H3	AE -> BI	0.997	4.737	0.000	7.498	0.000	Supported
H4	CON -> BI	0.287	1.990	0.054	2.297	0.022	Supported
H5	DI -> BI	0.031	3.693	0.000	2.412	0.016	Partially supported
H6	LU -> BI	0.480	1.044	0.297	1.379	0.168	Not supported
H7	PE -> BI	0.022	6.454	0.000	4.855	0.000	Partially supported
H8	PR -> BI	0.954	2.387	0.002	3.066	0.017	Supported
H9	CPI -> BI	0.008	3.158	0.002	1.128	0.259	Partially supported
H10	RC -> BI	0.523	1.152	0.249	1.788	0.053	Not supported
H11	TR-> BI	0.130	2.455	0.014	1.809	0.071	Not supported

Note: efficiency (EF), service excellence (SE), aesthetics (AE), behavioural intention (BI), convenience (CON), diversity (DI), luxury (LU), personalisation (PE), trust (TR), privacy (PR), consumer peer interaction (CPI) and relationship commitment (RC).

In the UAE sample, the results of the PLS-MGA analysis showed that three of the proposed hypotheses were supported namely: H3 (AE -> BI, p value = .998), H4 (CON -> BI, p value = .610, as there were no significant differences between the two groups in this relationship, consistent with what we hypothesised) and H8 (PR -> BI, p value = .999). In addition, four of the proposed hypotheses were partially supported as there were significant differences between male and female shopper groups but contrary to what we hypothesised. These four hypotheses were: H1 (SE -> BI, p value = .000), H5 (DI -> BI, p value = .010), H6 (LU -> BI, p value = .050) and H7 (PE -> BI, p value = .000). The remaining hypotheses were not supported.

In the UK sample, the results showed that three of the hypotheses were supported namely: H3 (AE -> BI, p value = .997), H4 (CON -> BI, p value = .287, as there were no significant differences between the two groups in this relationship, consistent with what we hypothesised)

and H8 (PR → BI, p value = .954). Furthermore, five of our proposed hypotheses were partially supported as there were significant differences between male and female shopper groups but contrary to what we hypothesised. These four hypotheses are H1 (SE → BI, p value = .050), H5 (DI → BI, p value = .031) and H7 (PE → BI, p value = .022) and H9 (CPI → BI, p value = 0.008). The remaining hypotheses were not supported.

We also assessed the model's predictive power, the assessment of the R^2 value showed that the model is able to predict 68% in male shoppers' behavioural intention and 51% in male shoppers' behavioural intention in the UAE. The model was also able to predict 63% of male shoppers' behavioural intention and 48% of female shoppers' behavioural intention in the UK, suggesting that the model has a good explanatory power (Hair et al., 2017).

6. Discussion

This research analysed gender differences in millennial customer omnichannel experience in modern shopping malls, combining physical and virtual environments encounters in a cross-national context. The findings revealed that the proposed model fits well among millennials in both countries, specifically among millennial male shoppers in both the UK and the UAE. On the contrary to what we hypothesised, the effect of service excellence on behavioural intention towards shopping in modern shopping malls is more significant among millennial male shoppers than millennial female shoppers in both the UK and the UAE. This contradicts with what was found in previous studies (e.g. Mathies and Burford, 2011; Mansoor, 2017). Millennial male shoppers in the UK and UAE view the quality of the services provided in shopping malls and by retailers in terms of courtesy, attitude, knowledge and friendliness of personnel. This factor was significant among millennial female shoppers too but at a lower level. In addition, efficiency was insignificant among both millennial male and female shoppers in both countries. This contradicts with the findings of previous studies on the significance of efficiency among millennial female shoppers as they pay more attention to detail (Ramprabha,

2017). Hence, customer personal interactions encounter in modern shopping malls are based on service excellence which is more important among millennial male shoppers.

The findings of this study regarding the impact of aesthetic were similar to what was found in prior studies (e.g. Kim and Moon, 2009; Chebat et al., 2014; Wu and Liang, 2019; Han and Ryu, 2009). Aesthetic is an important factor for millennial male and female shoppers in both the UK and UAE. However, our findings revealed that the aesthetic of modern shopping malls is a more important factor for millennial female shoppers' intention to shop in these malls than millennial female shoppers' male shoppers in both the UK and UAE. Furthermore, there were no substantial differences between millennial male and female shoppers in both countries in the effect of convenience on behavioural intention. This shows the significant effect of convenience and ease of access to the facilities, stores and retailers of malls among both millennial male and female shoppers. In addition, it shows a shift in millennial females' behaviour as despite that the existing literature pointed out that female shoppers prefer to spend longer time while shopping than millennial male shoppers and they are more proficient in navigation (Bogomolova et al., 2016; Chebat et al., 2014), male shoppers still prefer to have a convenient experience which helps them to manage their time efficiently. This also links to the changing lifestyle and role of women in the society which affects their shopping behaviour (Ameen et al., 2018).

Interestingly, the findings show that millennial male shoppers are more sensitive to the diversity of the brands, restaurants, stores and entertainment facilities in shopping malls in both countries. While existing research found that diversity is an essential element in determining shopping mall patronage (El-Adly, 2007, Kusumowidagdo et al., 2016), our findings suggest that millennial male shoppers find diversity more significant compared to millennial female shoppers. Furthermore, on the contrary to what we hypothesised, millennial male shoppers pay more attention to luxury in shopping malls than female customers in the UAE, while it was

insignificant for both millennial male and female shoppers in the UK. This contradicts with the results of earlier studies in this area (e.g. Wiedmann et al., 2009; Stokburger-Sauer and Teichmann, 2013).

Millennial male shoppers in UAE are more concerned with luxury of shopping malls and retailers than millennial female shoppers. This is possibly because millennial male shoppers in this country tend to spend slightly more on luxury products than female shoppers and they are the main bread owners (Jedcaux, 2017). Overall, the findings of our research indicate the significance of aesthetics, convenience, diversity and luxury as part of customer physical environment encounters in modern shopping malls. While the aesthetics factor is more significant among millennial female customers, convenience, diversity and luxury are more significant among male customers.

Surprisingly, millennial male shoppers in both countries are more affected by a personalised virtual environment in shopping malls than female shoppers. This extends the findings of previous studies conducted by Kim and Han (2014) and Aichner and Coletti (2013) in which personalisation was found a significant factor among customers in general. Hence, it is particularly important for modern shopping malls to follow millennial male customers' profiles, consumption patterns, and customer needs. The findings also show that millennial female shoppers are less concerned with being offered a personalised shopping experience than male shoppers and they are more sensitive to privacy issues associated with the use of virtual environments in modern shopping malls. The findings show that millennial female shoppers are sensitive to how their information is used by shopping malls and retailers, which possibly links to their behaviour in disclosing more personal information when shopping (Stern, 2004).

Our findings on the effect of consumer peer interaction on behavioural intention were contracting to what we originally hypothesised. First, there were no significant differences

between millennial male and female shoppers in terms of the effect of this factor in the UAE but it was more significant among male shoppers. This contradicts with our original assumption that consumer peer interaction is more important among females as they are more active on social media (Hogue and Mills, 2019). Second, millennial male shoppers in the UK are more engaged on social platforms and affected by this factor than female shoppers. This provides further evidence of the shift in millennial male shoppers' behaviour in modern shopping malls. In addition, the findings show that customer relationship commitment with retailers does not have a significant effect on behavioural intention among both genders in both countries. Hence, the sense of belonging to customers' favourite retailers in the shopping mall and on social media platforms does not necessarily lead to a higher intention towards shopping in modern shopping malls. This contradicts with the findings of previous studies regarding the effects of relationship commitment (e.g. Wang et al., 2019). This shows that millennial customers are more interested in the quality of the personal encounters and physical environment encounters and the reliability and ensuring privacy in the virtual environment when evaluating modern shopping malls.

There were no significant differences between millennial male and female shoppers in terms of the effect of trust in virtual environment encounters on their intention. Nevertheless, the findings show that millennial female shoppers in the UAE and male shoppers in the UK find trust in virtual environment encounters as an important factor determining their intention towards modern shopping malls. Finally, consistent with the findings of Garbarino and Strahilevitz (2004) and Lim and Yazdanifard (2014) regarding the significance of privacy among female customers, millennial female shoppers are more concerned about their privacy when using virtual shopping environments in these malls than male shoppers.

Overall, our findings reveal a shift in millennial male customers' behaviour in modern shopping malls as they pay more attention than before to service excellence, convenience,

diversity, luxury, consumer peer interaction and personalisation in shopping malls in both the UK and UAE.

7. Contributions and future work

7.1 Theoretical contributions

This study offers several theoretical contributions to the existing literature. The model proposed in this research: the gender-based shopping mall omnichannel experience (GSOE) model integrates factors classified as part of personal interaction encounters, physical environment encounters and virtual environment encounters in shopping malls. The proposed model conceptualises the factors affecting millennial customers' intentions towards shopping malls omnichannel experiences. The empirical examination of the model showed that there are significance gender differences among millennial shoppers in this context, in addition, to the differences found between the two countries studied in this research: the UK and UAE. The majority of existing research focused on the offline (physical) shopping experience (e.g. Kim et al., 2015; Merrilees and Miller, 2019) or the online customer experience (e.g. Verhagen et al., 2019; Zhang et al., 2019). Other studies focused on shopping mall physical experience (e.g. Keng et al., 2007; Calvo-Porrall and Lévy-Mangin, 2019) which mainly focused on personal interactions encounters and physical environment encounters. However, there are gaps in existing research in terms of analysing gender differences among millennial shoppers in a cross-cultural context. Hence, this research addresses a number of gaps in research and it builds on the findings of these studies by understanding the omnichannel experience of millennial customers in modern shopping malls and studying gender differences in omnichannel shopping mall experience in a cross-national and cross-cultural context.

Our research revealed interesting findings regarding male and female millennial shoppers' behaviour in shopping malls. While previous studies emphasised that factors such as service

excellence, convenience, diversity, luxury, personalisation and consumer peer interaction are important for female shoppers (e.g. Mathies and Burford, 2011; Polkes, 2019; Stokburger-Sauer and Teichmann, 2013), our findings showed that millennial male shoppers pay more attention to service excellence, convenience, diversity, luxury and personalisation in shopping malls than millennial female shoppers in both the UK and UAE. Moreover, consumer peer interactions in virtual environments play a more significant effect on behavioural intention towards modern shopping malls among millennial male shoppers. The present findings examined the specific antecedents to male and female shoppers that in return generate an intention to visit modern shopping malls. Overall, this study provides a better understanding of different customer segments' views and preferences in terms of their omnichannel experience in shopping malls which can integrate the personal, physical and virtual aspects and it thus provides a more holistic view of their experience in these malls.

7.2 Practical implications

This research has implications for management teams of shopping malls and retailers. Overall, our findings show that the integration of technology (shopping malls' virtual shopping environment) as part of millennial male and female shoppers' omnichannel experience in shopping malls enhances their intention to visit these malls. Hence, shopping malls management teams and retailers should ensure that these technologies are well integrated with customers' personal encounters and the physical environment in shopping malls. We suggest that shopping malls managers and retailers need to focus on cross-cultural and cross-national differences when integrating new and advanced technologies to shoppers in a way that will positively impact their experience and improve the overall quality of this experience. This can be further enhanced by understanding the differences between male and female shoppers in this type of service encounters as found in this study.

Managers in shopping malls and retailers with stores situated in these malls should be updated with and constantly monitoring the rapid changes in consumer behaviour which does not necessarily mean a complete shift from offline shopping to online or mobile shopping rather than having an enjoyable experience which integrates all these channels combined. This is applicable to both male and female millennial shoppers. Our research focused on customers of two advanced and modern shopping malls: Westfield London in the UK and Dubai Mall in the UAE where different technologies are already integrated as part of the customer omnichannel experience. However, this approach should be followed by other shopping malls suffering from a decline in shoppers' interest to visit them.

Our findings regarding the shift in millennial male shoppers' behaviour in both the UK and the UAE have important implications for shopping malls management teams and retailers. For this segment of customers, despite the integration of virtual environment encounters in shopping malls, management teams are still advised to focus on the quality of the service provided face-to-face to customers. In addition, the attributes of the physical environment encounters are important for male shoppers in both countries. Hence, shopping mall managers and retailers should ensure the convenience of shopping malls in terms of how easy it is to reach the mall, late working hours and navigation to different stores. In addition, ensuring the diversity of restaurants, stores and entertainment facilities is important for this segment of customers. Furthermore, shopping malls management teams and retailers should ensure that the luxury of the physical environment in shopping malls in the UAE is particularly appealing to millennial male shoppers, in terms of the luxury of the appearance of the shopping mall and the services provided.

Providing millennial male shoppers in the UK and the UAE with a more personalised experience in the mall in terms of offers from their favourite retailers, products and services using different advanced technologies is important. In addition, ensuring that there is a strong

engagement with male shoppers in the UK on different social media platforms through collaboration between malls and retailers can have a significant effect on mall shoppers in both countries. On the other hand, as female shoppers tend to provide more information when using technologies as part of the virtual environment encounters, assuring them that the privacy of the information they provide as part of their virtual environment encounters will be ensured can play a significant role in increasing their intention towards visiting shopping malls in both countries.

7.3 Limitations and future research

Despite the significant contributions, this research has some limitations that can be addressed in future research. The research focused on collecting data from advanced shopping malls in the UK and UAE only. Future research can gather data from customers in shopping malls in other countries and compare the findings to the findings of this study. In addition, future research can gather data from management teams of shopping malls and retailers to understand their perspective on providing customers with an improved omnichannel experience. Furthermore, we encourage researchers to acknowledge virtual environments when studying service encounters in modern shopping malls, in addition to the personal and physical encounters. Hence, future studies can integrate additional factors that may be applicable to the technologies used in virtual environments in modern shopping malls.

8. Conclusion

This study considered the differences between millennial male and female shoppers in customer omnichannel experience in modern shopping malls, combining physical and virtual encounters in a cross-national context, focusing on two major shopping malls: Westfield London in the UK and Dubai Mall in the UAE. In doing so, we collected quantitative data from male and female shoppers in both countries. Our findings showed important differences between millennial male and female shoppers in terms of their preferences in personal

interactions, physical and virtual environments encounters. The findings show that the majority of the factors integrated in our proposed model are significant, especially for millennial male shoppers in the UAE and UK which has important implications for academics, retailers and mall management to deliver a more pleasant shopping experience to their customers. Overall, this research provides a clearer understanding of modern shopping mall customer omnichannel experience in a cross-national context.

Appendix A.

Measurement items and the studies they were adapted from (personal interaction encounters, physical interaction encounters and virtual interaction encounters)

Items	Adapted from
Personal interaction encounters	
<i>Efficiency</i>	
EF1: The service provider was very attentive to me	Mathwick et al. (2001) and Keng et al (2007)
EF2: The service provider offered good advice	
EF3: I dealt with an honest service provider	
EF4: The service provider tried eagerly to solve my problem	
EF5: At the end of the service encounter, I got exactly what I wanted	
EF6: I received good offers while shopping in the mall	
<i>Service excellence</i>	
SE1: The service provider seemed competent	Mathwick et al. (2001) and Keng et al (2007)
SE2: The service provider listened to me carefully	
SE3: The service provider understood what I wanted	
SE4: The service provider genuinely wished to help me	
SE5: In terms of the service provider's problem solving or question answering help, the inte service provider was a very positive experience	
SE6: Personal services offered by the service provider were very important	
Physical environment encounters	
<i>Aesthetics</i>	
AE1: This mall is decorated in an attractive fashion	Mathwick et al. (2001) and Keng et al (2007)
AE2: The mall's architecture gives it an attractive character	

AE3: The layout makes it easy to get to the restrooms

AE4: Overall, the layout makes it easy to get around

AE5: The variety of food offered in the mall is excellent

Behavioural intention

Mathwick et al. (2001) and
Keng et al (2007)

BI1: I have a strong desire to visit or shop in this shopping mall

BI2: I would recommend this shopping mall to friends

BI3: I will come back to this shopping mall

BI4: I will continue to visit this shopping mall

Diversity

El-Adly (2007)

DI1: The restaurants in the shopping mall are varied

DI2: Different stores branches are available in the shopping mall

DI3: A large food court exists in the shopping mall

DI4: There are cinemas in the shopping mall

Luxury

El-Adly (2007)

LU1: External appearance of the mall is impressive

LU2: This shopping mall is popular

LU3: Luxury services are provided in the shopping mall

Convenience

El-Adly (2007)

CON1: Supermarkets exist in the shopping mall

CON2: It is easy to reach the shopping mall

CON3: The shopping mall has late working hours

Virtual environment encounters

Personalisation

Chellappa and Sin (2005)

PE1: I value technologies in the shopping mall that are personalised for my usage experience preferences

PE2: I value technologies in the shopping mall that acquire my personal preferences and personalise the services and products themselves

PE3: I value goods and services in the shopping mall that are personalised based on information that is collected automatically (such as IP address, pages viewed, access time) but cannot identify me as an individual.

PE4: I value goods and services in the shopping mall that are personalised on information that I have voluntarily given out (such as age range, salary range, Zip Code) but cannot identify me as an individual.

PE5: I value goods and services that are personalised on information I have voluntarily given out and can identify me as an individual (such as name, shipping address, credit card information).

Privacy

Chellappa and Sin (2005)

PR1: I am sensitive about giving out information regarding my preferences

PR2: I am concerned about anonymous information that is collected about me.

PR3: I am concerned about how my personally un-identifiable information will be used by the shopping mall and retailers.

PR4: I am concerned about how my personally identifiable information will be used by the shopping mall and retailers.

Trust

Wang et al (2019)

TR1: The performance of the technologies in the shopping mall always meets my expectations

TR2: The technologies in the shopping mall can be counted as good features

TR3: The technologies in the shopping mall are reliable

Relationship commitment

Wang et al (2019)

RC1: I have an emotional attachment to the technologies used as part of my shopping experience in the mall

RC2: I feel a sense of belonging to my favourite retailers' in the shopping mall social media platform(s)

RC3: I feel a strong connection to my favourite retailers' in the shopping mall social media platform (s)

RC4: I feel a part of the group in my favourite retailer's social media platform (s)

Consumer peer interaction

Wang et al (2019)

CPI1: I maintain close social relationships with other shoppers

CPI2: I spend a lot of time interacting with other shoppers

CPI3: I know other shoppers on a personal level

CPI4: I have frequent communication with other shoppers

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