

## LINKING THE LACK OF TACTILE SENSORY CUES TO CONSUMERS' EMOTIONS IN E-COMMERCE CLOTHING PURCHASES: A CROSS-CULTURAL STUDY

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### ABSTRACT

The absence of tactile sensory cues has been a continuous barrier preventing consumers to purchase clothing through e-commerce stores. The e-commerce purchasing process is tediously influenced by the level of the consumers' autotelic or instrumental Need for Touch (NFT), which sequentially impacts the emotions experienced by the consumer. This paper explores consumers' emotions related to a lack of tactile sensory experiences during e-commerce clothing purchases in a cross-cultural study between South Africa and the United Arab Emirates (UAE). Data was collected from a structured, self-administered electronic questionnaire. Respondents were provided with pictures of clothing garments from which their NFT and emotional responses were predominantly determined. The UAE respondents tend to display generally higher levels of NFT than South Africans, with higher levels of instrumental NFT found in UAE respondents. South Africans displayed a higher emotional response than UAE respondents. The international gap in existing research regarding a lack of tactile sensory cues in e-commerce clothing purchases is addressed in this study as it highlights the importance of NFT in e-commerce clothing purchases, and the effect thereof across cultural boundaries, providing insight into the effect of tactile sensory cues on consumers' emotions, which directly affects their purchase intention.

### KEYWORDS

check-all-that-apply (CATA) methodology; consumers' emotions; e-commerce; need for

touch; purchase intention; tactile sensory cue

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## INTRODUCTION

A sensory cue is a stimulus that induces a certain reaction or behaviour, classified as visual, tactual, olfactory, gustatory, and auditory (American Psychological Association 2023). As part of the haptic system, tactile (touch) sensory cues refer to the process of receiving information such as temperature, coarseness, shape, and texture through the touch of the skin (Ariza & Santis-Chavez 2017). Touch is an essential part of consumer's decision-making, as it has a positive effect on consumer attitudes, behaviour, and purchase intentions (Rathee & Rajain 2019). The need for consumers to touch products is inevitable, whether consumers touch the product to obtain information about physical features or to touch the product due to pleasure and gratification (Manzano, Gavilán, Ferrán, Avello & Abril 2016). Consumers utilise sensory cues when purchasing clothing through e-commerce stores and, as a result, lead to consumers experiencing certain emotions during the decision-making process (De Barnier & Roux 2020).

Researchers revealed the effects of visual and auditory sensory cues on consumers' behaviour toward e-commerce sites but could

not determine whether these sensory stimulations affect consumer emotions and instinctive tactile needs. The limited research on tactile sensory cues and its significance to consumer emotions, especially in a cultural context, is particularly important in present times when businesses are shifting to online retailing (Rootman & Kruger 2017). Clothing e-commerce retailers are facing a missed opportunity in terms of providing consumers with an interactive sensory shopping experience (Petit, Velasco & Spence 2019) that could, when correctly implemented, heighten their tactile perceptions, improve their positive emotions, and increase their purchase intention (Wu, Quyen & Rivas 2017).

Pleasurable and aesthetically pleasing e-commerce website design, together with ambient conditions that stimulate visual sensory cues in consumers, are linked to positive emotions and influence their purchase intention (Rathee & Rajain 2019). Nevertheless, an e-commerce environment can cause consumer deprivation in terms of touch, resulting in less emotionally engaged consumers. Consumers' need for touch (NFT), an element in both online and offline environments, is a favourable choice for collecting information through the human body's haptic system (Peck & Childers 2003) to correctly judge the product at hand. Consumers' NFT is imperative in determining the reaction of absent sensory cues in e-commerce and how it affects consumer emotions. The lack of tactile exploration differs from consumer-to-consumer as well as culture-to-culture and depends on their level of NFT (Rathee & Rajain 2019).

The role of culture and diverse cultural frames of reference adds to the determinants of the consumers' emotions and purchase intention when engaging in e-commerce clothing purchases (Lee, Jin, Rhee & Yang 2016) as culture and socio-demographic factors have been identified as influential factors in

consumers' purchasing decision-making (Mehrorita, Elias, Ismail Al-Alawi, Abdulrahman Al-Bassam 2019). Due to the nature of this study, focus is placed specifically on the cultures of South Africa (SA) and the United Arab Emirates (UAE) as culture plays an integral part in consumer behavioural patterns and should be implemented as a means to ultimately increase purchase intention and influence consumer emotions (Rootman & Kruger 2017). South Africa and the UAE have been chosen for this study as both countries display profound similarities and differences between cultural orientations in terms of consumer behaviour and decision-making (Le Serre, Legohérel, Weber 2013). Cultural orientation has also been proven to affect information processing and motivation of individuals (Shavitt *et al.* 2006), further reaffirming the importance of culture in consumers' choice of purchasing methods (i.e. consumers choosing traditional brick-and-mortar stores or e-commerce stores for clothing purchases). Furthermore, limited research has been done on determining the NFT of consumers from the UAE and South Africa, as well as their emotional responses towards the absence of this vital sensory cue when engaging in e-commerce clothing purchases (Banda 2021).

Therefore, the aim of this study is to explore consumers' emotions related to a lack of tactile sensory experiences during e-commerce clothing purchases in a cross-cultural study. The research objectives of this study were to: 1) describe and compare the demographic profile of a sample from South African- and UAE consumers; 2) determine consumers' general level of NFT (in terms of a lack of tactile sensory cues) of four clothing garments available for e-commerce purchases; 3) determine consumers' emotional response in e-commerce clothing purchases using the CATA method; and 4) determine the associations between the NFT and emotional response in e-commerce

clothing purchases.

Furthermore, as this study aims to determine consumer emotions due to the lack of tactile sensory cues when engaging in e-commerce clothing purchases, it is essential to consider the impact of the internet for purchases on these consumers' decision-making, as access to the internet and knowledge of technological use, influences consumer decisions such as whether to purchase through e-commerce stores or at brick-and-mortar stores. Virtual technology, including AR technology, can affect consumers' decision-making while purchasing clothing through e-commerce stores (Zhang, Cao, Wang 2017) as consumers who are educated about the internet and technology (Mehrorita *et al.* 2019), will be more likely to purchase clothing through e-commerce stores. Certain visually appealing factors of the e-commerce store will also lead to positive consumer emotions and therefore alter consumer decision-making (Lee & Park 2013).

## LITERATURE REVIEW

### Need for touch

Need for touch is a psychological trait (Manzano *et al.* 2016) defined as "a preference for the extraction and utilisation of information obtained through the haptic system" (Peck & Childers 2003). Consumers' NFT can be classified into two categories, namely autotelic and instrumental NFT (Holbrook & Hirschman 1982). Autotelic NFT can be described as a need to experience delight and enjoyment from directly touching a product, whereas instrumental NFT is a need in which consumers obtain certain information through the physical touch of a product. Touch is predominantly used to acquire product information regarding texture (e.g., softness or roughness). Therefore, clothing has been found to be a product category that is most affected by a consumer's NFT and their

intention to purchase the product online (Karangi & Lowe 2021). Many consumers with instrumental and/or autotelic NFT abstain from e-commerce clothing purchases due to a lack of touch (Wilfling, Havenith, Raccuglia & Hodder 2023). Even with a functional and aesthetically pleasing e-commerce clothing store, the lack of tactile sensory cues in e-commerce has been repeatedly identified as a hindrance to e-commerce purchasing, especially in the occurrence of consumers demonstrating elevated levels of NFT (Rathee & Rajain 2019). Research has found that touch can lead to consumers developing an emotional attachment to a product (Nägele, von Walter, Scharfenberger & Wentzel 2020). Consumers who are categorised as having high NFT are shown to use their tactile sensory cue in the early product evaluation stages, leading to positive attitudes when gaining access to physical products, in comparison to consumers classified as having low NFT who will use their tactile sense as a means to gather information about the product (Manzano *et al.* 2016). Studies have also concluded that autotelic NFT, in lieu of instrumental NFT, forms the emotional responses of consumers when exposed to tactile sensory cues (Pino, Amatulli, Natarajan, De Angelis, Peluso & Guido 2020).

### **Consumer emotions and e-commerce**

Consumers' emotions play a vital role in decision-making. Due to the lack of touch during e-commerce clothing purchases, consumers may experience negative emotions (Mazaheri, Richard & Laroche 2012). The provenance of these consumer emotions includes influences that are attributed to a multisensory consumer experience when shopping online (Li, Wu & Spence 2020). These influences involve atmospheric cues, website design and lack of sensory involvement in e-commerce retailer designs (Li *et al.* 2020). As emotions are

prominent, and critical, in most aspects of the purchasing process of clothing (Stewart & Carey 2020), consumer's NFT plays a vital role in determining the direct relationship between the lack of tactile sensory cues and consumer emotions while engaging in e-commerce clothing purchases. In addition, diverse cultural opinions regarding the e-commerce store can lead to differences in consumer emotions and purchase intention (Lee *et al.* 2016).

### **The role of culture in e-commerce**

The role of culture in diverse cultural identities is a determinative aspect of the emotions that consumers are faced with when making purchasing decisions (De Barnier & Roux 2020). Western cultures have been found to identify as an individualistic culture, where individuals are more likely to be independent and creative, whereas collectivistic cultures identify as interdependent and accord (Eaton & Louw 2000). Individualistic cultures thus prefer minimalistic e-commerce platforms that still stimulate but do not over-stimulate sensory cues, whereas collectivistic cultures favour e-commerce platforms with more stimuli, including animation and a greater variety of products displayed at once (Davis, Wang & Lindridge 2008). Studies have found the South African (SA) culture is more individualistic than collectivistic. Per contra, the culture of the UAE is more collectivistic (Hofstede Insights 2023). However, the expatriate community residing in the Emirates and the culture of non-Emiratis should also be taken into consideration, resulting in a culture categorised as both individualistic and collectivistic. Therefore, to epitomise the cultural differences of these two contrasting countries, it is essential to comprehend the importance of taking the cultural orientation of the e-commerce consumers into consideration, as well as to recognise the dependence of an interactive interface for e-commerce on the consumers' cultural

background, as the foundation of all consumers' decision-making is grounded in their culture (Davis *et al.* 2008).

### Conceptual framework

Consumers are exposed to multisensory stimuli when engaging in e-commerce clothing purchases, which could, when executed and incorporated successfully, increase consumers' purchase intention and positive emotions (Li *et al.* 2020). Visual stimuli, such as aesthetically pleasing web designs, are immediately perceptible by consumers. However, the tactile sensory cue has well been overlooked in the e-commerce clothing industry as a means to influence consumers' decision-making and purchase intentions in provoking positive emotions when engaging in online shopping (Rathee & Rajain 2019). Consumers with high levels of autotelic and instrumental NFT tend to experience negative emotions when in the absence of touch

(Overmars & Poels 2015). Furthermore, the understanding and classification of consumers' autotelic and instrumental NFT are imperative as these aspects directly impact consumer purchasing behaviour in e-commerce (Manzano *et al.* 2016). Yet, the environment of e-commerce has changed due to the impact of COVID-19 on consumer decision-making and purchasing behaviour (Bizcommunity 2021), coercively changing both brick-and-mortar and e-commerce retailers' strategies into adapting a global online technological approach. Therefore, by increasing awareness of the interrelationship between consumers' emotions and sensory cues when engaging in e-commerce clothing purchases, consumer decision-making and purchase intentions will be increasingly comprehensible while allowing e-retailers to adapt their retail platform and include the sensory needs of the e-commerce consumer (Mehrorita *et al.* 2019; Rootman & Kruger 2017; Rathee & Rajain 2019). For the purpose

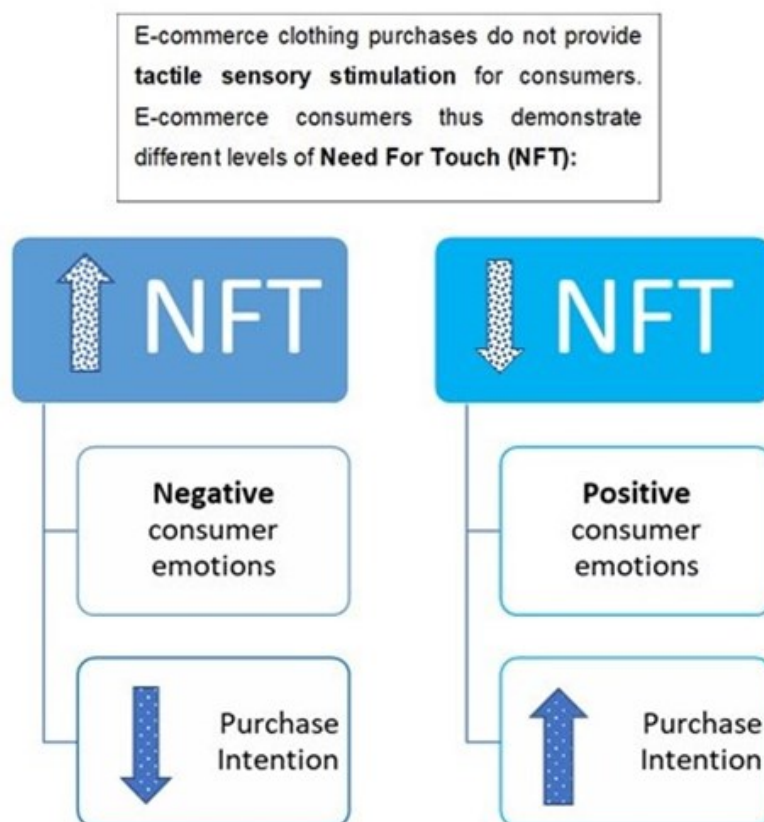


FIGURE 1: CONCEPTUAL FRAMEWORK OF THE STUDY

of this study, consumers' perceptions of e-tailers and e-commerce purchases will be tested to determine the effect of sensory cues and NFT on consumers' emotions who engage in e-commerce clothing purchases in South Africa and the UAE. This will be done by attentive evaluation of consumers' emotional responses to determine the impact of the lack of tactile sensory cues in e-commerce clothing purchases on consumers' emotions (Figure 1).

## METHODS AND MATERIALS

This study obtained ethical approval (NWU-00317-21-S1) and was conducted within the parameters presented to the ethics committee.

## Research design and sample

For this study, a quantitative, non-experimental, descriptive, and cross-sectional research approach was used to gather data across SA and the UAE. A non-probability convenience sampling method was used to gain access to the respondents through social media platforms (i.e. Facebook and Instagram). Respondents were required to be at least 18 years old, currently holding permanent residency in SA or the UAE for a minimum of six months with access to the internet. The research sample included 701 responses, of which 346 (SA: n = 145; UAE: n = 201) were completed responses.

## Data collection tool

Data was collected from a structured, self-administered electronic questionnaire (QuestionPro, [www.questionpro.com](http://www.questionpro.com))



**FIGURE 2: CLOTHING GARMENTS OF MALE RESPONDENTS**



**FIGURE 3: CLOTHING GARMENTS OF FEMALE RESPONDENTS**

available in English. Section A of the questionnaire determined respondents' demographic profiles, followed by section B addressing consumers' NFT with the 12-item NFT scale (Peck & Childers 2003). Section C applied the Check-All-That-Apply (CATA) questions, incorporating emotional terms derived from the EmoSensory Wheel (Schouteten, De Steur, De Pelsmaeker, Lagast, De Bordeauhuij & Gellynck 2015) and the multi-sensory perception and positive emotion mixed item scale (MPPEMIS) (Li *et al.* 2020) to determine consumers' emotional responses towards e-commerce clothing purchases.

Before the commencement of section B of the questionnaire, respondents were provided with four pictures of clothing garments (based on their gender) (Figures 2 and 3). The colours and styles of the garments were kept neutral and modest to accommodate all respondents. While the male garments ranged between cotton and corduroy, the female garments ranged between cotton, silk and corduroy. Respondents were not provided with any written product description of the garments and relied solely on visual appearances. The differences in clothing garment's textures contribute to the determination of respondents' level of NFT. Questions from sections B and C in the questionnaire should have been answered with consideration of purchasing the provided garments (Figures 2 and 3) online.

### Data analysis

Data was analysed with IBM SPSS Statistics (Version 25, Release 23.0.0). Descriptive statistics were calculated for all items in the questionnaire. Means and standard deviations were reported for question items measured on a Likert scale. Proportion tests were used to compare the demographic profile of the two study populations. Exploratory factor analysis (EFA) was performed to reduce the individual

factors into a few dimensions and Kaiser's criterium was used to determine the number of factors to extract (Field 2009). For internal consistency, Cronbach's alpha was reported (Shrestha 2021). Cohen's *d* calculated the practical significant differences between standardised means and Cramer's *u* evaluated the strength of associations between variables.

## RESULTS

### Demographic profile

A total of 145 respondents in SA and 201 respondents in the UAE participated in the study (N = 346) (Table 1). Sample sizes from both countries consisted of more female respondents (SA = 85.31%; UAE = 97.47%). South African respondents were mainly aged between 18 and 29 years (37.2%) with a gross monthly income of R20 001 – R50 000 (24.8%), whereas most respondents in the UAE were aged 30 to 39 years (41.3%) and earned a gross monthly income of AED 8001 – AED 20 000 (28.40%). Respondents in SA resided mostly in the Gauteng province (33.1%), and respondents in the UAE are mostly located in the emirate of Dubai (58%). Respondents in both countries largely made use of a direct technical device (e.g., smartphones and tablets) to complete the electronic questionnaire (88.3% in SA; 94.4% in the UAE).

### Need for touch

For internal reliability, the inter item correlation is 0.69 for autotelic NFT and 0.69 for instrumental NFT. The Cronbach alpha coefficient is 0.93 for autotelic NFT, and 0.93 for instrumental NFT. Table 2 shows respondents' level of NFT. For autotelic NFT, both SA ( $3.71 \pm 1.68$ ) and UAE ( $3.75 \pm 1.38$ ) males, as well as UAE females ( $3.88 \pm 1.47$ ) neutral to slightly agree to the six autotelic

**TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS (N = 346)**

Variable	SA (n = 145)		UAE (n = 201)		Total (N = 346)	
	n	%	n	%	n	%
<b>Gender</b>						
Male	21	14.69	15	7.58	36	10.56
Female	123	85.31	183	97.47	306	89.44
<b>Age in years</b>						
18 – 29	54	37.20	31	15.40	85	24.57
30 – 39	24	16.60	83	41.30	107	30.92
40 – 49	32	22.10	49	24.40	81	23.41
50 – 59	24	16.60	29	14.40	53	15.32
>60	11	7.60	9	4.50	20	5.78
<b>Gross monthly income†**</b>						
Between 0 and 8000	21	14.50	25	12.50	46	13.37
Between 8001 and 20 000	35	24.10	57	28.40	92	26.74
Between 20 001 and 50 000	36	24.80	52	25.90	88	25.58
Between 50 001 and 100 000	28	19.30	21	10.40	49	14.24
More than 100 000	13	9.00	5	2.50	18	5.23
Prefer not to disclose this information	11	7.60	40	19.90	51	14.83
<b>Hometown location (SA)***</b>						
Eastern Cape	9	6.20				
Free State	28	19.30				
Gauteng	48	33.10				
KwaZulu-Natal	6	4.10				
Limpopo	1	0.70				
Mpumalanga	4	2.80				
Northern Cape	2	1.40				
North-West	13	9.00				
Western Cape	33	22.80				
<b>Hometown location (UAE)***</b>						
Abu Dhabi			68	34		
Ajman			2	1.00		
Dubai			116	58		
Fujairah			3	1.50		
Ras Al Khaimah			4	2.00		
Sharjah			6	3.00		
Umm Al Quwain			1	0.50		
<b>Technical device used****</b>						
Indirect device (e.g. desktop)	16	11.00	11	5.60	27	19.22
Direct device (e.g. smartphone)	128	88.30	187	94.40	315	92.11

Note: n = sample size; N = population size; \*Missing values: SA:1; UAE:3; \*\*Missing values: SA:1; UAE:1; \*\*\*Missing values: SA:1; UAE:1; \*\*\*\*Missing values: SA:1; UAE:3; † Gross monthly income is displayed in Rand (R) for SA and Dirham (AED) for UAE.

statements. For the females, SA females (4.03±1.77) agree to strongly agree to the autotelic NFT statements. For instrumental NFT, both SA males (3.76±1.27) and females (3.97±1.41) neutral to slightly agree to the six instrumental statements. Notably both UAE (4.39±1.32) males and females (4.11±1.42) agree to strongly agree to the six statements for instrumental NFT indicating a higher level of instrumental NFT than the SA respondents.

### Emotional response

Respondents' emotional responses to the clothing garments are presented in Table 3. Positive emotional responses that are mainly selected include "calm", "good", and "contented". Negative emotional responses that are predominantly chosen include "dissatisfied" and "disappointed". For the positive emotions, the males from both countries are more positive about garment 2



**TABLE 2: RESPONDENTS' LEVEL OF NEED FOR TOUCH**

NFT	Male SA (n = 21)		Male UAE (n = 15)		Female SA (n = 123)		Female UAE (n = 183)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Autotelic NFT	3.58	1.53	3.75	1.38	<b>4.03</b>	<b>1.77</b>	3.88	1.47
When walking through stores, I can't help touching all kinds of garments.	3.71	1.68	3.83	1.47	4.44	1.46	4.25	1.49
Touching garments can be fun.	3.67	1.53	3.67	1.07	4.30	1.38	4.30	1.27
When browsing in stores, it is important for me to handle all kinds of garments.	3.62	1.40	4.00	1.04	3.89	1.36	3.82	1.42
I like to touch garments even if I have no intention of buying them.	3.52	1.50	3.83	1.80	3.88	1.62	3.80	1.54
When browsing in stores, I like to touch lots of garments.	3.57	1.47	3.58	1.44	3.86	1.58	3.60	1.53
I find myself touching all kinds of garments in stores.	3.38	1.57	3.58	1.44	3.83	1.60	3.52	1.55
Instrumental NFT	3.76	1.27	<b>4.39</b>	<b>1.32</b>	3.97	1.41	4.11	1.42
I place more trust in garments that can be touched before purchase.	4.00	1.48	4.58	1.17	4.27	1.28	4.29	1.38
I feel more comfortable purchasing a garment after physically examining it.	4.52	0.98	4.83	1.19	4.45	1.35	4.65	1.34
If I can't touch the product in store, I am reluctant to purchase the garment.	3.29	1.06	3.75	1.49	3.50	1.46	3.64	1.43
I feel more confident making a purchase after touching a garment.	4.05	1.40	4.83	1.03	4.23	1.42	4.37	1.34
The only way to make sure a garment is worth buying is to actually touch it.	3.00	1.30	4.00	1.48	3.49	1.50	3.69	1.46
There are many garments that I would only buy if I could handle them before purchase.	3.71	1.42	4.33	1.56	3.87	1.47	4.04	1.58

Note: bold = highest score for all NFT; italic = lowest score for all NFT; Scale: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree; autotelic NFT = touch for pleasure and enjoyment; instrumental NFT = touch to obtain information.

**TABLE 3: RESPONDENTS' EMOTIONAL AVERAGE RESPONSES USING CATA (%)**

	Garment 1		Garment 2		Garment 3		Garment 4	
	SA	UAE	SA	UAE	SA	UAE	SA	UAE
<b>Positive emotions</b>								
Male	10.82	17.86	14.58	18.33	14.23	21.30	11.11	11.90
Female	11.37	9.53	9.30	8.88	14.31	11.22	10.72	11.81
<b>Negative emotions</b>								
Male	5.71	8.33	7.50	8.33	5.00	8.33	15.79	15.00
Female	4.81	6.89	8.05	5.81	4.22	4.54	7.35	6.40

Note: Positive emotions = glad, enthusiastic, happy, good, pleasant, contented, desire, satisfied, excitement, attractive, pleasantness, passionate, delightfulness; Negative emotions = nervous, unpleasant surprise, discontented, dissatisfied, guilty, disappointed, sad, disgust.

(SA = 14.58%; UAE = 18.33%) and garment 3 (SA = 14.23%; UAE = 21.30%). For the females, garment 3 (SA = 14.31%; UAE = 11.22%) and garment 4 (SA = 10.72%; UAE = 11.81%) are mostly viewed as positive. Interestingly for the male respondents, there is

a 7% difference for garments 1 and 3 between SA and UAE. For the negative emotions, while male respondents are more negative about garment 4 (SA = 15.79%; UAE = 15.00%), females are more negative about garment 2 (SA = 8.05%; UAE = 5.81%).

**TABLE 4: SUMMARY OF SIGNIFICANT ASSOCIATIONS (P<0.05) BETWEEN NFT AND EMOTIONAL RESPONSE**

Garment*	SA Male		UAE Male		SA Female		UAE Female	
	aNFT	iNFT	aNFT	iNFT	aNFT	iNFT	aNFT	iNFT
1	Satisfied**	-	-	-	Enthusiastic Happy Attractive	Contented Discontented Enthusiastic Attractive	Sad**	Disappointed
2	Enthusiastic** Delightfulness	Satisfied	Good**	Happy**	-	Happy	Disgust** Pleasant	-
3	Pleasantness	Pleasantness	Good** Pleasantness** Satisfied** Excitement**	-	Passionate	Passionate	Pleasantness	Glad Pleasantness
4	-	-	Calm** Nervous	-	Desire Pleasant	Disgust Guilty	Glad Pleasant Excitement	-

Note: \*Garments for male and female respondents differ (Figures 1 and 2); \*\* Large effect size ( $d \geq 0.8$ ); Selected emotional responses in Bold; aNFT = autotelic NFT; iNFT = instrumental NFT.

### Associations between NFT and emotional responses

Table 4 summarises the associations between NFT and respondents' emotional responses for both countries. There are no corresponding cross-cultural comparisons between NFT and emotional responses for male respondents. Notably, UAE males, who show high instrumental NFT, selected "nervous" (autotelic NFT) for garment 4 and indicate decreased associations between NFT and emotional responses. Female respondents also indicate that only garment 4, with "pleasant" (autotelic NFT) as emotional response, corresponds for both countries. The stark contrast in emotional response towards garment 1 and instrumental NFT is also noteworthy in that SA females indicate the response "enthusiastic", whereas UAE respondents indicate "disappointed".

## DISCUSSION

### Demographic characteristics of South African and UAE respondents

The young demographic profile of South African respondents categorises in the median age group of the South African population

(Worldometer 2022), which can be due to the online nature of this study, where respondents were asked to complete an electronic questionnaire and therefore needed to be computer literate, as well as the positive attitude that younger consumers show towards technological progress (Mehrotra *et al.* 2019). The older demographic profile of UAE respondents is supported by literature (Visa 2019; Magento Extensions 2020). The indifference in income of the two countries also lead to different purchasing behaviour as proven by this study. Respondents in UAE earn a higher typical salary than South African respondents (SalaryExplorer 2022). Both countries' respondents made use of a direct technical device to complete the electronic questionnaire of this study. Research has found that consumers using direct devices when purchasing clothing through e-commerce stores show higher levels of touch stimulation (Lee & Choi 2021). Therefore, direct devices may increase the level of NFT of consumers when engaging in e-commerce clothing purchases and thus lead to positive attitudes and higher levels of purchase intention. It is evident that, by describing and comparing the two demographic profiles of South Africa and the UAE, clear differences exist, leading to further dissimilarities in levels of NFT between male and female consumers,

and their emotional response towards e-commerce clothing purchases.

### **NFT and the effect on e-commerce clothing purchases**

UAE males use tactile sensory cues to obtain information about the physical garment at hand rather than touching the garment for hedonic purposes, whereas SA males will be more inclined to purchase clothing garments through e-commerce due to lower levels of autotelic NFT. Interestingly, the female respondents demonstrate higher levels of autotelic NFT statements than the male respondents. A study by Rathee and Rajain (2019) confirmed females have been found to demonstrate higher autotelic NFT. Consumers with higher levels of autotelic NFT demonstrated emotional responses in terms of tactile cues, which also led to consumers forming emotional attachments to certain products (Lee & Choi 2021). It is evident that UAE females indicate higher levels of instrumental NFT, resulting in a lower purchase intention towards e-commerce clothing purchases due to the lack of tactile sensory cues and physical information about the garment prior to purchase.

Culture influences the perception of e-commerce globally (Pratesi, Hu, Rialti, Zollo & Faraoni 2021) and should therefore be regarded as a contributing factor to e-commerce purchasing behavioural differences. The individualistic nature of SA consumers and collectivistic nature

of UAE consumers (Hofstede Insights 2023) is evident in the results of this study, with South Africans responding positively towards the displayed garments in the electronic questionnaire due to the minimalistic and under-stimulated nature of the pictures. UAE respondents demonstrate higher levels of instrumental NFT and therefore demand increased sensory stimulation within e-

commerce. It is therefore evident that SA consumers demand less sensory stimuli from e-commerce than UAE consumers and therefore show an increased positive reaction towards the lack of tactile sensory cues in e-commerce clothing purchases.

### **Emotional responses in e-commerce clothing purchases**

UAE males demonstrate less emotional responses across all garments in comparison with SA males, which can be due to their collectivistic cultural nature (Hofstede Insights 2023). Therefore, the generally lower levels of NFT of SA and UAE males is a major contributing factor towards the emotional responses found in this study. For this study, UAE females show higher levels of instrumental NFT that result in a decreased emotional response, which can be a result of cultural orientation, as less emotion is customarily displayed in collectivist Emirati culture (Al Marzouqi, Otim, Alblooshi, Al Marzooqi, Talal & Wassim 2022) with certain Muslim populations displaying apprehension towards emotions of contentment, compared to Western individualism, which increases one's wellbeing (Lambert, Warren, Schwam & Warren 2023). It is therefore clear that the diverse SA culture lends itself to various levels of expressiveness, with certain cultural groups in the country demonstrating higher levels of expressiveness than others. Yet, the majority of South Africans openly engage in elevated levels of emotion. This could therefore lead to an increased emotional response towards e-commerce clothing purchases.

### **Associations between NFT and emotional responses**

South Africans have demonstrated more significant associations ( $p < 0.05$ ) to emotional responses, and signified responses to autotelic NFT rather than instrumental NFT, as autotelic and hedonic purchases provoke

increased consumer emotions, albeit existing research proves that male consumers gravitate towards higher levels of instrumental NFT (Rathee & Rajain 2019). Cinar (2020) confirmed that negative emotional responses lead to consumers experiencing sensory responses which may be associated with negative attitudes towards the clothing garments (Cinar 2020), leading to a decrease in purchase intention. Furthermore, consumers with elevated levels of instrumental NFT, having a lower purchase intention, may thus be more likely to display a negative attitude toward e-commerce clothing purchases compared to consumers with elevated levels of autotelic NFT and higher purchase intention (Ha 2019).

South African respondents have had greater significant associations towards emotional responses than UAE consumers, which could be an indication of cross-cultural differences in autotelic and instrumental NFT as SA respondents have demonstrated higher levels of autotelic NFT. Reasons for these results could include the vast amount of luxury shopping malls in the country of UAE, howbeit apparel has shown increasing e-commerce purchases (do Espírito Santo & Trigo 2020). Consumers in the UAE are driven by the extravagant shopping experiences in brick-and-mortar retailers. The shopping orientation of consumers in the UAE is also driven by factors such as sustainability and experience (Pradeep & Pradeep 2023). These consumers are less likely to consider price as a deciding factor and more likely to choose high quality products when purchasing. Interestingly, among the pillars of the UAE National Agenda is the achievement of a sustainable environment and the infrastructure required to support sustainable development that balances economic and social development (UAE Ministry of Climate Change and Environment 2023). South African respondents, however, have a lower monthly income (Table 1), and therefore, contrastingly,

consider price as one of the overarching decision-making factors when purchasing products. In SA the gap between acknowledgement towards sustainable purchases (92% importance score) and action (42% not living sustainably), should be treated by brands as an opportunity to make sustainable living more accessible (Burrows 2023).

## STUDY LIMITATIONS AND RECOMMENDATIONS

This cross-cultural study included population samples from South Africa and the UAE. However, the UAE population sample, although diverse, might not include all nationalities currently residing in the UAE. This might have been the case in this study, and it is therefore recommended that future research ensures the inclusion of most or all nationalities in the population sample to accurately represent the current population of the UAE. Furthermore, an electronic questionnaire with Check-All-That-Apply (CATA) questions were distributed to respondents to determine the emotional and sensory responses of consumers' e-commerce clothing purchases, supplemented by the EmoSensory wheel (Schouteten *et al.* 2015) and MPPEMIS (Li *et al.* 2020). This method of standardised questioning guarantee's reliability (Pietersen & Maree 2016) and is often used for sensory product depiction (Ares & Jaeger 2015). However, CATA-based questions might limit the consumers' sensory responses (Ares & Varela 2018). By including open-ended questions in the electronic questionnaire where other emotional and sensory responses could be shared by respondents, additional responses were collected. However, further in-depth understanding of South African and UAE consumers could be obtained with a qualitative study methodology by providing increased insight into the research problem

and thus elaborate on the decision-making processes and reasoning behind consumers' emotional and sensory responses in terms of NFT and e-commerce clothing purchases.

## CONCLUSIONS

This study vitalises consumers' emotional needs in e-commerce clothing purchases and highlights the imperative similarities and differences of two nations with regards to clothing purchases in the e-commerce context by acknowledging the divergent levels of NFT and the differences in their emotional responses. It is evident that UAE consumers have a greater need to touch clothing products prior to purchasing than SA consumers, especially with reference to obtaining information of a product through touch. South African consumers are more likely to engage in e-commerce clothing purchases. This study aids e-commerce and industry role players on the behavioural aspects of e-commerce consumers in terms of touch deprivation and emotional responses. Findings from this study can therefore provide insight to industry role players to capitalise on consumers' e-commerce behaviour and emotions regarding clothing purchases, by encouraging e-commerce to incorporate tactile alternatives to consumers' culture and level of NFT. This will consequently lead to engaging e-commerce, increasing positive emotions in consumers, and, as a result, increase purchase intention.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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