



**A STUDY ON CONSUMERS' INTENTIONS TO REUSE MOBILE APPAREL APPLICATIONS**

*Tüketicilerin Mobil Giyim Uygulamalarını Yeniden Kullanma Niyetleri Üzerine Bir Araştırma*

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**ABSTRACT**

To understand how hedonic shopping orientation affects the desire to reuse mobile applications, this study will examine the mediating impact of the need for mobile app atmosphere as well as the moderating role of mobile irritation. 222 consumers who used mobile applications for their shopping provided information via an online survey. Process Macro testing was done on the research model. The test results indicate that there is a strong beneficial impact of hedonic shopping orientation on the intention to reuse mobile apps. Simultaneously, hedonic shopping orientation has a considerable impact on the intention to reuse mobile apps due to the positive mediating role of the need for mobile app atmosphere and the negative moderating influence of mobile irritation. This study presents implications for mobile app retailing and expands the field of research on mobile shopping behavior. Important information is also provided for mobile customers who have a hedonic shopping orientation.

**ÖZ**

Hedonik alışveriş yöneliminin mobil uygulamaları yeniden kullanma niyetini nasıl etkilediğini belirlemek amacıyla bu çalışmada, mobil uygulama atmosferine duyulan ihtiyacın aracılık etkisi ve mobil antipatinin düzenleyici rolü incelenmektedir. Alışverişlerini mobil uygulamalarla yapan 222 tüketici, çevrimiçi anket aracılığıyla araştırmaya dahil edilmiştir. Araştırma modeli üzerinde Süreç Makro testleri yapılmıştır. Çalışma sonuçları, hedonik alışveriş yöneliminin mobil uygulamaları yeniden kullanma niyeti üzerinde güçlü ve olumlu bir etkisi olduğunu göstermektedir. Buna ek olarak, hedonik alışveriş yöneliminin, mobil uygulama atmosferine duyulan ihtiyacın pozitif aracılık rolü ve mobil antipatinin negatif düzenleyici etkisi nedeniyle mobil uygulamaları yeniden kullanma niyeti üzerinde önemli bir etkiye sahip olduğu görülmüştür. Bu çalışma, mobil uygulama perakendeciliğine yönelik çıkarımlar sunmakta ve mobil alışveriş davranışına ilişkin araştırma alanını genişletmektedir. Ayrıca hedonik alışveriş yönelimine sahip mobil alışverişçiler için önemli bir içgörü sağlamaktadır.

**Anahtar Kelimeler**

Mobil Uygulama  
Atmosferi, Mobil Antipati,  
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## **1. Introduction**

The number of smartphones and the use of mobile devices are rapidly increasing and mobile applications become the new playmaker of the retail world. In parallel with this tendency, shopping habits of millions of consumers around the world have been redefined (Kasilingam & Krishna, 2021). A mobile app (or mobile application) is a software program that provides users formatted information based on an independent user interface and is activated by being installed on smartphones or devices (Kim, Park, Kim, & Lee, 2014). A branded mobile app, on the other hand, is software that can be downloaded to a mobile device from an Apple's App Store or Google's Play Store, that prominently displays the brand identity through brand elements etc., a brand logo or icon (Bellman, Potter, Treleaven-Hassard, Robinson, & Varan, 2011). Mobile applications are increasingly becoming a preferred tactic by retailers as they allow for digital interaction (Van Heerde, Dinner, & Neslin, 2019). According to research, smartphone users have increasingly adopted and used mobile apps with the intention of purchasing in recent years. In this context, consumer spending on mobile applications worldwide is expected to reach USD 160 billion in a short while. In addition, a recent report suggests that there has been a significant increase in the number of mobile app installs and consumers' preference for shopping from mobile apps has intensified compared to other online forms (Chopdar, Paul, Korfiatis, & Lytras, 2022). Mobile applications, especially branded ones are changing and transforming the way consumers shop, seek information, socialize, communicate and obtain both hedonic and utilitarian gratifications (McLean, Al-Nabhani, & Marriott, 2021).

The number of branded mobile applications downloaded globally is predicted to reach 258,2 billion by 2022 (Statista, 2019). According to another study, it is predicted that the number of mobile shoppers in the United States will exceed 187 million users by 2024 (App Annie, 2019). Based on all these predictions, it is believed that mobile application channels will become more important for retailers in the near future and those apps will become the main source of online shopping. According to 2021 Digital Report Turkey which was published by Hootsuite and We Are Social, there is only 2.3% of the population (aged 6 to 64) who do not use a phone. Smartphones constitute 97.2% of the phones used. In addition, the use of tablets has also augmented and reached 44.4%. Looking at the mobile application usage trends by category, messaging applications such as WhatsApp, Telegram, and Signal are observed to be the most frequently used applications. While social media applications rank second after them with 96.3%, it is seen that the most preferred mobile applications following them belong to the categories of music, online shopping, games and banking.

According to global consumer research, mobile applications account for 90% of the time spent on the mobile internet (eMarketer, 2020), with the average user spending approximately 4 hours per day on mobile applications. In addition, the pandemic has changed consumer purchasing behavior in both traditional and electronic commerce environments (Eger, Komárková, Egerová, & Mičák, 2021). The Covid-19 pandemics has caused consumers to reconsider their past shopping habits and even learn new ones. During the Covid 19 worldwide pandemics, smartphone and mobile app usage has expanded even more. In addition to a 25% increase in shopping expenditures made through applications compared to the previous year, there was an overall 20% increase in smartphone usage (App Annie, 2020). Due to strict containment measures, consumers had to switch to online shopping, home delivery or cashless payment methods which they had never considered before. Likewise, retailers have started to invest heavily in improving their mobile product purchasing processes and mobile applications in order to minimize the possible adverse consequences of restrictions that greatly affect consumers shopping patterns (Leone et al., 2020; Škare, Soriano, & Porada-Rochoň, 2021).

With the rapidly growing mobile world, the elements that will add value to the mobile application experiences and atmospherics have started to be of great importance for retailers. It is a well-known fact, nevertheless, that consumers are not using mobile applications for purchasing as much as retailers had anticipated. Despite the fact that most smartphone users in the United States have various mobile shopping apps installed, just 25% of them utilize such apps to shop. Similarly, around 25% of mobile apps are abandoned after just one-time use (Statista, 2019). Despite the strong growth in mobile application users, many brands cannot ensure the sustainability of mobile application usage. Too many mobile shopping apps are unsuccessful in converting users initial visit into a real purchase. For both researchers and practitioners, the low conversion rate raises important research questions.

Customers may be encouraged to utilize mobile applications for shopping not only due to benefits like low prices or a variety of products, but also due to the shopping environment's environmental quality. For this reason, it becomes crucial for retailers to build atmospherics in which they can smooth both the consumer's experience and their purchasing process. Kotler (1973) defines atmospherics as "the conscious design of the space to create certain effects". In other words, atmospherics is an effort to design purchasing environments to

produce certain emotional effects in the buyer that increase the probability of purchase. The atmospherics, which is very important in the consumer purchasing journey, can be responsible for two-thirds of purchases according to researches (Hausman & Siekpe, 2009), can determine the effectiveness of a retailer (Savelli, Cioppi, & Tombari, 2017) and can be an important distinctive factor among retailers. Similarly, the effect of online store atmospherics is a field which has been studied extensively in the literature (Hsieh, Hsieh, Chiu, & Yang, 2014). Key findings indicate that online atmospherics has an impact on attitude (Richard & Habibi, 2016), flow experience (Gao & Bai, 2014), satisfaction (Eroglu, Machleit, & Davis, 2003), impulse buying behavior (Barros, Petroll, Damacena, & Knoppe, 2019) and purchase intention (Wu, Lee, Fu, & Wang, 2014). This study highlights the importance of meeting the consumer's need for retail atmospherics in mobile retailing from the perspective of mobile application users. Additionally, it is based on the hypothesis that the mobile application atmospherics should be designed as a strategic tool to generate purchase intention. Although prior studies have revealed that retail atmospherics have a substantial impact on customer shopping behavior, few studies have focused on mobile app atmospherics in particular. Furthermore, despite the increasing importance of mobile applications in retail, scientific research in the field is geographically limited. It is seen that the literature on understanding the mobile shopper remains insufficient and there are areas that need research, particularly when it comes to developing economies (Chopdar & Sivakumar, 2019). From this perspective, the hedonic orientation of mobile shoppers, their need for atmospherics and their intent to reuse the mobile app were tested in the Turkish market, specifically in apparel industry and the moderator role of mobile irritation was emphasized.

## **2. Theoretical Background and Hypotheses**

### **2.1. Hedonic Shopping Orientation and Consumer Need for Mobile App Atmospherics**

Shopping orientation is the way that consumers shop, and it can lead to individual variations in shopping behavior (Sinha, 2003). Studies about hedonic orientation shows that, it is a crucial determinant of consumer adoption and use of technology because it deals with receiving pleasure from utilizing it (Brown, Venkatesh, & Bala, 2006). For this reason, the mobile platform can satisfy consumers' hedonic motives by providing a fun and smooth purchasing experience. Academic studies also support that consumers' hedonic shopping orientation is a significant factor for online (Handa & Gupta, 2014) and mobile shopping behavior (Yang & Kim, 2012). Even when exposed to a technologically enhanced retail setting, hedonic customers can adapt to the retail atmosphere and become a part of it more rapidly (Donthu & Garcia, 1999; Brownm, Pope, & Voges, 2003).

Studies on the atmospherics suggested that; the retail environment is an important dimension that shapes the shopping experience (Sharma & Stafford, 2000). Consumers, by perceiving this atmospheric as multidimensional (Donovan, Rossiter, Marcoolyn, & Nesdale, 1994) evaluate stores holistically (Matilla & Wirtz, 2001). The atmospheric perceptions that consumers differentiate among brands also affect their general attitudes towards these brands (Rayburn & Voss, 2013). Although the atmospherics literature originated by focusing on physical environments such as restaurants and shopping malls (Kotler, 1973), with the advent of the internet, its emphasis switched to digital worlds (Eroglu, Machleit, & Davis, 2003; Gao & Bai, 2014). Adapting atmospherics to the online retail context, researchers (Eroglu, Machleit, & Davis, 2001) conceptualized the online atmospherics as “the sum of all cues that can be seen and heard by online shoppers”. Since consumers think that physical and digital environments are not only connected but similar when it comes to shopping, they desire to have close experiences in both environments (Childers, Carr, Peck, & Carson, 2001). The hedonic value of purchasing can be increased by using features like colors, borders, background patterns, fonts, animation, music, and sound, according to research on the atmospherics of online stores (Eroglu, Machleit, & Davis, 2003). Recently, in addition to the online store atmospherics, the m-atmospherics has also been started to work to improve the mobile shopping experience of consumers (Rayburn & Voss, 2013; Rayburn, Anderson, Zank, & McDonald, 2022). An atmospheric with positive elements, both physically and digitally, is vital for the success of retailers. Therefore, it is proposed that hedonistic shopping orientation is a precondition for consumer need for mobile app atmospherics and H<sub>1</sub> was developed:

H<sub>1</sub>: “Hedonic shopping orientation will positively affect the need for mobile app atmospherics.”

## **2.2. Intention to Reuse Mobile App**

Individual needs in the consumer environment are defined by Belk et al. (2003) as a motivational area that may be controlled, planned, directed, and satisfied by marketers. From this point of view, it seems likely that consumers who need a mobile app atmospherics will have the intent to reuse the mobile application, as retailers strengthen the atmospheric elements (Belk, Ger, & Askegaard, 2003). For instance, clothing retailers have begun to explore and gradually use creative ways to meet consumers' online atmospherics needs, such as image interaction technologies (IIT) (Kim, Fiore, & Lee, 2007), design aesthetics (Wang, Hernandez, & Minor, 2010). Similarly, many retailers have focused on the mobile app atmospherics in order to give high-quality in-app experiences to their customers. From this view, H<sub>2</sub> was developed:

H<sub>2</sub>: "The need for mobile app atmospherics will positively affect the intention to reuse mobile apps."

In addition to extrinsic motivations; intrinsic motivations are also accepted as an important driving force of consumers' intention and willingness to use novel methods and programs (Alalwan, Dwivedi, Rana, & Algharabat, 2018). Conceptually, hedonic shopping orientation, as one of these intrinsic motivations, can be related to the reuse intention of mobile applications in terms of the sense of pleasure that will be derived from the experience of using them. In addition, it is known that hedonic consumers interest in online shopping and e-commerce channels not only because of factors such as security, interaction and privacy but also in search of an inner and exciting process experience. Such consumers are always looking for novel and different ways to achieve a sense of satisfaction and pleasure in their online shopping activities (Gunawan & Sondakh, 2020). Previous studies also confirm that users' perceptions of pleasure and entertainment, i.e. hedonic motivations, are important for re-visiting a website (Raney, Arpan, Pashupati, & Brill, 2003). Furthermore, it is well acknowledged that hedonic motivations influence consumers' impulsive purchasing behavior (Yu & Bastin, 2017) and that mobile devices with entertaining tools and applications influence users' propensity to download mobile apps (Palos-Sanchez, Correria, & Saura, 2019). From this view, H<sub>3</sub> and H<sub>4</sub> were developed:

H<sub>3</sub>: "Hedonic shopping orientation will positively affect the intention to reuse mobile apps."

H<sub>4</sub>: "Hedonic shopping orientation has a positive effect on the intention to reuse mobile apps through the mediation of the need for mobile app atmospherics."

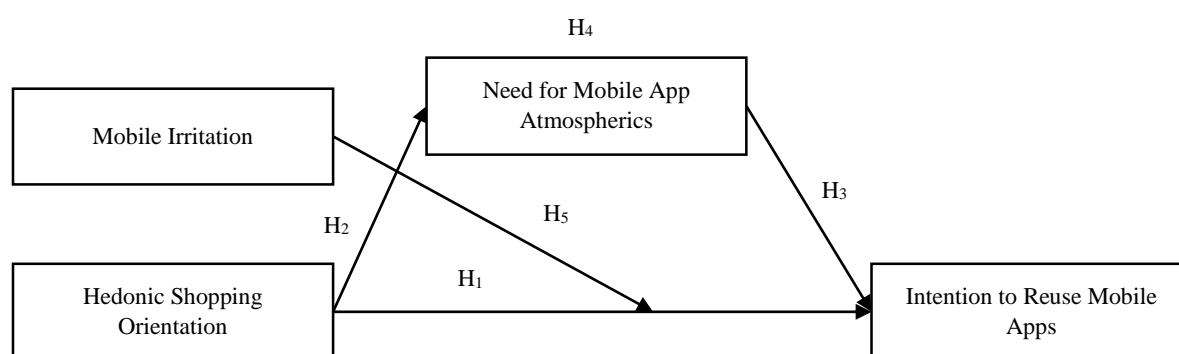
## **2.2. Mobile Irritation**

When the concept of consumer ambivalence (Otnes, Lowrey, & Shrum, 1997) is extended, it seems likely that consumers with hedonic orientation will have mixed emotions in the mobile environment. These consumers who are looking for the entertainment satisfaction provided by an interactive shopping environment inherently, may feel discomfort when the process is directed through technology. The shopping procedure and structure of mobile applications may not be sufficient to meet the expectations of hedonic shoppers in terms of mobile experience. For example, consumers who encounter the sign-up screen without providing any hedonic satisfaction as soon as they enter the application may experience disappointment (Lee & Kim, 2019). Studies show that smartphone users ranging between the ages of 19 to 33 in the USA expect a mobile-friendly atmospheric while shopping via mobile apps, and they even attach more importance to this than the social media accounts of those brands (Marketing Charts, 2015). For this reason, the process and possible issues in mobile applications can lead to negative shopping experiences by strengthening hedonic consumers' sense of mobile irritation. Improving the mobile app atmospherics is perceived as an important area in terms of both satisfaction of hedonic shoppers and reducing the negative effects of mobile antipathy. Accordingly, H<sub>5</sub> was developed:

H<sub>5</sub>: "Mobile irritation has a moderator role on the effect of hedonic shopping orientation on the intention to reuse mobile apps."

Retail atmospherics is defined as "the deliberate design of space to create certain impacts" in general (Kotler, 1973). Retailers can adjust atmospheric cues like music, color and smell to increase customers' emotional responses. Website atmospherics has been an essential topic in retail literature since the emergence of the Internet. All aspects that web designers can build, such as background color and pattern, image, typography, menus, background music and interactive web apps, can be found in the website atmospherics (Eroglu, Machleit, & Davis, 2003; Wu, Lee, Fu, & Wang, 2014). Researchers are beginning to concentrate on various elements of mobile shopping since it first entered the retail landscape. In a recent study, the mobile application

atmospherics were conceptualized by expanding on Kotler's (1973) definition as “the conscious design of mobile application environments in order to create positive effects on users and get behavioral returns” (Lee & Kim, 2019). Despite the fact that the atmospheric dimensions of a mobile shopping app have arisen as a fascinating and essential topic, the significance of atmospherics in mobile shopping remains unclear. The research model of the study is proposed based on this perspective. To be more precise, it is suggested that the hedonic shoppers may be the shoppers whose need for mobile app atmospherics is very high and with the right atmospheric design, the intention of such users to shop again through the app can be increased. In addition, the attitudes of users with mobile irritation were also examined and the negative moderating effect of this irritation on the intention to reuse of hedonic consumers was included. The mobile applications of the apparel industry were chosen to understand the determining effects of the atmospherics in the study since the need for tangible senses such as seeing and touching in order to make product evaluations is high and evident in this industry. As a result, the research model is shown in Figure 1.



**Figure 1.** Research Model

### 3. Method

A total of 222 Turkish consumers took part in a survey inquiring about a recent mobile shopping experience. In this context, consumers who do not have shopping experience through any mobile applications were not allowed to answer the questionnaire. An online questionnaire with multi-item scales was developed to measure the constructs included in the proposed model (see Fig. 1): hedonic shopping orientation, consumer need for mobile app atmospherics, mobile irritation and intention to reuse mobile apps for apparel shopping. Since it is not possible to reach the entire target population, convenience sampling technique, which is one of the fastest, most economical and useful sampling techniques, was used to collect data (Aaker et al., 2007). However, since data will be collected with a survey, an application was made to Van Yüzüncü Yıl University’s Social and Human Sciences Publication Ethics Committee. The approval document numbered 2022/07-24 and dated 23/03/2022 has been received. It is widely accepted in the literature that the sample size might be 10 times the total number of scale items and we have 14 items in this study (Hair et al., 2009: p. 329). Therefore, the sample size of 222 people was found to be sufficient. We used previously validated scales to measure each investigated construct. Hedonic shopping orientation (Lee & Kim, 2019) and need for mobile app atmospherics (Koo & Ju, 2010) was measured with four items. Mobile irritation (Lee & Kim, 2019) and intention to reuse mobile apps (Yoo & Donthu, 2001) was measured with three items adapting from previous studies. All the question items employed five-point Likert-type scales (1=Strongly disagree and 5=Strongly agree).

### 4. Findings

Before testing the research model, frequency analysis, factor analysis, reliability analysis, normality tests were performed. PROCESS macro one of the path analysis modeling tools developed by Hayes (2018: p. 586) for SPSS with Model 5 was employed to investigate research model. The demographic profiles of the participants are shown in Table 1. Among the total participants (n=222; 100%), the highest number of participants are found to be female (n=133; 59.9%), in a 27-41 age group (n=128; 57.7%), have bachelor's degree (n=130; 58.6%), with a monthly income ranging between 5001-7500 TL (n=67; 30.2%) and private sector employees (n=95; 42.8%).

**Table 1.** Sample Characteristics

Demographic Characteristics		f	%	Demographic Characteristics		f	%
Gender	Female	133	59.9	Profession	Student	54	24.3
	Male	89	40.1		Not working	12	5.4
	<b>Total</b>	<b>222</b>	<b>100</b>		Public sector	49	22.1
Age	10-26 (1996–2012; Generation Z)	79	35.6	Frequency of Mobile App Shopping	Private sector	95	42.8
	27-41 (1981-1995; Generation Y)	128	57.7		Other	12	5.4
	42-57 (1965-1980; Generation X)	15	6.8		<b>Total</b>	<b>222</b>	<b>100</b>
	<b>Total</b>	<b>222</b>	<b>100</b>		Daily	5	2.3
Level of Education	High school	21	9.5	Shopping with Mobile Apps of Clothing Brands	Few times a week	53	23.9
	Bachelor's degree	130	58.6		Once a month	81	36.5
	Post graduate	55	24.8		Few times a month	83	37.4
	Ph.D.	16	7.2		<b>Total</b>	<b>222</b>	<b>100</b>
	<b>Total</b>	<b>222</b>	<b>100</b>		Daily	1	.5
Monthly Income	0-3000 TL	63	28.4	Frequency of Mobile Apps of Clothing Brands	Once a week	11	5.0
	3001-5000 TL	32	14.4		Few times a week	11	5.0
	5001-7500 TL	67	30.2		Once a month	32	14.4
	7501-10000 TL	33	14.9		Few times a month	41	18.5
	10001 TL and above	27	12.2		Once few months	126	56.8
<b>Total</b>	<b>222</b>	<b>100</b>	<b>Total</b>	<b>222</b>	<b>100</b>		

Normality test results can be observed from Table 2. Since the skewness values are within the limits of  $\pm 3$  and the kurtosis values are within the limits of  $\pm 10$ , it should be accepted that the data obtained reveal a normal distribution (Kline, 2005). Since the data indicated a normal distribution, parametric test techniques were used for statistical analysis.

**Table 2.** Normality Test Results

Findings	Intention to Reuse Mobile Apps	Hedonic Shopping Orientation	Need for Mobile App Atmospherics	Mobile Irritation
Skewness	-1.266	-.563	-1.665	-.019
Kurtosis	1.633	-.372	2.802	-.648

Since the data showed normal distribution, t-tests and ANOVA, which are difference analysis tests, were performed. Mobile apps reuse intentions of consumers do not show a significant difference (see Table 2) according to age ( $F(2,219)=.175$ ;  $p=.839$ ), education level ( $F(3,218)=.893$ ;  $p=.446$ ), monthly income ( $F(4,217)=.376$ ;  $p=.825$ ), and profession ( $F(4,217)=.718$ ;  $p=.580$ ). However, females seem to be more willing to reuse mobile apps than males ( $t(220)=2.927$ ;  $p=.000$ ).

The measurement items and their results of factor and reliability analysis are shown in Table 3 and Table 4. KMO value is between 0.80-0.99 accepted as an excellent value (Kaiser, 1974). Factor loadings are  $\geq .50$  and the total explained variance is  $\geq 60\%$ , these values are widely accepted in social science literature (Hair et al., 2009). AVE values were calculated as  $\geq .50$ . CR values were calculated as  $\geq .70$ . It is also calculated as  $CR > AVE$ . Therefore, the convergent validity of the factor dimensions was supported (Fornell & Larcker, 1981). All items were found to be reliably since the reliability values of the factor dimensions are  $\geq .70$ , (Nunnally, 1978).

It is possible to see the model test results in Table 5. The direct positive effect of hedonic shopping orientation on both the need for mobile applications atmospherics (Coeff=.6251;  $p=.0000$ ; LLCI=.5305; ULCI=.7197) and the intention to reuse mobile apps (Coeff=.7052;  $p=.0000$ ; LLCI=.4493; ULCI=.9611) is significant. In addition, the direct positive effect of the need for mobile apps atmospherics on the intention to reuse mobile applications is also important (Coeff=.3993;  $p=.0000$ ; LLCI=.2615; ULCI=.5371). The need for mobile apps atmospherics mediates the indirect positive effect of hedonic shopping orientation on the intention to reuse mobile apps (Effect=.2496; BootLLCI=.1430; BootULCI=.3770). Moreover, mobile irritation has a negative moderator role on the effect of hedonic shopping orientation on the intention to reuse mobile apps (Coeff=-.1356;  $p=.0003$ ; LLCI=-.2089; ULCI=-.0622).

**Table 3.** Results of Analysis of Variance

<b>The results of t-test for independent (gender) groups</b>						
Group	n	Mean	Std. Deviation	df	t	p
Female	133	4.0000	.76761	220	2.927	.000
Male	89	3.6142	1.19648			
<b>ANOVA results for independent (age) groups</b>						
Source of Variance	Sum of Squares	df	Mean Squares	F	p	
Between Groups	.338	2	.169	.175	.839	
Within Groups	211.352	219	.965			
Total	211.690	221	1.134			
<b>ANOVA results for independent (level of education) groups</b>						
Source of Variance	Sum of Squares	df	Mean Squares	F	p	
Between Groups	2.570	3	.857	.893	.446	
Within Groups	209.121	218	.959			
Total	211.690	221	1.816			
<b>ANOVA results for independent (monthly income) groups</b>						
Source of Variance	Sum of Squares	df	Mean Squares	F	p	
Between Groups	1.459	4	.365	.376	.825	
Within Groups	210.231	217	.969			
Total	211.690	221	1.334			
<b>ANOVA results for independent (profession) groups</b>						
Source of Variance	Sum of Squares	df	Mean Squares	F	p	
Between Groups	2.765	4	.691	.718	.580	
Within Groups	208.925	217	.963			
Total	211.690	221	1.654			

**Table 4: Exploratory Factor Analysis Results**

Factors	Items	$\lambda$	VE (%)	AVE	CR	$\alpha$
Hedonic Shopping Orientation	I like to spend time for shopping.	.992	54.759	.701	.902	.895
	While shopping, I frequently seek entertainment.	.861				
	I like to browse around while shopping.	.791				
	Shopping is fun for me.	.675				
Need for Mobile App Atmospherics	I would like the mobile app that I am shopping to have interactive elements.	.889	12.464	.668	.888	.898
	I would like the mobile app that I am shopping to have dynamic graphics.	.873				
	I would like the mobile app that I am shopping to be carefully designed.	.826				
	It is important to me that the mobile app that I am shopping looks attractive.	.663				
Intention to Reuse Mobile Apps	I will use mobile apps again for my apparel purchases in the near future.	.921	7.901	.797	.921	.944
	I am very likely to reuse mobile apps for my apparel purchases.	.884				
	I am planning to reuse mobile apps for my apparel shopping.	.873				
Mobile Irritation	I think most mobile apps are messy and disorganized.	.956	5.850	.787	.916	.868
	I think most mobile apps are confusing.	.926				
	I often get angry when shopping from mobile apps.	.769				
<b>% of Total Variance Explained</b>			80.973			
<b>KMO Value:</b> .890	<b>Bartlett's Test of Sphericity:</b> Approx. Chi-Square=2683.209			df=91	Sig.=.000	

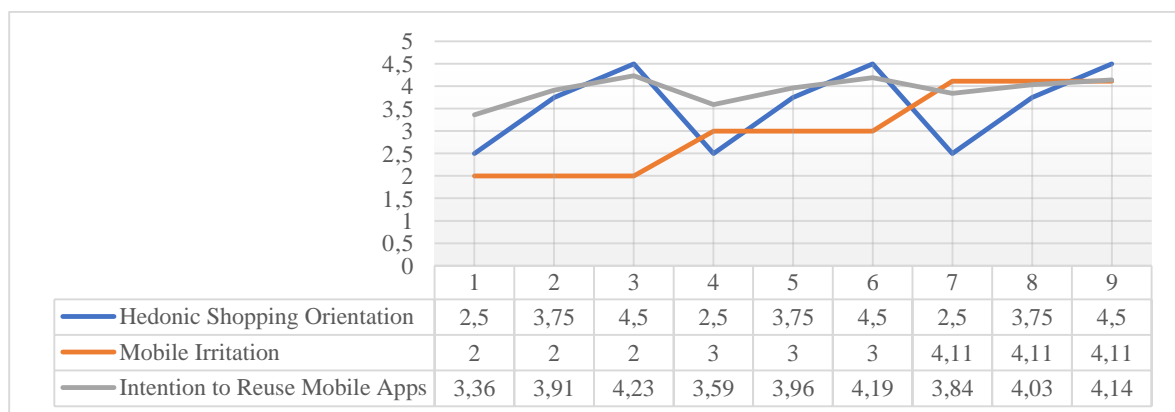
Note:  $\lambda$ =Factor loadings; VE=Variance Explanation; AVE= Average Variance Extracted; CR= Composite Reliability;  $\alpha$ =Cronbach's alpha

**Table 5.** Direct and Indirect Effects

H	Structural paths	R <sup>2</sup>	Coeff	SE	t	p	LLCI	ULCI
H <sub>1</sub>	Direct effect of hedonic shopping orientation on the need for mobile app atmospherics	.4355	.6251	.0480	13.0287	.0000	.5305	.7197
H <sub>2</sub>	Direct effect of the need for mobile app atmospherics on intention to reuse mobile apps	.6059	.3993	.0699	5.7115	.0000	.2615	.5371
H <sub>3</sub>	Direct effect of hedonic shopping orientation on intention to reuse mobile apps	.6059	.7052	.1299	5.4306	.0000	.4493	.9611
H <sub>5</sub>	Negative moderator role of mobile irritation on direct effect of hedonic shopping orientation on intention to reuse mobile apps	.6059	-.1356	.0372	-3.6408	.0003	-.2089	-.0622
H <sub>4</sub>	Mediating role of the need for mobile app atmospherics in the indirect effect of hedonic shopping orientation on intention to reuse mobile apps		<b>Effect</b>	<b>BootSE</b>	<b>BootLLCI</b>	<b>BootULCI</b>		
			.2496	.0593	.1430	.3770		

The findings for the conditional effects of hedonic shopping orientation on intention to reuse mobile apps at low, middle, and high values of mobile irritation are shown in Figure 2. The conditional effects of hedonic shopping orientation on the intention to reuse mobile apps are significant when the value of mobile irritation is low (Effect=.4341; p=.0000; LLCI=.2962; ULCI=.5720), middle (Effect=.2985; p=.0000; LLCI=.1893; ULCI=.4077), and high (Effect=.1485; p=.0243; LLCI=.0195; ULCI=.2775). However, as the mobile irritation value increases, the effect of hedonic shopping orientation on the intention to reuse mobile applications decreases. As seen in the graphic, while mobile irritation (orange line) is low, hedonic shopping orientation (blue line) increases, and at the same time, reuse intention (grey line) increases. Conversely, when mobile irritation increases, hedonic shopping orientation decreases, and at the same time, reuse intention decreases.

Different Values of Mobile Irritation	Effect	SE	t	p	LLCI	ULCI
Low value	2.0000	.4341	.0700	6.2037	.0000	.2962 .5720
Middle value	3.0000	.2985	.0554	5.3862	.0000	.1893 .4077
High value	4.1067	.1485	.0655	2.2685	.0243	.0195 .2775



**Figure 2.** Conditional Effects

### 5. Discussions, Implications and Conclusions

While using mobile apps has become a common strategy utilized by companies to increase satisfaction, loyalty, customer engagement, revenue and customer value, they also have certain disadvantages due to their restricted ability to provide full "tactile input" to customers (Citrin, Stem Jr, Spangerberg, & Clark, 2003). Since the beginning of Internet retailing, this subject has been extensively studied in the literature. According to studies, consumers particularly when shopping for apparel products online, perceive a significant level of product risk



(Goldsmith & Goldsmith, 2002). This is because physically inspecting things in an online environment has sensory limitations. Even while current technology capabilities allow consumers to receive significant visual cues, it is still difficult for mobile marketers to convey those sensory components through mobile apps. This research proposes solution to this problem while highlighting the significance of mobile app atmospherics for hedonic consumers in an apparel-related scenario.

Although studies related with hedonic motivations indicate that it has a very important role in determining technology acceptance and use (Alalwan, Dwivedi, Rana, Lal, & Williams, 2015) the majority of previous research on mobile apps have used functional views to analyze continuance usage intention. We still have limited understanding of how hedonic motivations influence mobile app usage. People become more inclined to employ technology when they are highly driven by hedonic considerations. In the case of an online shopping system, for instance, consumers start to trust and adopt the process when they learn that buying through mobile applications gives them access to a wide selection of goods and services while also giving fun and utility (Baabdullah, 2018). Because it is associated with enjoyment, fun, and delight arising from shopping activities, hedonic motivation also has a strong beneficial effect on app users' impulsiveness (Chopdar, Paul, Korfiatis, & Lytras, 2022). However, this study addresses the atmospherics need of hedonic shoppers and explaining their intention to reuse the mobile app by considering to their levels of mobile irritation. The results of our study indicate that there is a positive relationship between hedonic shopping orientation, consumer need for mobile app atmospherics and intention to reuse mobile apps. This finding is consistent with the findings of Kaltcheva and Weitz (2006), who discovered that motivational orientation influences how consumers receive environmental cues, and Lee and Kim (2019), who discussed the atmospherics needs of hedonic shoppers in a mobile setting from a U&G perspective. In addition to being a predictor of both the intention to reuse mobile apps and the consumer need for mobile app atmospherics; our study reveals that as a novel finding, consumer need for mobile app atmospherics has a mediating effect on the relationship between hedonic shopping orientation and the intention to reuse mobile apps. This result highlights the importance of arranging the atmospherics for mobile app reuse, especially if customers are hedonic oriented.

As another important contribution, the study addresses mobile irritation and underlines the importance of atmospheric need for hedonic consumers in mobile environment. Concept of irritation in past literature widely studied from the advertising perspective and many of them found a negative relationship between irritation and consumers' attitudes towards mobile advertising (Wang, Oh, & Wang, 2009). Mobile ads can install negative feelings because of the nature of their execution (e.g., too loud or too long) or placement (e.g., too many or too frequent), and this may cause unfavorable spillover effects on marketing and advertising efforts (Alwreikat & Rjoub, 2020). With regard to online buying, Lim (2013) defined irritation as the degree to which a website makes online shoppers feel confused, distracted, and irritated. His research demonstrates that dynamic web atmospherics that are well-designed had a considerable impact in lowering web irritation. Consistent with this result, we also suggest mobile app atmospherics as a way to influence consumers' perceptions of irritation and confusion in shopping context. Negative moderator role of mobile irritation on direct effect of hedonic shopping orientation on intention to reuse mobile apps, supports the notion that hedonic consumers who are "ambivalent" can be both excited and displeased when making purchases on their mobile devices. Thus, a mobile shopping app with interactive and dynamic atmospherics design is an important tool for marketers to manipulate consumer's attitude.

The main purpose of our study was to shed light on retailers who have difficulty in converting mobile application visits into real purchases and cannot use applications effectively in terms of shopping while mobile usage is so common. While doing so, the study's primary objective was to evaluate mobile retailing by highlighting the significance of mobile app atmospherics. We experimented with a conceptual model that broadens the literature on mobile shopping behavior while examining consumer need for atmospherics in mobile apps, particularly for users with hedonic shopping orientation. Our findings provide crucial managerial insights. Firstly, mobile shopping apps should have user-friendly technical interfaces with images to avoid a messy mobile screen composition. Secondly, a branded mobile app can be a powerful tool for retailers in increasing customer intention to reuse the app through the mediation effect of atmospheric cues and to strengthen the brand image by transferring the benefits of online shopping to the physical shopping experience. Lastly, retailers should develop strategies to attract mobile irritated customers for mobile shopping and design atmospheric cues according to the customer's shopping orientation.

## 6. Limitations and Future Recommendations

The limitations of this study present opportunity for future investigation. First of all, data were collected by asking the participants which mobile apparel application they use the most. Since individual answers may differ significantly, future research might use the same mobile shopping app, allowing researchers to more effectively evaluate consumer need of mobile app atmospherics. Secondly, the moderator role of mobile irritation was examined in this study, but there may be other variables that will affect the experience of hedonic consumers in mobile environment. For example, a recent study indicates relationship between hedonic shopping value, retailer app usage and deal prone customers (Flacandji & Vlad, 2022). For this reason, the role of different personality traits like this can be explored in future studies.

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#### **Etik, Beyan ve Açıklamalar**

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**1. Etik Kurul izni ile ilgili;**

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**2. Bu çalışmanın yazar/yazarları, araştırma ve yayın etiği ilkelerine uyduklarını kabul etmektedir.**

**3. Bu çalışmanın yazar/yazarları kullanmış oldukları resim, şekil, fotoğraf ve benzeri belgelerin kullanımında tüm sorumlulukları kabul etmektedir.**

**4. Bu çalışmanın benzerlik raporu bulunmaktadır.**

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