ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF SCIENCE ENGINEERING AND TECHNOLOGY

THE IMPACT OF RETAIL STORE ENVIRONMENTAL CUES ON SHOPPER BEHAVIOR

PhD THESIS

Merve COŞKUN

Department of Management Engineering

Management Engineering Programme

JUNE 2019

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İSTANBUL TEKNİK ÜNİVERSİTESİ ★ FEN BİLİMLERİ ENSTİTÜSÜ

PERAKENDE MAĞAZA ATMOSFERİNİN ALIŞVERİŞÇİ DAVRANIŞI ÜZERİNDEKİ ETKİLERİ

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Merve Coşkun, a Ph.D. student of ITU Graduate School of Science Engineering and Technology student ID 507132002 successfully defended the thesis/dissertation entitled "THE IMPACT OF RETAIL STORE ENVIRONMENTAL CUES ON SHOPPER BEHAVIOR", which she prepared after fulfilling the requirements specified in the associated legislations, before the jury whose signatures are below.

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To my family,

FOREWORD

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ABBREVIATIONS

BS : Bias Corrected
CI : Confidence Interval
HC : Human Crowding
LLCI : Lower Limit Confidence Interval
Mturk : Mechanical Turk
PAD : Pleasure Arousal Dominance
RSC : Retail Shopper Confusion
SOR : Stimulus Organism Response
SM : Store Messiness
ULCI : Upper Limit Confidence Interval

SYMBOLS

β : effect size

α : Cronbach alfa

λ : factor loading

M : mean

t : mean difference

p : significance value

SD : standard deviation

SE : standardized effect

F : variance difference

R-sq: Regression coefficient

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THE IMPACT OF RETAIL STORE ENVIRONMENTAL CUES ON SHOPPER BEHAVIOR

SUMMARY

Several factors influence shopper decisions in a store like product assortment, pricing tactics, promotional activities. Store atmospheric cues also have critical importance to impact customer experience and purchase decisions. Based on the model of Mehrabian and Russell (1974) in environmental psychology, retail environment features can affect the subjective experience of consumers, especially their pleasure, arousal and dominance. Environmental stimuli -music, scent, lighting, other shoppers- can influence a consumer's emotional state (e.g. pleasure, arousal, dominance) which in turn affect the approach or avoidance behavior of the consumer (e.g willingness to pay, postponing purchase). Studies in environmental psychology and retailing state the importance of atmospheric factors of a retail store for affecting shopper experiences, conveying a positive or negative store image and promoting or preventing specific behavioral intentions of consumers.

The present thesis suggests an experimental approach to understand how retail store atmospheric cues such as the presence of other shoppers and store messiness, influence retail shopper confusion in a fashion retail store and affect shopper behavioral intentions. Retail shopper confusion is a three-dimensional mental state consisting of the cognitive effort necessary to deal with confusion (cognition), emotions reflecting the discomfort associated with confusion (emotion) and restricted behavioral intentions (conations) (Garaus et. al., 2015). Therefore the concept of retail shopper confusion focus on the negative feelings in a retail store. In this thesis research, the author defines disorderliness with a high human crowding and store messiness in a fast-fashion retail store. The main objective is to investigate the effect of disorderliness in a store environment on retail shopper confusion by decreased cognitive abilities, negative emotions and restricted behavioral intentions, which in turn is expected to influence shoppers' experiences and purchase decisions in the store. The other objective of this thesis is to find out whether human crowding and store messiness in a fast-fashion retail store lead to perceived scarcity and perceived competition among shoppers and these perceptions influence shoppers' competitive behaviors.

To investigate these effects, the author conducted three experimental study in order to examine the causal effects of store disorderliness on shoppers' behaviors.Study 1 suggests a main effect of crowding and messiness for each dimension of retail shopper confusion which further leads to negative behavioral reactions within the store. The findings of study 1 also suggest a mediation role of retail shopper confusion between crowding, messiness, and shopper behavioral intentions. In study 2, the author further examine the moderating role of shopping motivations on the relationship between retail shopper confusion and shopping behavioral intentions. The results suggest that in high crowded and messy stores, the negative effect of retail shopper confusion on in-store exploration and spending time will be stronger

for consumers pursuing recreational-shopping motivations as compare to task-oriented consumers.These two studies offer a theoretical understanding on the effects of two in-store elements- human crowding and store messiness on retail shopper confusion that further influence the shopper behavioral intentions. Study 3 was conducted to understand the effect of human crowding and store messiness as retail store atmospheric factors on shoppers' competitive behaviours. With this study, the effect of store atmospheric factors on in-store hoarding and hiding was investigated through the mediating effect of perceived scarcity and perceived competition. Results suggested that store messiness and human crowding influence competitive behaviours through perceived scarcity and perceived competition. When consumers see the messiness, they find easier to hide merchandise in a place away from the other consumers' view. And when the store is crowded, they feel that the products will be gone immediately so they have a tendency to hoard items although they are not sure to purchase them.

In conclusion, this thesis by conducting three experimental studies, contributed to the retailing literature by finding a significant relationship between retail store atmospheric cues as human crowding, store messiness and shoppers' behaviours through a negative feeling-retail shopper confusion and also perception of scarcity and competition. Retail store managers can benefit from the findings of this study. Fast fashion retailers have similar scenarios where due to new product offerings, the stores tend to be extremely crowded and messy. To avoid negative shopper behaviors, such stores need to re-design their stores to help in decreasing the level of human crowdedness. Also, these retailers need to have efficient frontline employees that could help keep the store organized and thus less messy. Also, retailers should pay attention to the antecedents of in-store hoarding and hiding because holding the items without buying decisions or moving items away from the other customers' sight can decrease sales of the store.

PERAKENDE MAĞAZA ATMOSFERİNİN ALIŞVERİŞÇİ DAVRANIŞI ÜZERİNDEKİ ETKİLERİ

ÖZET

Perakendeciler için müşterilerine tatmin edici bir alışveriş deneyimi sunmak ve buna bağlı olarak gelecekteki satışları artırmak önemli bir hedeftir. Mağaza atmosferini oluşturan ambiyans, tasarım ve sosyal unsurlar tüketicilerin mağaza deneyimlerini etkilemektedir. Mağaza tasarım öğeleri koridorlar, renkler, malzemeler, raflar, görsel ürünler; ambiyans öğeleri akustik uyaranlar, aydınlatma, koku, sıcaklık, sosyal faktörler ise müşteriler ve çalışanlardır (Baker, 1987). Görsel, işitsel, koku alma, dokunsallık ve lezzet gibi çok duyusallı atmosferik ipuçları ve ayrıca diğer müşteriler, beraber alışveriş yapılan kişiler ve çalışanlar gibi sosyal unsurlar müşteri deneyimini etkiler. (Shukla and Babin, 2013; Spence et. al., 2014; Zhang et. al., 2014).

Fiziksel mağazalarda vakit geçiren müşterilerin alışveriş deneyimlerini en çok etkileyen faktörlerden biri görsellik ve görselliğin nasıl algılandığıdır. Mağazalarda en dikkat çekici unsurlardan biri mağazadaki görsel karmaşa veya karışıklıktır. Çevredeki karmaşıklık artıkça bu bir algısal yük oluşturur ve kişilerin o çevredeki uyaranlar ile ilgili bilgileri işleme kabiliyetleri azalarak o çevreyi algılamak için olması gerektiğinden daha fazla gayret göstererek anlamaya çalışırlar (Reber ve diğ., 2004; Orth ve Wirtz, 2014; Orth ve diğ., 2016). Mağaza içi bilgi işlem akıcılığını yönlendiren özellikler arasında, görsel karmaşıklık önemli bir rol oynamaktadır (Creusen ve diğ., 2010).

Mağaza içindeki insan veya mekan kalabalıklığı ve ürünlerin dağınık ve düzensiz yerleştirilmesi veya daha sonradan dağıtılması ile ortaya çıkan görsel karmaşa veya yığılma, müşterilerin bilgi işleme akıcılığını ve mağaza içi deneyimlerini etkilemektedir. Mağaza içerisindeki bu karmaşanın yarattığı algılamada yükleme, bilgi işleme akıcılığını etkiler ve sonrasında bu karmaşadan kaynaklanan bilişsel ve duygusal olumsuzluklar meydana gelebilir. Mağaza atmosferindeki bu karmaşa müşterinin keyif alma, uyarılma ve çevre üzerinde kontrol sahibi olma gibi durumları etkileyerek sonrasında meydana gelebilecek çevreden uzaklaşma veya çevreye yakınsama gibi davranışsal niyetlerini etkiler (Van Rompay ve diğ., 2012; Chae ve Zhu, 2014). Mağaza içi dağınıklık ve kalabalıktan kaynaklanan karmaşa, fazla yükleme durumu ile müşteride olumsuz duygu durumlarını ve o çevredeki algılanan kontrolün zayıfladığı hissini yaratabilmektedir. Böyle durumlarda tüketiciler alışveriş motivasyonlarına veya mağaza içerisinde bu dağınıklık ve kalabalık kaynaklı kıtlık ve rekabet algısına göre farklı davranışsal niyetler gösterebilirler (Kaltcheva ve Weitz, 2006; Pons ve diğ.,2014; Gupta ve Gentry, 2016). Müşterilerin hangi kalabalık ve dağınıklık durumunda yaşayacağı karmaşa hissi ve algınan kıtlık ve rekabet hissinin incelenmesi perakende yöneticileri için önemlidir.

Bu tezin temel amacı, mağaza çevresindeki dağınıklık ve düzensizliğin, bilişsel yetenekleri azaltması, olumsuz duygular yüklemesi ve davranışsal niyetleri kısıtlaması ile oluşan alışverişçi şaşkınlık hissinin, müşteri deneyimleri ve son satın alma kararlarını nasıl etkilediğini araştırmaktır. Aynı zamanda mağaza içi dağınıklık ve düzensizliğin ortamdaki kıtlık ve rekabet algısı da yaratabileceği ve bu algıların tüketicilerin rekabetçi davranışlar sergilemesine neden olabileceği öngörülmektedir.

Bu çalışmada mağaza içi dağınıklık ve düzensizlik insan kalabalığı ve mağazadaki ürünlerin dağınıklığı olarak tanımlanmıştır. Mevcut tez çalışması (1) hızlı moda perakendeciliğinde. mağaza içi insan kalabalığı ve mağaza dağınıklığının tüketicilerde karmaşa ve şaşkınlık hissine yol açarak nasıl davranışsal niyetler sergileyebilecekleri ve (2) mağaza içi insan kalabalıklığı ve mağaza dağınıklığının ortamda bir kıtlık ve sonrasında rekabet algısı yaratarak tüketicilerin mağaza içinde elde tutma ve saklama gibi rekabetçi davranışlar sergileme eğilimlerini test etmeyi amaçlamaktadır. Yazar bu amaçlar doğrultusunda 3 ayrı deneysel araştırma methodu kullanarak tüketicilerden veri toplamış, analizler yapmış ve sonuçlar doğrultusunda çalışmanın sonuçlarının teorik ve yönetsel çıkarımlarını tartışmıştır.

İlk olarak yazar, tez çalışmasının ana unsurları olan mağaza içi insan kalabalığı ve mağaza dağınıklığının görselleştirilmesi için ana deneylerde kullanılacak mağaza görselleri tasarlanmış ve çalışma anketleri ile cevaplayıcılara gösterilmek üzere alışveriş senaryoları hazırlanmıştır. İlk deneysel çalışmada (Çalışma 1) amaç, kalabalık ve dağınıklığın alışverişçide bir karmaşa hissi yaratarak mağaza içindeki davranışlarına etkisini incelemiştir. Sonuç olarak bu iki düzensizlik unsurunun karmaşa hissi yaratarak tüketicinin mağaza içinde daha az zaman harcaması. daha az plansız satın alma gerçekleştirmesi, daha az tekrar ziyaret etme isteği duyması, daha az mağaza benimseme isteği ve daha az mağaza keşfi isteğine neden olduğu görülmüştür. Karmaşa hissi üç alt boyuttan oluşmakta ve hissedilen çaresizlik, irrite ve etkinsizlik hisleri tüketici davranışsal niyetlerini etkilemiştir. Sonuç olarak önceki çalışmalardan elde edilen sonuçlara paralel olarak, mağazadaki görsel karışıklığın tüketicinin estetik algısı ile ters düşerek olumsuz davranışlara neden olduğu görülmüştür. Aynı zamanda ilk deneyden elde edilen bulgulara göre karmaşa hissinin mağaza içi çevresel unsurlarla davranışsal niyetler arasında aracı bir değişken olduğu bulunmuştur.

Çalışma 2'de Çalışma 1'deki kalabalık ve dağınıklığın alışverişçide bir karmaşa hissi yaratarak davranışsal niyetlerini etkilemesinin yanısıra tüketicilerin alışveriş yapma güdülerinin bu karmaşa hissi ve davranışsal niyetler ilişkisi üzerinde nasıl bir etki yarattığı araştırılmak istenmiştir. Sonuç olarak Çalışma 1 deki mağaza düzensizliğinin karmaşa hissine neden olduğu bulgusu yeniden kanıtlanmıştır. Ayrıca alışverişçi güdüleri hazcı olan kişilerin faydacı güdülere sahip olanlara göre mağaza içi düzensizlikten daha negatif etkilendikleri ve daha olumsuz davranışsal niyetler gösterdikleri saptanmıştır. Önceki çalışmalara bakıldığında mağaza içindeki kalabalığın faydacı güdülere sahip olan tüketiciler için daha olumsuz etkileri olduğu görülmektedir. Hazcı güdüye sahip tüketicilerin, faydacı tüketicilere göre, kalabalık ve dağınıklık etkisi ile hissettikleri karmaşa duygusunun daha az mağaza içi keşfetme ve daha az mağaza içinde zaman geçirme isteğine neden olduğu bulunmuştur. Bu çalışmanın genel bulgulara göre farklı bir sonuç elde etmesi literatüre katkı açısından önemlidir. Bu ters etkinin nedeni, mağazadaki dağınıklık ve kalabalık etkisi ile hazcı

tüketicilerin alışveriş etkinliğinden zevk almasını ve mağazada eğlenmesini zorlaştırdığını hatta imkansız hale getirmesi olarak açıklanabilir. Bilgi yüklenmesi olarak düşünülen ve alışverişten zevk almaya engel olabilecek mağaza içi unsurların hazcı güdülere sahip alışverişçilerin amaçlarını yeniden yapılandırması ve mağazadaki amaçlarının eğlenme ve zevk alma yerine daha faydacı amaçlara dönüşmesi bu beklenmedik bulguyu açıklamayabilmektedir.

Çalışma 3'teki temel amaç bu düzensiz mağaza içi unsurlarının tüketiciler için mağazadaki ürünlerle ilgili bir kıtlık algısına neden olup olmadığının araştırılmasıdır. Bu kıtlık algısının neden olabileceği rekabetçi algı ile satın alma kararı netleşmeden ürünü elde tutma veya mağaza içinde saklama gibi mağaza içi rekabetçi davranışlara neden olabileceği öngörülmüştür. Elde edilen sonuçlara göre, insan kalabalığı ve mağazadaki genel düzensiz görünüm bir kıtlık algısı yaratmıştır. İnsan kalabalığının ve mağaza düzensizliğinin artması ile mağaza içindeki ürünlerle ilgili bir kıtlık algısı oluşmuştur. Tüketiciler artan kalabalık ve düzensizlik ile istedikleri ürünlerin kolay bulunamayacağını ve mağaza bir kıtlıkla karşılacaklarını düşünmektedir. Bu kıtlık algısı ile ortaya rekabet algısı çıkmış ve tüketiciler ürünleri elde edebilmek için birbirleri ile bir rekabete girmek zorunda kalacaklarını düşünmüşlerdir. Çalışmanın sonucuna göre, mağazadaki insan kalabalığı ve dağınıklık tüketicilerde kıtlık ve rekabet algısı yaratmaktadır. Bu kıtlık ve rekabet algısı etkisi de mağaza içi elde tutma ve saklama gibi rekabetçi davranışları arttırmaktadır. İnsan kalabalığı doğrudan elde tutma, mağaza dağınıklığı da doğrudan ürünü saklama gibi rekabetçi davranışaları etkilemektedir. Bu çalışma ile yazar daha önce araştırılmamış olan mağaza içi çevresel faktörlerden kalabalık ve dağınıklığın kıtlık ve rekabet algısı aracılığıyla rekabetçi davranışları nasıl etkilediğini incelemiş ve anlamlı bulgular elde etmiştir.

Sonuç olarak bu tez çalışması kapsamında yürütülmüş olan üç deneysel tasarım ile elde edilen bulgular perakende ve tüketici davranışı literatürü açısından önem taşımaktadır. Tüketicilerin mağaza içinde karşılaştıkları görsel düzensizlik olarak tanımlanan insan kalabalığı ve dağınıklığın olumsuz duygular yaratarak mağaza içi davranışları olumsuz yönde etkilediği, tüketicilerin sahip oldukları alışveriş güdülerine göre bu etkilerin farklı yönde olabileceği ve aynı zamanda bu görsel düzensizlik nedeniyle tüketicilerin mağaza içindeki satışları olumsuz yönde etkileyebilecek olan ürünü elde tutma veya saklama gibi rekabetçi davranışlara neden olduğu gösterilmiştir. Bu çalışmanın bulgularından perakende yöneticileri yararlanarak, mağaza içi kalabalık ve dağınıklık unsurlarının gözden geçirilmesi ve gerektiği zamanlarda kontrol edilmesi şeklinde önlemler alabileceklerdir.

1. INTRODUCTION

In recent years, there is a stiff competition between traditional, online and multichannel retailers. After retail competition has steadily increased, and various online, social and mobile technologies continue to emerge, such that the path to purchase has become far more complex (Grewal et. al., 2014). After the number of online and multichannel retailers have increased with the help of technological advances as internet and mobile devices, people may tend to shop online rather than going stores. In some categories, consumers perform most of their search online and most of their shopping in the store; for other categories (e.g., electronics, books, some clothing), consumers use stores to search and experience the merchandise but make purchases online As we are living in the age of online connectedness, besides online experiences, retailers should give importance to the basics of consumers' in-store experiences. There are a wide range of psychological factors affecting customer experiences and shopping behavior in a retail store (Puccinelli et al., 2009; Grewal et. al., 2014).

Although online shopping is popular, physical stores may have some advantages over online stores to provide more sensory experiences in shopping process. There are lots of different motives drive people to make shopping offline or online. Customers may have different value considerations from shopping. Tauber (1972) classified diffent shopping motives into personal and social motives. Personal motives are role-playing, diversion, self-gratification, learning about new trends, physical activity and sensory stimulation. Social motives are social experiences outside the home, communication with others having similar interests, peer group attraction, status and authority and pleasure of bargaining. It can be stated that store shopping motives are the need to touch, smell, see goods and the need to interact people in the store environment (Kwik, 2002).

Therefore, store shopping process and effective factors influence the shopping experience should be understood by retailers. They should move beyond a product focus to a focus on the customers' store experiences (Puccinelli et al., 2009). There

are lots of different factors can influence shopper experiences and decisions in the store such as product assortment, pricing strategies, promotional activities. But store atmospheric cues are also very important to impact shopper experience and purchase decisions.

While shopping in a retail store, shoppers can have different type of emotions lead them to different shopper behavioral intentions. Many research has examined the relationship between retail environmental cues and consumers' responses for shopping outcomes is based on this model- the Stimulus- Organism- Response (SOR). This model is developed by Mehrabian and Russell (1974) (Machleit and Eroglu, 2000; Eroglu etl. al., 2005; Kaltcheva and Weitz, 2006; Morrison et. al. ,2011;Holmqvist and Lunardo, 2015). According to this framework, the emotional states of an shopper that can be seen as pleasure, arousal or dominance and these mediate the influence of the environmental stimuli on shopping outcomes. Environmental stimuli such as music, scent, lighting, other shopper can influence a consumer's emotional state which in turn affect the approach or avoidance behavior of the consumer (e.g willingness to pay, postponing purchase). This SOR model proposes that environment is made up of several elements (stimuli) that create emotions of pleasure, arousal, and dominance in individuals (organism), which then determine their behaviors (response). Researchers tested this model in many studies including environmental and personal factors as stimuli influence shoppers responses with the mediating role of cognitive processes besides emotions as organism (Donovan, et al., 1994; Eroglu et al., 2001).

In environmental psychology Pleasure-Arousal-Dominance (PAD) Scale (Mehrabian & Russell, 1974) has been used as the general measurement instrument to assess individuals' emotional responses but some researcher mention that this scale does not reflect the consumers' specific emotions that lead to different consumer reactions (Bagozzi et. al.,1999; Garaus and Wagner, 2016). Then researchers have tried to conceptualize and explore some specific emotions and especially they focus on negative emotions because previous research claimed that negative emotions during shopping situations may influence consumers' satisfaction more strongly than positive ones (Babin and Darden, 1996) and it is very crucial to investigate how negatively consumers perceive an overly stimulating store environment (Kaltcheva and Weitz, 2006).

Most studies about retail store stmosphere focuses on how to generate positive consumer responses by manipulating in-store elements, rather than studying the factors that create negative impact on consumer behaviors. But it is very crucial to investigate how negatively consumers perceive an overly arousing store environment. Consumers can feel confused and frustrated within a high arousing shopping store and this confusion state influence their behavioral intentions during their shopping process. Some research investigated confusion feeling in shopping situations but they conceptualize confusion more as a product-related state (Walsh, 2002; Walsh et. al., 2007). Malhotra (1984) suggested that product variety in retail environments leads to a higher decision density for consumers that creates dysfunctional consequences such as confusion, panic and frustration.

Mitchell and Papavassiliou (1997; 1999) first suggested a holistic consideration of consumer confusion and they examined the confusing effect of price, product and promotional cues in the store. Most previous studies have focused on the product performance instead of other environmental factors may lead confusion. Consumer confusion has been identified as a "consumer failure to develop a correct interpretation of various facets of a product/service, during the information processing procedure. As a result this creates misunderstanding or misinterpretation of the market" (Turnbull et. al., 2000; Walsh et. al., 2007). Studies have examined the confusing effect of products in terms of stimuli similarity (similar products), overload (many products) and ambiguity (ambiguous information with products) (Mitchell et. al., 2005; Walsh and Mitchell, 2010) and they found out that confused shoppers response negatively such as decreased loyalty and trust, purchase abandonment and postponement, and also alteration of brand choice (Mitchell et. al., 2005; Walsh et. al., 2007; Walsh and Mitchell, 2010; Garaus et. al., 2015).

The lack of store environmental related confusion state in literature motivated Garaus and Wagner (2013) to conceptualize a new confusion context for shopping situations in a physical retail store and they developed a new construct called 'Retail Shopper Confusion' (RSC) following the research call by Mitchell and Papavassiliou (1999) to identify store environmental confusion factors. They defined it as a negative feeling that makes it difficult for consumers to interpret store environment stimuli and they gave a detailed classification of confusing in-store factors into ambient

(lighting, scent), design (store layout, shelving and storage) and social factors (employees, other customers) in the store.

This study aims to provide understanding of environmental antecedents and behavioral outcomes of shoppers when they feel confusion in a physical store environment within a fast-fashion retail context. There are many different affecting factors may lead to confusion based on product or store environment in a physical store context. This study limits itself to store environmental factors lead to shopper confusion instead of product based confusion related to product based stimuli similarity, overload and ambiguity. This study focused on store confusion and properties of environmental factors based on "information rate theory" from environmental psychology. According to Mehrabian and Russell (1974) information rate refers the total amount of information per unit time. A high information rate needs comprehensive cognitive processing abilities. When a store environment conveys too much information that can be percieved as stimuli overload, then people's cognitive processing abilities exceed their capacities that results in confusion (Jacoby et. al., 1974; Garaus et. al., 2015). The underlying factors for characterizing the information rate, which are widely used in environmental psychology literature: "stimuli variety", "stimuli novelty", "stimuli complexity" and "stimuli conflict" (Schweizer et. al., 2006).

In environmental psychology literature, many studies have demonstrated that the pleasure-arousal-dominance (PAD) scale (Mehrabian and Russell, 1974) can be used as the general measurement instrument to understand emotional responses of consumers but some research mentions that this scale does not reflect the specific experiences in consumption situations. So the concept of retail shopper confusion concentrate on the negative feelings related to confusion in a retail store. Garaus and Wagner (2016) demonstrated that pleasure dimension correlated negatively with this newly developed scale's all dimensions and also low feelings of dominance along with high levels of arousal can characterize retail shopper confusion.

The current research uses the environmental overload as a driver of shopper confusion in a retail store and it is derived from visual complexity and disorderliness. Visual clutter as a driver of visual complexity has been defined as density perception in a scene with crowding and disorganization (Rosenholtz et. al., 2007; Orth and Wirtz, 2014). We define disorderliness with a high visual merchandise clutter (store

messiness) and human crowding in a fast-fashion retail store. Human crowding as a social atmospheric factor in a store and store messiness that is scarce in retailing literature will be investigated in the context of fast-fashion retailing to understand their impact on shopper confusion. Fast-fashion store environment is competitive for shoppers with many aspects. While shopping, consumers face very different environmental factors that influence their decisions. Specifically, human crowding and store merchandise messiness, generally seen in the store, can cause very challenging shopping situations to choose and make final decisions with confusion and frustration feelings. This feeling of confusion accompanying feeling of lack of self-control influence shoppers' experiences and purchase decisions. The behavioral responses of a confused shopper may be less in-store exploration, less spending time but also may be an impulsive spending depend on the self-regulation resources depletion. So this research focuses on fast fashion retail store environments to see whether fashion shoppers are confused in a crowded and messy store and how they react as in-store exploration, spending time, store patronage etc.

Retailers are moving toward fast fashion due to the dynamic and volatile market by delivering new products throughout the season constantly.So, a product life span is reduced by accelerating perishability of fashion items. Also, fast fashion retailers deliberately limit product availability, creating a sense of scarcity on the part of consumers in order to make constant area for new products and minimize markdowns, (Byun and Sternquist, 2008). Fast fashion is a strategic concept to capitalize on rapid inventory turnover through implementation of a short renewal cycle and limited supply (Byun & Sternquist, 2008). Such a retail atmosphere influences shopping intentions by urging shoppers to grab the merchandise before it is taken by another shopper.

There are two different ways a retailer may use the scarcity of a commodity in the marketplace: limited-time scarcity and limited-quantity scarcity (Cialdini, 1985). Scarcity effect has generally been examined in the context of promotional messages in the store with limited time or merchandise quantity (Aggarwal et al., 2011; Jnag et al., 2015). But also retail atmospheric cues can influence scarcity perceptions. Human crowding as a social-related and store messiness as a design-related factor can influence consumers' scarcity perceptions in the environment. If there is high human density in the store, then individuals think that resources in the environment

may be scarce or are/will be getting scarce in a little time. Also messiness of merchandise makes people think that there is a promotion or sale in the store so leading to scarcity perception in the environment. At the same time, human crowding and store messiness as a driver of scarcity perception can lead perceived competition among consumers. Such a retail atmosphere influences shopping responses by urging consumers to grab an item immediately before it issold out in the store. Accordingly, consumers take possession of some merchandises based on their interest while shopping, even though there is uncertainty to finalize the purchasing process. So consumers may develop some competitive behavioral intentions as in-store hoarding or hiding to regain their freedom to make a choice. In–store hoarding and in–store hiding behaviors exhibit strong desires of possessiveness that are generated due to the fear of scarcity (Gupta & Gentry, 2016).

The effect of human crowding on in store hoarding through perceived competition and also the impact of perceived scarcity as limited products on competitive behaviors as in store hoarding through perceived competition have been investigated by Byun and Sternguist (2008) and Byun and Mann (2011) but there is no study investigated the effect of perceived scarcity derived from store environmental cues on perceived competition and in-store hoarding. Also in store hiding behavior has not been investigated empirically enough. This study aims to understand the mediating effect of scarcity as a perception between store disorderliness (created by human crowding and store messiness) and perceived competition, and also the moderating effect of scarcity as store promotions on the relationship between retail shoppper confusion states and shoppers' behavioral intentions (revisit, store exploration intention, time spending, store patronage and unplanned expenditure) and also in-store hoarding and hiding as competitive behaviors.

Some studies have stated that consumers enter stores with specific goals in their mind that can be arranged along a continuum ranging from the hedonic to the utilitarian (Babin et al., 1994; Orth et. al., 2016). With utilitarian motivation, consumers engage in shopping out of necessity to obtain the right products, obtain desired information, and/or receive an intended service. In the process, little or no inherent satisfaction is derived from the shopping activity and the main focus is to efficiently complete the shopping activity. In contrast, hedonic motivation focuses more on entertainment and emotional value (Hirschman & Holbrook, 1982).

Consumers engage in shopping to seek fun and thus derive inherent satisfaction from the shopping activity itself. Orth et. al. (2016) demonstrated that a complex environment would be more likely to interfere with goal attainment as an obtacle than it would in a hedonic shopping situation. They found out that the effect of cognitive load derived from visual complexity on shopping experience was significant and negative with individuals in a more utilitarian shopping orientation. So this study also aims to find out the moderating effect of shopping motivations on the relationship between retail shopper confusion state and shoppers' behaviors in a retail store.

Thus based on the above discussion about previous research from literature, the current research is looking for answers the following research questions:

RQ(1): Do shoppers feel confusion in a crowded and messy retail store?

RQ(2): How does this confusion state influence shoppers' behavioral intentions in the store?

RQ(3): Does shopping motivation as a situtional factor influence the relationship between retail shopper confusion and shoppers' behavioral intentions?

RQ(4): Do human crowding and store messiness influence perceived scarcity and perceived competition which in turn affect in-store competitive behaviors of shoppers- as in-store hoarding and in-store hiding?

This research suggests an experimental study to investigate above research questions. Three different experiments were conducted by manipulating related constructs within shopping scenarios given with some retail store visuals. Study 1 aims to investigate the effect of human crowding and store messiness on shoppers' behavioral intentions through the effect of retail shopper confusion state. Study 2 aims to investigate the moderating effect of shopping motivation (as a situational task or recreational shopping motivation) on the relationship between retail shopper confusion and shoppers' behavioral intentions. Last, Study 3 aims to investigate the effect of human crowding and store messiness on in-store competitive behaviors- in-store hoarding and hiding behaviors through the mediating effect of perceived scarcity and perceived competition.

This study is outlined as follows. In Chapter 2, extant literature review is given about investigated constructs as retail store atmosphere, human crowding, store messiness, retail shopper confusion, perceived scarcity, perceived competition, shopping motivation and related theories to develop conceptual framework and related hypotheses. In Chapter 3, methodology, data collection procedures and measures used in four studies are given. In Chapter 4, data analyses and findings for all three studies seperately are discussed. In Chapter 5, general discussion, key theoretical and practical implications along with limitations and further research directions are given.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

In this chapter, literature about related constructs and related theories to develop a conceptual model will be given. This study aims to investigate the effect retail store atmospheric cues on shoppers' behaviors in general so first literature about retail store atmosphere, human crowding and store messiness, previous research and related theories will be discussed. Then retail shopper confusion as the main component of this research will be reviewed. Then the literature for perceived scarcity, perceived competition, shopping motivations and shoppers' behavioral intentions will be reviewed to develop related hypoteses.

2.1 Retail Store Atmosphere

Retailers across the world are increasingly understanding the effect of store atmospherics on retail sales. The retail environment plays an important role in attracting consumers and leading a positive impression of the store (Baker et al., 2002; Mehta et. al., 2013). Extant research demonstrate that that retail atmospheric cues as the ambience, design and social factors of a store's selling environment (Baker et. al., 2002) – positively impact consumers perception of a retail store and entail positive outcomes as purchase intention or negatively influence consumers quality and image evaluations and entail negative outcomes as dissatisfaction or store switching (Mattila and Wirtz, 2001; Spangenberg et al., 2006; Shukla and Babin, 2013). Studies have shown that customers tend to spend more time in the environments they find pleasant or tend to exit the environment they find unpleasant and annoying (Bone and Ellen, 1999; Machleit and Eroglu, 2000; Garlin and Owen, 2006; Walsh et. al., 2007; Parsons, 2011; Poon and Grohman, 2015). Baker, Grewal and Levy (1992) emphasize three key dimensions of retail atmosphere: the ambience of the store, the design elements, and the social elements. Retail atmospherics includes anything in the store that influences the consumer. These can be from the lighting, to music, to the employees. Recent research about retail atmospheric factors has focused on how a particular factor influences customer reactions in the store. For

example, simple scents (vs. complex scents or no scent) lead to more spending (Hermann, et. al., 2013), and red-colored prices (vs. black-colored prices) provide greater perceived value for males (Puccinelli et. al., 2013). Spence et. al. (2014) highlights the impact of the different sensory atmospheric factors by reviewing the five sensory domains: visual atmospherics (e.g., brightness and color), auditory atmospherics (e.g., music tempo, volume and type), olfactory atmospherics (e.g., scent), tactile atmospherics (e.g., ability to touch products), and taste atmospherics (e.g., ability to sample products). They also highlight the impact of congruent versus incongruent factors and the potential effects of sensory overload.

Most studies on retail atmospherics adopt Mehrabian and Russell's (1974) stimulus-organism-response (SOR) model as theoretical framework. The SOR model shows that environmental factors are stimuli (S) that jointly impact an organism's psychological responses (O) and lead to approach or avoidance behaviors (R). Applied to a retail context, the SOR model suggest that retail atmospheric cues elicit emotional or cognitive responses from consumers, which in turn result in approach or avoidance behaviors of consumers (Spangenberg et al., 2006; Morrison et. al., 2011; Shukla and Babin, 2013; Garaus and Wagner, 2013; Pons et. al., 2014; Garaus et. al., 2015; Pons et. al.; 2016). Figure 2.1 shows the Mehrabian and Russell's SOR model.

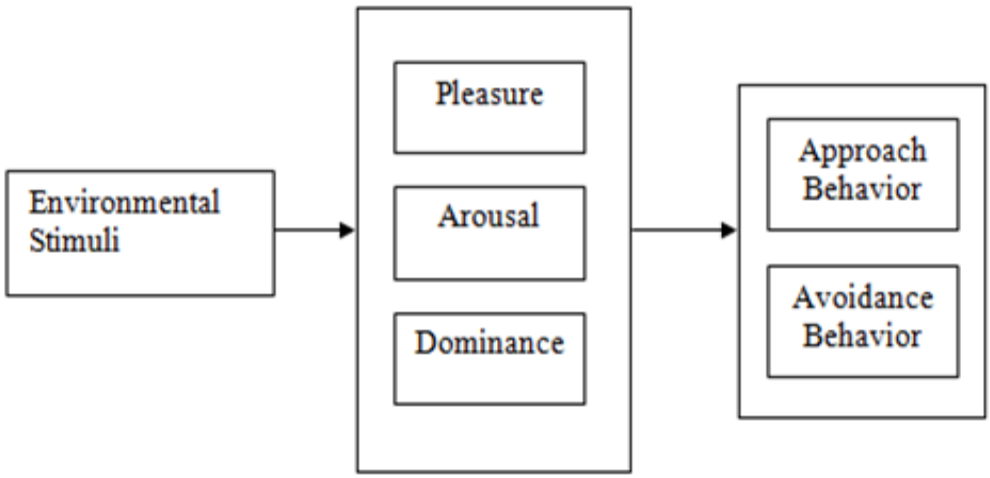

Figure 2.1: Mehrabian and Russell's SOR model (1974).

The store atmospheric cues affects the consumers' emotional states in the shopping environment (Donovan and Rossiter, 1982; Mehrabian and Russell, 1974). This emotional states are pleasure, arousal, and dominance (PAD). Pleasure is the degree

to which an individual feels good, happy, or satisfied. Arousal reflects the degree to which an individual feels stimulated, active and excited in a situation. Lastly, dominance can be stated as the degree to which an individual feels that he/she has control over the situation. Arousal and dominance dimensions of PAD traditionally viewed as emotional states but they would be interpreted as cognitive appraisals that will affect pleasure, the only pure emotional reaction. As core appraisal dimensions, arousal as determining one's adaptation effort and dominance as one's environmental control determine the emotional and behavioral outcomes of a shopping experince (Massara et. al., 2010). The dominance dimension has received only limited empirical support in the retailing literature, although the importance of the pleasure and arousal dimensions is generally acknowledged in order to explain consumer behavior (Van Rompay et. al., 2012; Douce and Janssens, 2013). Van Rompay et al. (2008) showed that control feeling as a dominance related constrcut mediate the relationship between spatial crowding and shopping pleasure, suggesting that environmental cues can negatively influence consumer responses by restricting their free movement.

Many research have been conducted to investigate the effect of different retail store atmospheric cues on shoppers' behaviors as approach or avoidance through emotional states as pleasure and arousal. Spangenberg et al. (2006) mentioned that ambient scent in a retail environment can influence consumers, with such effects likely moderated by congruity between the scent and the retailer’s product offering. Their study demonstrates that shoppers evaluated the store and its merchandise more favorably, and were more likely to exhibit approach behaviors in the presence of an ambient scent that is congruent with gender-based products, as compared to an incongruent scent.

Morrison et. al. (2011) examined the effects of music (volume high or low) and aroma (vanilla scent present/absent) on young fashion shoppers in a real retail setting. Results show that volume of music and the presence of a vanilla aroma both have a significant impact on shoppers' emotions and satisfaction levels. Additional analysis reveals that the arousal induced by music and aroma results in increased pleasure levels, which in turn positively influences shopper behaviors, including time and money spend, approach behavior, and satisfaction with the shopping experience.

Shukla and Babin (2013) examined the effects of consumer psychographics and store characteristics on shopping value and the effect of shopping value on store switching. The study implemented general deal proneness and normative interpersonal influences as consumer psychographics and product assortment, store ambience and after-sale services as store characteristics. It was found out that general deal proneness was significant in the case of utilitarian shopping value only. Looking at the effects of normative interpersonal influences, the findings suggested that presence of other consumers can significantly affect consumer's own perceptions of hedonic and utilitarian value derived from the shopping experience. As store characteristics, the results demonstrated that the breadth and depth of product assortment can certainly lead to higher perceptions of shopping value. It is mentioned that the effect of after sale service on shopping value at store level is highly dependent on immediate gratification rather than future promise. As ambience factors music, lighting and design affected utilitarian shopping value and not the hedonic shopping value. Also the hedonic shopping value has been found as stronger influencer to store switching behavior than utilitarian shopping value.

In most retail stores, shoppers are subject to multiple social forces simultaneously as they navigate through the store. Social elements of a retail store are sales person contacts, other shoppers as co-shoppers or strangers drive social crowding in the store (Underhill, 1999; Argo et. al., 2005; 2008; Luo, 2005; Zhang et. al., 2014). For instance, an employee in the store can greet a customer in the store as a sign of connection or customer can involve in discussions with their friends or family members as co-shoppers while passing through a crowded store before examining the products in a grocery retail store. Therefore, it is important to investigate how these different social influence factors impact shoppers'evaluations and behaviors.

Previous studies found out that social influences in the store environment can have significant impacts on shopper perceptions, emotions and behaviors. Customers can have interactive or noninteractive social contacts as they shop the store. Interactive social influence can be seen when a customer speaks with her/his companion as co-shopper or with a sales person to take advice (Goff and Wlaters, 1995; Underhill, 1999; Leibowitz, 2010). Social influence as noninteractive in the store may occur when there is no direct interaction such as when other shoppers see other customers shopping in the store. Other shoppers are perceived as strangers in the crowded store

and this crowd can produce positive or negative emotions which in turn influence positive or negative behavioral outcomes and also influence product choices (Argo et. al., 2005; Hui et. al., 2009; Maeng et. al., 2013; Pons et. al., 2014). Some studies have focused on the interactive social elements in the store and they investigated the influence of interactions between other shoppers, co-shoppers and sales person. For instance Kurt et. al. (2011) found out that men spend more than women when they shop with a peer. Luo (2005) revealed that when shoppers imagine shopping with their friends, this creates more unplanned buying intentions, but an imagined shopping trip with family members decreases spending amount of money. Another study has found out that helpfulness of salespeople in a store visit that is simulative, increases arousal and willingness to buy (Baker et. al., 1992). Some other studies have focused on the noninteractive social elements in the store as perceived shopper density and tried to found out positive or negative consequences of perceived shopper density (Becker, 1991; Machleit et. al., 2000; Eroglu etl. al., 2005; Mattila and Wirtz, 2008; Li et. al., 2009; Baker and Wakefield, 2012; Mehta et. al., 2013; O'Guinn et. al., 2015; Pons et. al., 2016). Argo et. al. (2005) find that a shopper accompanied by another person tends to feel happier than when shopping alone, but when the number of companions increases, feeling happiness decreases and the shopper becomes dissatisified.

2.2 Retail Shopper Confusion

Consumers may encounter many different product and brand choices in a store environment in which they are not be able to choose efficiently. The phenomenon of increasing consumer suffering depends on the increasing product assortments in a store can be named as consumer confusion. Malhotra (1984) stated that product variety in retail environments creates a higher decision density for consumers as dysfunctional consequences such as confusion, panic and frustration. Not only the increasing options for products and brands in the store but also all stimuli generated by marketing instruments are causes of consumer confusion. Missing quality references of a product, frequent price changes and inappropriate ambient cues as music or temperature can be confusion triggers in a retail store. (Schweizer et. al., 2006).

Mitchell and Papavassiliou (1997; 1999) first initiated a holistic consideration of consumer confusion and they examined the confusing effect of price, product and promotional cues in the store. Most previous studies have focused on the product performance instead of other environmental factors may lead confusion. Studies have examined the confusing effect of products in terms of stimuli similarity, overload and ambiguity. Confusion can be originate from product overchoice and the information carried on these products, hence triggers of confusion state refers "stimulus overload", "stimulus similarity" and "stimulus ambiguity" (Walsh, 2002; Walsh et. al., 2007).

Schweizer et. al., (2006) developed a consumer confusion scale based on the environmental psychology, which covers cognitive and emotional consumer responses and entails all elements perceived by shoppers in a store. They benefited information rate theory from environmental psychology. Mehrabian and Russell (1974) defined information rate as the total amount of information per unit time. A high information rate requires comprehensive cognitive processing efforts. If a store environment conveys too much information, people's cognitive processing abilities exceed their capacities; resulting in feelings of overload and confusion. Schweizer et. al., (2006) identified four factors for characterizing the information rate, which are widely used in environment psychology literature: "stimuli variety", "stimuli novelty", "stimuli complexity" and "stimuli conflict" and developed a confusion scale consists of social environmental factors but not design and ambient factors.

As a specific negative feeling "confusion" in a retail store was conceptualized as "Retail Shopper Confusion" by Garaus et al. (2015). The authors benefit trilogy of mind as a theoretical evidence for confusion state of mind. They emphasize the interplay of these three mind states- affect, cognition, and conation during the confusion state and changes in all these three subsystems of the mind constitute the retail shopper confusion (Garaus and Wagner, 2016). Retail Shopper Confusion (RSC) was defined as a negative feeling that makes it difficult for consumers to select and interpret store environment stimuli. RSC is a three-dimensional mental state consisting of the cognitive effort necessary to deal with confusion (cognition), emotions reflecting the discomfort associated with confusion (emotion) and restricted behavioral intentions (conations) (Garaus et. al., 2015). Cognitive confusion as first subsystem reflects the impairment in memory-related processes related to

information reasoning, encoding, storing and retrieving (Mayer et. al., 1997). Also confusion includes negative emotions such as anger, frustration, irritation or anxiety (Walsh et. al., 2007) leads to affective confusion as second subsystem. Last, confusion restricts behavioral intentions of consumers because store environmental stimuli are misinterpreted and it leads to feelings of loss (Dogu and Erkip, 2000) and helplessness (Massara et al., 2010) leads to conative confusion.

In environmental psychology literature, many studies have demonstrated that the pleasure-arousal-dominance (PAD) scale (Mehrabian and Russell, 1974) is a general measurement instrument for emotional responses. But some research mentions that PAD scale does not reflect the specific experiences in consumption situations. Also, it is mentioned that the dominance dimension of PAD has received only limited empirical support in retailing literature although the importance of the pleasure and arousal dimensions is generally acknowledged many times (Van Rompay et. al., 2012; Douce and Janssens, 2013). Garaus and Wagner (2016) analyzed convergent validity between RSC and PAD scales and they found out that pleasure dimension correlated negatively with all retail shopper confusion dimensions and also high levels of arousal and low feelings of dominance characterized RSC. So as a more specific and negative feeling, retail shopper confusion measurement can be used to analyze dominance dimension with conative confusion subsystem empirically. RSC scale has thirteen items under three subsystems of mind. First, *inefficiency* as the cognitive effort necessary to deal with confusion has "efficient", "careful", "productive", "high performing" reverse coded items. Second, *irritation* as emotions reflecting the discomfort associated with confusion has "annoyed", "irritated", "nerved" items. Third, *helplessness* as restricted behavioral intention has "helpless", "lost", "awkward", "baffled", "weak", "overstrained" items.

There are two empirical research investigate the retail shopper confusion state in a retail store environment. First, Garaus et. al. (2015) focused on the aspect of cognitive misfit produced by inappropriate in-store elements and lead to consumer confusion. They tried to research the extent to which cognitive fit impacts retail shopper confusion and in turn shopping value. This study also investigates a potential moderating effect of motivational orientation. They defined the cognitive fit as the match of the store image with the store design serves as the manipulation for high and low appropriateness conditions. The findings of the study have shown that low

cognitive fit evokes feelings of confusion, which in turn decreases shopping value. Second, Garaus and Wagner (2016) found out that when there is a confusing store environment with ambiguous signage, untypical department arrangement, entry that is hard to find, then shoppers confused and show avoidance behavior such as decreased unplanned expenditures, in-store exploration and store patronage intention.

2.3 Disordered Store Environment

Atmospherics, or the retail store environment refer to both tangible and intangible aspects of a retail store design and can alter the customer experience. Recent studies have mentioned that disordered retail store environments may influence consumers' experiences and responses while shopping (Chae and Zhu, 2014; Orth and Wirtz, 2014; Orth et. al., 2016). When a customer enters a store, first she/he mostly pay attention to shelves, merchandise, store layout and human crowding. So if there is a disorderliness in a store, then it can be stated that the visual complexity derived from store messiness and high human crowding can lead a chaotic environmental perception and influence shoppers' cognitive, affective and behavioral responses (Chae and Zhu, 2014; Orth et. al., 2016). Lucia-Palacios et. al (2016) stated that atmospheric physical design and also perceived human crowding may affect cognitive and affective responses as efficiency,confusion, stress and frustration. So we address the effect of store messiness and human crowding as disordered retail environment cues on retail shopper confusion and shopper behavioral intentions for the current research.

2.3.1 Perceived human crowding

Many research on theoretical and managerial implications of retail crowding has been conducted from the introduction of the concept into the marketing literature by Harrell et al. (1980) (Eroglu et al., 2005). Perceived crowding in the literature on retailing is an important element as a noninteractive social factor or human variable of store atmospherics (Turley and Milliman, 2000; Mehta, 2013). The stimulus overload theory suggests that crowding is experienced when environmental stimulation exceeds one's capacity to cope (Milgram, 1970; Mehta, 2013) and also when the level of density in environment interferes with the shopper’s goals or activities in the store. There are two dimensions of perceived crowding in literature; spatial and human crowding. Spatial crowding perceptions are based on the amount

of merchandise and fixtures as well as their configuration within the store and human crowding perceptions based on the number of individuals as well as the extent of social interaction in the store (Eroglu and Machleit, 1994; Eroglu et al., 2005).

Many studies have been conducted to investigate the effect of perceived crowding on shoppers' satisfaction and behaviors. Machleit et. al. (2000) has shown that an increase in perceived crowding as both social (human) crowding and as spatial crowding in a retail store can decrease the level of satisfaction that shoppers have with the store. They also used tolerance for crowding, prior expectations of crowding, and also store type as moderators for the effect on the crowding-satisfaction relationship. They mediated the crowding-satisfaction relationship by emotional reactions. They conducted two field and one laboratory experiments and thay found out that whereas emotions only partially mediate the relationship, the decrease in shopping satisfaction due to crowding is moderated by expectations of crowding and personal tolerance for crowding. Also they have revelaed that the relationship between perceived crowding and shopping satisfaction appears to vary by store type as discount and upscale.

Mattila and Wirtz (2008) examined the combined effects of two human factors as perceived crowding and employee friendliness on impulse buying in a high excitement induced store environment. Their findings indicated that it is better to stimulate and excite customers in a store environment to the extent to over-stimulation to increase impulse purchases. Also they found out that there are interactive effects between perceived crowding and employee friendliness and they have joint impact on impulse buying. Familiarity with the store also has been shown as a significant influencer on impulse buying.

Baker and Wakefield (2012) examined the effect of shopping orientations on perceived crowding in a shopping mall and in turn subsequent emotional responses to the experience within shopping malls. Their findings show that both shopping orientations are affected by need for control and need for intimacy may help to understand why two shoppers in a retail store view the same density in different ways. Task-oriented shoppers with a higher need for control tend to perceive more dense as crowding, and then they can feel stressed. Social shoppers with recreational-orientation, who tend to have a higher need for intimacy, perceive dense environments positively, and then feel stimulated and excited.

Mehta et. al. (2013) investigated how perceived crowding affects patronage intention. They examined the mediating effect of emotional states depend on Mehrabian and Russell S-O-R model (1974). They also examined the mediating effect of cognitive evaluations of the store and its products that have been overlooked by previous studies. As moderators, they used the optimal stimulation level as personal trait that it has not been empirically investigated. Also they examined the moderating effect of shopping motivations has been scarce in retail crowding literature. The findings have shown that the effect of perceived crowding on emotions and evaluations appears to be moderated by optimal stimulation level of consumers. The results also revealed that the effect of pleasure on patronage intention is stronger for individuals who score high on hedonic motivation than for individuals who score low on hedonic motivation.

Zhang et. al. (2014) investigated how social elements in a physical store influence shoppers' product interaction and purchase likelihood. They used a video-tracking database to understand how the interactions between the social elements of a store environment impact the shopping process as measured by product touch and interaction that lead to purchase intention. They found out that in terms of interactive social factors, shopper conversations with employees tend to reduce the shopper's pace down, increase the time of store visit, and increase product touch frequency and purchase likelihood. They also examined the moderating effects of product category and group size. They found out that both noninteractive as crowding and interactive as discussions with peers or family members and store employee contact, social factors have a tremendous impact on shoppers' touch frequency. Shoppers who visit the store with peers or family members are less likely to enter to the crowded departments. Similarly, shoppers who made conversations with their companions are less attracted to crowded stores. The influence of sales employee on shopper engagement isdecreased by the level of crowding in the store. Contrary to the findings for touch frequency, crowds can stimu- late shopper interaction with products, they have the opposite effect on purchase conversion rate. Shoppers are less likely to buy merchandise when the store is crowded.

Pons et. al. (2014) investigated how shoppers may react in crowded utilitarian settings and examined the specific role of scarcity in the density–dissatisfaction relationship. The study examined the mediating effect of affective states of

consumers on consumers' satisfaction or dissatisfaction in a crowded store context. The findings revealed that the scarcity of the store may reduce the extent to which consumers perceive negative experiences in a dense retail situation. Previous studies used the scarcity effect in which consumers have tendency to acquire products are perceived as scarce or becoming limited in the context. Scarce goods and services may appear to be more valuable and to increase consumer desire to own them (Wann et al., 2004;Wu et al., 2012; Pons et. al., 2014). Also in literature scarcity has been described as a rational cause of consumer density levels. The study of Pons et. al (2014) used two different perceived density term as human crowding and spatial crowding. Human crowding is the number of individuals and the social interaction among the people in the store while spatial crowding is related to nonhuman elements (amount of merchandise and fixtures) in the environment and their relationship to each other (Machleit et. al., 2000). Retailing literature demonstrated that human crowding is the most important component crowding perceptions in a store (Michon et. al., 2005). Pons et. al. (2014) found out that in highly dense situations, consumers perceived significantly lower human crowding in a scarce situation than they do in a non-scarce situation. However, scarcity does not change human crowding perceptions in an environment that is not dense. The study showed that in the dense and scarce situation only the perceived human crowding is reduced but there are no changes in the level of perceived spatial crowding. This finding may be depend on that consumers do not seem to associate scarcity and spatial characteristics of the store.

The current study focus on human crowding as an uncontrollable density factor by store management. Past studies found out that the effects of human crowding perceptions have produced mixed results. Some studies emphasize negative effects of perceived human crowding on shopping satisfaction (Machleit et al.,1994; Machleit et al.,2000), while a few others mention its positive effects (Eroglu et al., 2005; Pons et al.,2006; Li et al.,2009). These different effects may depend on shopping context as utilitarian (mostly negatively affected) or hedonic (mostly positively affected), and also some individual traits as tolerance for crowding (Machleit et al.,1994; Pons et al.,2006). Also studies have stated that too much or too few other shoppers in a retail store were not preferred and there should be an optimum level. Because up to some level perceived shopping pleasure of a consumer might increase, but after some

level, it may decline (Mehta, 2013). By following the Mehrabian and Russell S-O-R framework, researchers investigated the influence of perceived human crowding on pleasure and arousal as affective responses of shoppers. Perceived human crowding causes high arousal levels but it may cause high or low level of pleasure with respect to the shopping motivations or individual traits (Baker and Wakefield, 2012). Also the other dimension of PAD scale from Mehrabian-Russell framework is dominance that relates to perceived control in an environment as an emotional response as feelings of lack of control on one's surroundings to feelings of being influential and powerful, or in control (Lunardo and Mbengue, 2009). When perceived control is lacking in the environment, negative responses will follow and In retailing literature, human crowding is one of the mostly studied dimension related to the perceived control. Crowding effects may occur when there is high spatial or human crowding that leads to a loss of control regarding the selection of important actions or goals by restricting free movement and wayfinding in the environment (Machleit et al.,2000). So within the scope of this research, human crowding as a social atmospheric factor is assumed to lead retail shopper confusion by high irritation, inefficiency and helplessness feelings based on low levels of pleasure and dominance and high levels of arousal in a fashion retail store.

Therefore, we propose the following hypothesis;

H1: High crowded retail store will generate retail shopper confusion rather than a low crowded retail store.

2.3.2 Store messiness

Messiness is a multifaceted concept covers being disorganized, dirt and violation of social norms (Keizer et al., 2008). This current research focuses on disorganized retail store environments as an aspect of messiness. Store messiness is sometimes inevitable and retailers usually face the challenging effect of the messy store on shoppers' cognitions, perceptions and behaviors as lower consumers' design perceptions, lower perceived customer value, service and merchandise quality (Baker et al., 2002; Douce et al., 2014). Messiness often appears in stores: disorganized shelves, unsorted merchandise, and messy clothes racks. Previous research emphasizes that a disorganized and messy environment can clutter one's mind and complicate one's judgments (Belk et al., 2007) due to the fact that people's

perceptions of their environment translate into corresponding behavior based on perception-behavior link (Dijksterhuis and Bargh, 2001; Liu et al., 2012).

Some recent studies have investigated the relationship between environmental disorder and perceived self-control (Van Rompay et. al., 2012; Chae and Zhu, 2014; Orth et. al., 2016). The messiness and disordered nature of the environment are likely to make people feel that they have restricted personal control over their environment and their life (Chae and Zhu, 2014). Recent studies have found out that visual complexity of a store is an obstacle for processing of the environment and items in this environment (Orth and Wirtz, 2014; Orth and Crouch, 2014). Orth and Wirtz (2014) found out that complexity in a grocery retail store influences process fluency of environment which in turn affects pleasure, attractiveness of environment and response behaviors. Then the study of Orth et. al. (2016) demonstrated that processing load in a grocery retail store with a visual complexity decreased perceived self-control that are responsible for the lower level of processing fluency of the environment. Also Chae and Zhu (2014) found out that environmental orderliness in a primed setting can affect self-regulation by mentioning that a disordered environment threatens the individual's sense of personal control which leads to resource depletion and consequently impairs self-regulation.

But in fashion retailing literature, the research for the effect of store messiness on shoppers' emotions and behaviors in the store environment is not enough. Douce et al. (2014) investigated that whether diffusing pleasant scents can overcome consumers' negative response to a messy fashion store but not examine any direct effect of store messiness on shoppers' emotional states or behavioral intentions. They also investigated the interaction effect of store messiness and scent in a store on pleasure and arousal as affective responses but they ignored the dominance dimension although messiness restricts the one's perceived control as a lack of dominance in the environment. Within the scope of current study, we investigate the effect of fashion store messiness on retail shopper confusion as a specific negative affective response characterized with high arousal but low pleasure and dominance. We predict that a messy store will confuse shopper's mind and influence her/his behaviors based on perception-behavior link in a same manner.

Therefore, we propose the following hypothesis;

H2: A messy retail store will generate retail shopper confusion rather than a tidy retail store.

Retail shopper confusion as a negative feeling derived from stimulus overload within retail store is experienced when shoppers face at least one of disordered atmospheric cues as high human crowding or high store messiness. Retail shopper confusion occurs as a negative response to disordered store atmosphere and as such is an intervening variable through which consumers' shopping behavioral intentions are created.

Therefore, we propose the following hypotheses;

H3: The influence of human crowding on (a) revisit intention, (b) in-store exploration, (c) spending time, (d) store patronage intention, and (e) unplanned expenditure is mediated by retail shopper confusion.

H4: The influence of store messiness on (a) revisit intention, (b) in-store exploration, (c) spending time, (d) store patronage intention, and (e) unplanned expenditure is mediated by retail shopper confusion.

According to Garaus and Wagner (2016), shoppers can avoid store environments that characterized by high confusion level. Due to avoidance behavioral intentions, confused shoppers show avoidance behaviors as paying less attention to promotional messages and also they are less likely to incur unplanned expenditures. Further, confused shoppers avoid gaining in-store information and thus have less in-store exploration. Shoppers tend to avoid confusing stores and are less likely to revisit stores that lead to shopper confusion. Due to the negative mental states of RSC, shoppers tend not to enjoy their shopping trip in a confusing store, thus leading to lower store patronage intentions. Confused shopping situations encourage escape tendencies among the consumers, thus resulting in less time spent in the store.

Thus, the following is proposed;

H5: Retail shopper confusion leads to (a) lower revisit intentions, (b) less in-store exploration, (c) less spending time, and (d) lower store patronage, (e) less unplanned expenditures.

2.4 Shopping Motivations

Consumers go shopping for different reasons. Sometimes they do shopping with a clear end goal in their mind as purchasing an item, at other times shopping is a recreational activity for seeking fun while shopping (Van Rompay et.al.,2012).

Extant literature shows that there are two fundamental motivation orientations underlie the different shopping motives (Babin et. al., 1994; Kaltcheva and Weitz, 2006; Lunardo and Mbengue, 2009). The first motivational orientation as utilitarian, task-oriented involves consumers engaging in shopping out of necessity to obtain needed products or services with little or no inherent satisfaction derived from the shopping activity itself. Because task-oriented consumers derive satisfaction from the outcome of the shopping activity (the acquisition of the needed product, service, or information) rather than from the activity itself, their focus is on efficiently completing the shopping activity and obtaining its outcome with minimum expense of energy.

At the opposite of this utilitarian motivation, the recreational-oriented motivation as hedonic shopping orientation refers to consumers engaging in shopping to derive inherent satisfaction from the shopping activity itself. In this case, the shopping activity is motivated by more experiential benefits provided by the experience, such as agreement or excitement.

Task-oriented shoppers want to fulfill the shopping task efficiently by purchasing products they are interested in or allocating information (Babin et al., 1994;Westbrook and Black, 1985). In contrast, recreational shoppers seek fun, activation and some emotional experiences from the shopping trip itself (Hirschman and Holbrook, 1982; Garaus et. al., 2015). In this case, the shopping activity is motivated by more experiential benefits provided by the experience, such as agreement or excitement.

Consumers enter stores with some specific goals in their mind as hedonic or utilitarian (Babin et al., 1994; Orth et. al., 2016). Hedonic goals are related to the shopping experience with the objective of experiencing positive affect such as shopping with friends to socialize, explore, and have fun. On contrary, utilitarian goals are more instrumental or functional in nature such as weekly grocery shopping or buying some products for a concrete functional purpose. Anything that hinders the

goal attainment of task-oriented shoppers is likely to cause negative responses (Babin et al., 1994; Orth et. al., 2016). Task-oriented shoppers have little interest for or show a negative attitude toward nonfunctional cues within a retail store such as ambience (Korgaonkar, 1981). Also when the shoppers focus on task completion, high-arousal environments may be distractive as they prevent their goal fulfillment.

However, high-arousing environment may add to the fun of a shopping trip by increasing sensory stimulation for recreational shoppers (Jones et al., 2006). High-arousing stimuli creates hedonic value to the shopping for these recreational shoppers (Kaltcheva and Weitz, 2006). So consumers' hedonic or utilitarian shopping goals can moderate the effect of retail store environment on shopping experiences.

Lunardo and Mbengue (2009) mentioned that the focus of task-oriented consumers is on being successful in completing their shopping activities and tasks. Such consumers describe shopping as a ‘‘work’’ to be accomplished and evaluate the results of their effort with work performance, like success and accomplishment. In other words, control may be desired for task-oriented shoppers, who want to shop efficiently and easily deal with the environment in order to attain their shopping goal. They generally choose the the store to shop based on the extent to which the environmental stimuli may not hinder their goal achievement (Batra and Ahtola, 1990; Kaltcheva and Weitz, 2006). A lack of control that would impede such consumers from achieving their goals would reduce positive responses like pleasure or return intent. They found out that high perceived control decreases stress of consumers with high utilitarian shopping motivations.

Van Rompay et.al. (2012) found out that a spacious store layout positively impacts shopping pleasure and behavioral intentions rather than a disorganized store for task-oriented shoppers but store layout does not impact recreational shoppers’ responses.

Garaus et. al. (2015) found out that low cognitive fit between store image and store environmental characteristics evokes feelings of confusion, which in turn decreases shopping value for both hedonic and utilitarian shopping motivations.

Orth et. al. (2016) demonstrated that an environment that is too complex will be interfering with goal attainment in a negative way than it would in a hedonic shopping situation. They found out that the effect of cognitive load derived from

visual complexity on shopping experience was significant and negative with individuals in a more utilitarian shopping orientation.

So according to the shopping motivations, shoppers' affective reactions derived from high crowding and messiness in a retail store can be varied.

Therefore, we propose the following hypotheses;

H6: In a highly crowded retail store, the negative effect of retail shopper confusion on shopper behavioral intentions will be stronger when consumers pursue task-oriented rather than recreational shopping motivations.

H7: In a highly messy retail store, the negative effect of retail shopper confusion on shopper behavior will be stronger when consumers pursue task-oriented rather than recreational shopping motivations.

2.5 Perceived Scarcity

Perceived scarcity reflects limited merchandise supply as well as deliberate manipulation of merchandise availability by the retailer (Gupta, 2013). The condition under which items and opportunities are less available is termed as "scarcity". As items and opportunities become scarce, it is known that they are perceived as more valuable. Scarce goods and services appear to be more valuable and to increase consumer desire to own them (Aggarwal et al., 2011; Lynn, 1991; Pons et al., 2014). As items become scarce, people may lose freedom to make a free choice. Because people dislike their freedom to be threatened, their reaction to regain freedom leads them to want scarce items drastically more than before (Cialdini, 1985). Scarcity increases the perceived value of products, thus resulting in higher product desirability and greater satisfaction with the purchased product (Aggarwal et al.,2011; Lynn, 1991). There are two different ways a retailer may impose a scarcity in the marketplace as limited-time scarcity and limited-quantity scarcity (Cialdini, 1985). When limited-time scarcity (LTS) is used, the offer can be available for a particular period of time, after that time, the offer is not available (e.g., "Sale ends this Monday"). Limited-quantity scarcity (LQS) can be seen as the promotional offer made available for a particular quantity of the product. When each unit is sold, then the degree of scarcity will increase increase (e.g., "Only 100 units available at this price").

A “supply based scarcity” can increase when the retailer controls the product supply of in the marketplace. For instance, supply scarcity signal is like "due to limited supply, only while stocks last". On the other hand, in a “demand based scarcity,” the retailer does not limit the amount of supply but the scarcity arises based on high demand for the product that creates stock depletion. . For instance, demand scarcity signal is like " due to high demand, nearly sold out" (Gierl and Huettl, 2010; Gupta 2013)

Apparel merchandise as fashionable products can be desirable for consumers for many reasons. It is widely accepted that scarcity strategies generate desirability for products in the apparel industry (Bozzolo and Brock, 1992; Brock and Brannon, 1992; Byun and Sternquist, 2008; 2011; Lynn, 1992; Mittone and Savadori, 2009). Lynn (1992) mentioned that people want to get scarce items because of a desire for social status. This idea refers to particular product categories that are capable of promoting the possessors’ self-esteem and social standing. Apparel products, particularly fashion apparel products as opposed to basic apparel products (e.g., white t- shirt), are commonly used to express aspects of a shopper’s identity (Solomon and Rabolt, 2009).

Apparel products in fast fashion environments can be perceived as conspicuous consumption goods because their enhanced designs from celebrity designers and high- fashion runways can impress others. At the same time, frequently renewing merchandise in the store with an increase in the number of seasons enables fast fashion products to be scarce. Because of the shortened seasons and short life cycles of each product, the availability of the product is limited. As a result, consumers may feel insecure because they may miss an opportunity to own the product. Consequently, consumers may need to revisit the store more often or make a quick decision to purchase the product before the merchandise is permanently out of stock. If a product is used for conspicuous consumption, signals of scarcity due to limited supply are advantageous compared to signals of scarcity due to high demand. On the contrary, if a product is used for non-conspicuous consumption, signals of scarcity due to high demand result in more favorable product evaluations (Gierl and Huettl, 2010).

In general, scarcity may lead to urgency sense among shoppers (Aggarwal, Jun, and Huh 2011). When there are limited time windows to purchase limited items,

shoppers tend to have “urgency to buy” in their minds. A short time allowance to make a decision restricts consumer’s freedom to choose an object. Reduction in the freedom of decision-making (i.e., product choice) should produce reactance and consumers will be motivated to make a product purchase to regain their decision-making freedom. Also, emphasizing expiration of a buying opportunity in the near future should create a sense of urgency and enhance product desirability (Bae and Lee, 2005; Gupta 2013).

Both internal cues and external cues can trigger the sense of urgency to obtain a product (Wansink 1994; Youn and Faber 2000). Internal cues can be perceived as a sign for consumers’ emotional states and moods whereas external cues refer the sensory and retailer-controlled environmental cues. Studies found our that atmospheric factors in the retail environmen are important external triggers that impact consumers’ urgency to purchase (Eroglu and Machleit 1993; Mitchell 1994). Also some factors such as point-of-purchase, promotions and displays may also influence the desire of the consumer to purchase the product. When a stimulus such as promotional offer is perceived as temporally close, a shift in reference point to product desire is increased; hence, felt urge to buy is created. Thus, a tight time limit to make a decision would be a factor in promoting the immediate availability of a reward, in the form of product possession. In other words, it is predicted that temporal proximity in decision time will play a role in increasing consumer’s felt urge to buy the product (Yun Kim, 2014).

It can be stated that limited time scarcity and limited quantity scarcity both increased desirability and increased one’s urge to buy impulsively. Finally, this will result in impulse buying. It is predicted that people exposed to an attractive product deal with limited time availability for decision-making will manifest greater buying impulse than those with abundant time availability. Retailers that adopt fast-fashion strategies manipulate product availability in their stores to communicate signals like "buy now or you won’t get it tomorrow", which threatens consumers’ freedom to delay a purchasing decision, and it creates psychological reactance and and encourages them to take actions to protect their behavioral freedom.

2.6 Perceived Competition

When there are scarce resources in an environment, then individuals can feel competition among themselves. Scarce resources have been identified as a primary driver of competition for species' and organizations alike. Some seasons are important to creates competition, such as Christmas or Black Friday and they can influence consumers' emotional and behavioral responses as a main driver for their buying decisions (Nichols, 2010). Competitive retail environments creates traffic through implementing some attractive merchandises and promotional messages or scarce items. Also the store can create a sense of competition among the consumers when there are limited store offerings, thus make shoppers act more urgently to acquire scarce items in the store (Byun & Sternquist, 2008). Nichols (2010) suggested that limited time offers, merchandise quantity and limited experiences in a store as three types of scarcity can influence competition perception among individuals. Some research also stated that the actual and implied presence of other shoppers as human crowding appears to can create a perceived competition in the environment (Nichols, 2010; Byun and Mann, 2011). Also store messiness as another visual environmental cue can cause perceived competition through scarcity perception. Fast fashion stores without regarding the type of store (discount or department), human crowding and store messiness can create perceived scarcity and afterwards perceived competition. When consumers enter the store and see the messiness of merchandise on racks and displays, they think that store have some promotions or human crowding -sign of other shoppers as competitors can make consumers think that there are scarce products with some sizes and colors.

As a theoretical background, reactance theory can be used to understand how perceived scarcity and perceived competition lead in-store hoarding/hiding behaviors in store. This theory emphasizes an individual's reaction to perceived freedom loss. If an individual's freedom is threatened or eliminated, then this individual will experience psychological reactance to safeguard an individual's behavioral freedom (Brehm 1966; Clee and Wicklund 1980). This motivation leads to a desire to accomplish behavior that is restricted and then increasing its attractiveness perception (Brehm and Brehm 1981). So, a product's perceived scarcity can relate to a loss of personal freedom and therefore, may cause psychological reactance that leads to increased attention, attraction to the good that is unavailable, and increased

consumer motivation to grab the item that is not accessible (Ditto and Jemmott 1989; Markus and Schwartz 2010). So we anticipate that store messiness and human crowding can cause perceived competition in a retail store through perceived scarcity and this competition feeling influence shoppers' competitive behavioral intentions.

2.7 In-Store Competitive Behaviors

2.7.1 In-Store hoarding

More retailers are moving toward fast fashion by constantly delivering new products throughout the season as the market becomes dynamic and volatile. As a result, a product life span is decreased and thereby accelerating perishability of fashion items. In order to make constant area for new products and minimize markdowns, fast fashion retailers limit merchandise availability, creating a sense of scarcity (Byun and Sternquist, 2008).

Many studies have found out that scarcity impacts consumers' perceptions of goods leading to desirability and attractiveness. Previous studies have generally investigated the effect of scarcity when used in advertising and promotions and consumers' attitudes toward scarce products but they have not explained consumers' feelings and reactions to human-controlled scarce environments (Gupta and Gentry, 2013). The consumers' reactions to this scarce store environment are urgency to buy that leads to impulsive buying and some competitive behaviors as in-store hoarding and hiding. (Gupta and Gentry, 2016).

Scarcity signals as "*Buy it now or it won't be here tomorrow*" are used by fashion retailers in the competitive market to attract customers. Such a signal encourages immediate action from consumers. As a result, consumers try to obtain the products immediately before they are gone and they start to carry them around while shopping. This action is called "in-store hoarding". Shoppers often rush to hold the items while shopping, worrying that supplies may run out before they decide to buy . The literature in psychology and sociology suggests that hoarding is usually related to scarcity and is often adopted for minimizing the perceived risk. Commodity theory suggests that limited availability of products or opportunity enhances behavioral responses with the help of increased desire for product ownership (Brock 1968). Under limited availability conditions, anticipated gains of buying will trigger in-store

hoarding with a fear of losses. In-store hoarding involves shoppers taking possession of a product and keeping the product for themselves while shopping although they are not sure about buying the product. Consumers encountering a product scarcity are likely to be stimulated to hoard the items immediately before they are taken by other shoppers. Studies have mentioned that hoarding is driven by the fear of scarcity or unavailability of a merchandise. Shoppers become more impulsive for obtaining the products when there are limited time offers or they are uncertain about merchandise availability for their next store visit because of limited quantity offers (Byun and Sternquist 2008; 2012; Gupta and Gentry, 2013;2016).

Most studies have mentioned that some of the key infleuntial factors for in-store hoarding at fast fashion stores included desire to possess products of interest, avoidance of competition from other consumers and the perception of scarcity (Gupta and Gentry, 2016).

2.7.2 In-Store hiding

Other competitive in-store response within scarce store environment is "in-store hiding". Studies have defined in-store hiding behavior as an act on-purpose by removing the desired item from other consumers' sight and, therefore, a functional way to increase the chance of obtaining the desired product later. Store hiding strategies included hiding the product under the table or behind the rack and putting it in a wrong place in order to make others find it not easily. Key influential factors for hiding behaviors seen in fast-fashion retail stores were very similar to those of in-store hoarding as the perception of scarcity, the desire to possess products of interest, and the avoidance of competition from consumers (Gupta, 2013). Also other specific motivations for hiding are delaying buying decision, store policies and messiness of the store. A study mentioned that consumers find easier to hide products if a store is disordered and chaotic, because of the chances of hiding the product from other shoppers and the salespeople. Also gender effect on urgency to buy, in-store hoarding and hiding behavior in scarce environments has been investigated. According to the study of Gupta and Gentry (2016), men prefer urgency to buy and women focus in-store hoarding and hiding behavior under the condition of perceived scarcity. Fashion retailers face intense competition in the marketplace, because promoting product scarcity in a store could be advantageous because it creates a sense of urgency to buy among shoppers. However, retailers should also be aware of

shopper behaviors like in-store hoarding and in-store hiding. Behaviors like in-store hiding could destroy the store's financial performance, as hiding a product inhibits the sales. Controlling the different levels of crowding and messiness of the store can influence the intention to in-store hoarding and in-store hiding.

The effects of scarcity have largely been investigated in the context of advertising and also promotional messages in store focusing on limited time or merchandise quantity (Aggarwal et al., 2011). Besides, retail store atmospheric cues can lead perceived scarcity conditions. Stokols (1972) indicated that social crowding creates social constraints on available space and leads to competition with other people for scarce resources in the environment. Human crowding can be attributed as a higher level of competition among the shoppers, especially when shoppers compete for deals in a dynamic environment (Li et al., 2009). Also messiness in a retail store can lead perceived scarcity through products shortage with scarce sizes or styles for merchandises. Messiness as a sign of disorderliness and visual complexity in the environment can cause a feeling of freedom loss in decision-making process. So considering the effect of human crowding and store messiness in a fashion retail store on shoppers' competitive behaviors through scarcity and competition perceptions, this study aims to investigate the mediating effect of scarcity and competition on the relationship between retail store environmental factors and shoppers' competitive behaviors as in-store hoarding and hiding in the store.

Therefore, we propose the following hypotheses;

H8: High human crowding in a fashion retail store can influence perceived scarcity.
H9: High store messiness in a fashion retail store can influence perceived scarcity.
H10: High human crowding in a fashion retail store can influence perceived competition.
H11: High store messiness in a fashion retail store can influence perceived competition.
H12: High human crowding in a fashion retail store can influence in-store hoarding.
H13: High store messiness in a fashion retail store can influence in-store hoarding.
H14: High human crowding in a fashion retail store can influence in-store hiding.
H15: High store messiness in a fashion retail store can influence in-store hiding.
H16: Perceived scarcity and perceived competition will mediate the relationship between human crowding and in-store hoarding.

H17: Perceived scarcity and perceived competition will mediate the relationship between human crowding and in-store hiding.

H18: Perceived scarcity and perceived competition will mediate the relationship between store messiness and in-store hoarding.

H19: Perceived scarcity and perceived competition will mediate the relationship between store messiness and in-store hiding.

3. RESEARCH METHODOLOGY

Within the scope of this study, experimental design method was used to test whether any causal effect of human crowding and store messiness as retail store atmospheric cues on shoppers' behavioral responses in the retail store. Experimental design method has been widely used to collect data in retailing literature. This method sets all causal relationships between related constructs, identifies all factors that can be effective on independent and dependent variables. Variables can be controlled by manipulation or can be measured to test their effects. Experimental research design is an effective method for planning experiments that enable to analyze the collected data to produce valid and objective conclusions in consumer behavior literature. Previous research has shown that video demonstrations, pictures and role play scenario techniques have been used in online laboratory experiments to produce valid consumer responses (Machleit et al., 2000; Garaus et al., 2015; Orth et al., 2016).

Figure 3.1 depicts the visual diagram of three studies. Each experiment aimed to test related hypotheses and data for each has been collected from Amazon Mechanical MTurk data collection platform. Mechanical Turk (MTurk), an online labor market created by Amazon, has recently become popular among social scientists as a source of survey and experimental data. MTurk has accelerated science by facilitating access to a heterogeneous research-participant pool and has provided scientists with a platform to conduct research that is hard to conduct within physical labs or elsewhere online, such as cross-cultural comparisons (between the United States and India; Eriksson & Simpson, 2010), and field experiments (D. Chandler and Kapelner, 2013). The low cost of MTurk data facilitates the collection of well-powered samples (Paolacci and Chandler, 2014).

3.1 Procedures

For three studies, each participant has seen some pictures of a fashion retailer store and read related shopping scenario that manipulate crowding and messiness levels. The scenario described a fast-fashion clothing shopping situation that is one of the best representatives for disorderliness for crowding and messiness within a retail context, and participants were told to read the scenario and imagine themselves as shopping in this described situation. To prevent any bias, any store or brand names have not been provided. For all experiments, human crowding and store messiness situations were manipulated by store visuals and also described in the scenarios. Manipulation for shopping motivation in Study 2 was given within the scenario. Manipulations for human crowding, store messiness and shopping motivations were adapted from literature (the study of Kaltcheva, V. D., & Weitz, B. A., 2006 and Albrech et. al., 2017).

For the main experiments, each participant in one of the four store conditions was shown visuals of a retail store. Every condition consisted of two different visuals for the same store to give a walkthrough view for products on displays and racks. For example, in the low crowded conditions, two people were visible in the pictures but in the high crowded condition fourteen people were visible. In the low messy-tidy condition, merchandise was organized well on the displays and racks, but in the high messy condition merchandise was scattered. These arrangements for crowding were made with the help of a photo shop software. Messiness was manipulated in an actual clothing store and store pictures with suitable messiness level for conditions were taken. Positioning and posture of the individuals and merchandise were controlled to avoid confounding effects of other variables. Further, participants were given a shopping scenario to read. The scenarios described a clothing shopping situation as a good representative for messiness and human crowding within a retail context. Participants were instructed to read the scenario and imagine themselves shopping in the described situation (see Appendix A for store visuals). After seeing the visuals, respondents were given a shopping scenario in which manipulates related constructs and makes shoppers imagine in the described situation. (see Appendix B for all scenarios written for each study.)

3.2 Measures

After pictures and scenarios seen, respondents have completed a questionnaire to find out how they would feel and react to this disordered shopping situation. The questionnaire consists of existing scales measuring the constructs of interest. All responses were measured on 5-point Likert scales (1 = strongly disagree, 5 = strongly agree). First, retail shopper confusion was measured after reading the scenario to understand respondents' immediate mental state for Study 1-2. The 13-item, three-dimensional retail shopper confusion scale from Garaus and Wagner (2013) assessed perceived confusion evoked by the store environment. Three composite scores reflected the three dimensions as cognition, emotion, and conation of retail shopper confusion.

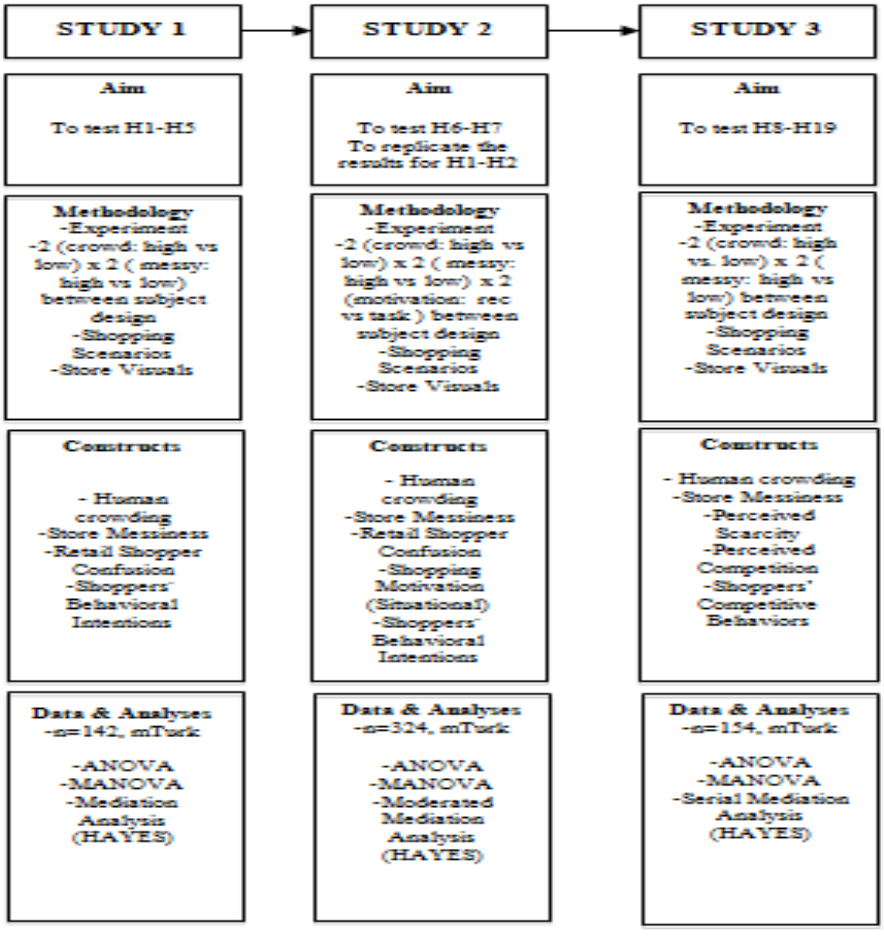

Figure 3.1 : Visual diagram of three studies.

Further, items measuring revisit intentions (Eroglu, Machleit, & Barr, 2005), in-store exploration (Donovan et al., 1994), spending time (Wakefield & Baker, 1998), store patronage (Donovan et al., 1994), and unplanned expenditure (Eroglu, Machleit, &

Barr, 2005) were used to measure participants' avoidance or approach behaviors. To check the manipulation of crowding and messiness, items like "the store is crowded with people", "there are too many shoppers", "the store's merchandise looks cluttered" and "the store's merchandise looks disorganized" were also incorporated in the survey. In Study 2 for situational shopping motivation, the manipulation was checked by asking "what is your fundamental reason of visiting the shopping mall according to the situation given in the scenario?" Two choices were given to the participants, "to acquire some needed products" or "to gain enjoyment during the shopping trip and spend leisure time." Also for competitive behavioral intentions in Study 3, items for in-store hoarding and hiding were adapted from the study of Gupta and Gentry (2016). In Study 3, perceived competition scale items were adapted from the study of Byun and Mann (2011). Perceived scarcity measure was adapted from the study of Byun and Sternquist (2012). Also perceived realism of the scenario and adaptation of the shopper in the scenario were measured to understand the believability of the study. In all studies, after completing these measures, participants responded to demographic questions.

4. DATA ANALYSES AND FINDINGS

Before main experiments, a pretest has been conducted to check the manipulations of store environment visuals as crowded and messiness enough to make people confused. There are four different store environments with high and low level of crowding and messiness. The store pictures representing four different conditions that will be used in main studies have been shown to the respondents randomly. 152 participants (mean age = 37.45, SD = 11.70, 57.2% female) from the Amazon Mechanical Turk (MTurk) research panel participated in the pilot study.

To check the manipulation of store crowding and messiness we conducted two independent samples t test with crowding and messiness as the factors and the mean composites "perception of crowding" and "perception of messiness" as the dependent variables. According to the analysis highly crowded store were perceived as more crowded than low crowded store ($M_{highcrowd}$=4.45, $M_{lowcrowd}$=2.61; (t (150) = -8.90, p<0,001)) and high messy store were perceived as more messy than low messy store ($M_{highmessy}$=5.43, $M_{lowmessy}$=2,87; (t (150) = -10.20 p<0,001) as intended. Also respondents were asked about the reality of the store and asked to indicate whether they have been to a store like that. 98.7% of respondents found the store in picture as real and also 82.2% of them stated that they have been to a store like that in the pictures.

4.1 Study 1

The purpose of this study was to examine the effect of human crowding and store messiness on retail shopper confusion which in turn influences the shopping behavioral intentions in a fashion retail store. Our study employed a 2 (crowding: high x low) x 2 (messiness: high x low) between-subjects factorial design where participants were randomly assigned to one of the 4 treatments. A usable sample of 142 respondents (mean age=40.96 years, SD=13.35; %61 female) was recruited from

Amazon Mechanical Turk (mTurk) and paid a small monetary compensation of $.50 to take the study. Figure 4.1 shows the conceptual model for Study 1.

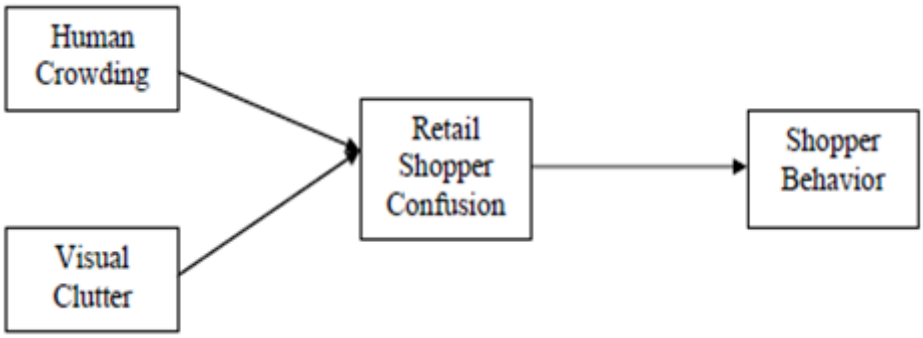

Figure 4.1 : Conceptual model for Study 1.

4.1.1 Data Analysis

4.1.1.1 Reliability and Validity of the Measures

This study aims to understand to what extent crowding and clutter lead shopper confusion - as a negative mental state which in turn influence shopper's behavioral intentions in a fashion retail store. So retail shopper confusion scale developed by Garaus and Wagner (2013) was used to measure this negative mental state after respondents were exposed to related scenarios and store pictures. The measure of Retail Shopper Confusion consists of 13 items related to 3 subscales of confusion state as "irritation" (emotional confusion), "inefficiency" (cognitive confusion) and "helplessness" (conative confusion). In first step, the realibility analysis tested the subscales' thresholds for their Cronbach's alpha and construct validity. The correct item-to-total correlations are suitable the threshold of 0.50 for the item "careful" in the "inefficiency" dimension so this item is excluded from analyses. Cronbach's alfa values are above the threshold of 0.70 for each of the three dimensions. ($\alpha_{irritation}$ = .87; $\alpha_{inefficiency}$ = .91 ; $\alpha_{helplessness}$ = .92). An exploratory factor analysis tested the proposed three-dimensional state of the retail shopper confusion scale for 12 items after "careful" item was exluded. The Kaiser-Meyer-Olkin (KMO) measure confirms the sampling adequacy of the analysis (KMO= .87). Bartlett's test of sphericity (X^2 = 1460.11, df= 66, p< .001) indicated that the correlations were suitable for factor analysis. Twelve items loaded on three factors and accounted for 79% of the variance in the items. In summary, the EFA results give support to the three-dimensional

conceptualization of the retail shopper confusion construct. Table 4.1 shows the factor loadings and measurement properties.

Table 4.1 : Statistics for retail shopper confusion scale (Study 1).

Dimension	Items	Mean	SD	λ	Cronbach's α
Irritation (Emotion)	Annoyed	2.62	1.28	.807	.87
	Irritated	2.70	1.33	.792	
	Unnerved	2.28	1.21	.706	
Inefficiency (Cognition)	Efficient*	3.42	1.32	.871	.91
	Productive*	3.29	1.21	.885	
	High Performing*	3.37	1.25	.891	
Helplessness (Conation)	Helpless	1.83	1.17	.808	.92
	Lost	2.09	1.29	.812	
	Awkward	2.45	1.32	.757	
	Baffled	2.10	1.15	.778	
	Weak	1.60	.97	.810	
	Overstrained	2.15	1.25	.739	

Notes: * reversed items. Retail Shopper Confusion scale was measured with a 5- point rating scale. λ =factor loading, α =Cronbach's alpha for each dimension

After retail shopper confusion measurement, respondents were asked to indicate their shopping behavioral intentions. The reliability analysis of the behavioral intentions measured with multiple items - "revisit intention" and "in-store exploration" yielded satisfactory Cronbach's alphas ($\alpha_{revisit} = .90$; $\alpha_{storexplore} = .84$). Table 4.2 shows the realibility values and statistics for measured constructs in Study 1.

4.1.1.2 Manipulation Checks

To test store manipulations for crowding and messiness, one-way ANOVA was conducted. A summated scale (mean of items) was calculated for crowding and messiness manipulation measures. ($\alpha_{crowding} = .95$; $\alpha_{messiness} = .97$). Results confirmed that participants in the high crowded situation perceived the store as more crowded (M_{high}=4.25; SD= .74) than the participants in the low crowded situation (M_{low}=1.58; SD= .84; F (1, 140) =399.73, $p < .001$). In the high messy situation, participants perceived the store as messier (M_{high}=4.40; SD= .93) than the participants in the low messy situation (M_{low}=1.64; SD= .98; F (1, 140) = 290.63, $p < .001$).

Also, we conducted a two-way ANOVA to see if there is any interaction effect between crowding and messiness that is not intended for manipulations. The interaction effect between crowding and messiness is non-significant for all crowding manipulation measures (F (.792) = $p > .05$; $\eta 2 = .006$) and messiness (F

(.392) = p > .05; η2= .003). These findings confirm the effectiveness of the manipulations.

Table 4.2 : Measures and reliabilities (Study 1).

Variables	Mean	SD	Cranach's Alfa
HumanCrowding (manipulation check items)			**.95**
The store is crowded with people	2.97	1.61	
There are too many shoppers	2.83	1.57	
StoreMessiness (manipulation check items)			**.97**
The store's merchandise looks cluttered	2.99	1.68	
The store's merchandise looks disorganized	2.91	1.72	
Shopping Behavioral Intentions			
Revisit Intention			**.90**
I intent to visit this store again	3.10	1.09	
I would avoid returning to this store*	3.31	1.26	
The likelihood that I would shop in this store in future is high	3.06	1.19	
In-store Exploration			**.84**
I would explore this store more thoroughly	2.98	1.29	
I would avoid looking around in this store*	3.02	1.39	
Spending Time			**-**
I would spend more time in this store than initially planned	2.91	1.22	
Store Patronage			**-**
I would enjoy shopping in this store	2.97	1.17	
Unplanned Expenditure			**-**
This is a kind of store where I would spend more money than I expected.	2.47	1.13	

Notes:—not applicable because the respective variable was either single-item measured. * reversed items

4.1.2 Hypoteses Testing and Findings

For hypotheses testing, a multivariate ANOVA (MANOVA) was conducted, with crowding and messiness as independent (between-subjects) variables and composite scores of the three confusion dimension- irritation, inefficiency and helplessness- as dependent variables.

Results show that there is a main effect of crowding for three retail shopper confusion dimensions (irritation: 3.01 vs 2.09; inefficiency: 3.82 vs 2.94; helplessness: 2.37 vs 1.72; Wilks' Lambda V= .756; F (3, 138) = 14.704, p< .01). Also a significant main effect of messiness for each retail shopper confusion dimension was found out. Compared to a tidy store, a messy store led to confusion (irritation: 2.94 vs 2.16; inefficiency: 3.85 vs 2.81; helplessness: 2.25 vs 1.84; Wilks' Lambda V= .765; F (3, 138) = 14.039, p< .01). Table 4.3 shows the results of

MANOVAs. This results indicate that high human crowding and store messiness lead to shopper confusion, supporting **H1** and **H2.**

Table 4.3 : Hypotheses testing- results of (M)ANOVAs- Study 1.

Dependent Variables	**High crowded** Mean(SD)	**Low Crowded** Mean(SD)	F	p-value	**Messy** Mean(SD)	**Tidy** Mean(SD)	F	p-value
Irritation (Emotion)	3.01(.116)	2.09(.115)	31.701	$p < .01$	2.94(.118)	2.16(.112)	23.208	$p < .01$
Inefficiency (Cognition)	3.82(.117)	2.94(.116)	18.468	$p < .01$	3.85(.119)	2.91(.114)	29.280	$p < .01$
Helplessness (Conation)	2.37(.113)	1.72(.112)	16.809	$p < .01$	2.25(.115)	1.84(.110)	6.652	$p < .01$
Revisit	2.98(.117)	3,29(.116)	3.496	$p > .05$	3.58(.113)	2.69(.119)	29.076	$p < .01$
In-store Exploration	3.42(.128)	2.52(.129)	24.867	$p < .01$	3.45(.125)	2.49(.131)	27.977	$p < .01$
Unplanned Expenditure	2.64(.125)	2.25(.126)	4.903	$p < .01$	2.82(.122)	2.06(.128)	18.502	$p < .01$
Store Patronage	3.26(.123)	2.63(.124)	13.117	$p < .01$	3.41(.120)	2.47(.126)	29.160	$p < .01$
Spending Time	3.15(.131)	2.61(.130)	8.309	$p < .01$	3.37(.134)	2.39(.127)	28.626	$p < .01$

The interaction effect between crowding and messiness was significant only for emotional confusion state, "irritation" ($F(3, 138) = 4.39$, $p < .038$, $\eta_2 = .031$). The results suggest that participants in low crowded condition were more emotionally confused when there is high messiness ($M= 2.65$) as compared to low messiness condition ($M=1.53$). However, for the high crowded condition, the difference between low and high messy conditions were not significant for irritation ($M_{low}=2.78$ vs $M_{high}=3.23$, $p> .05$) (see Figure 4.2).

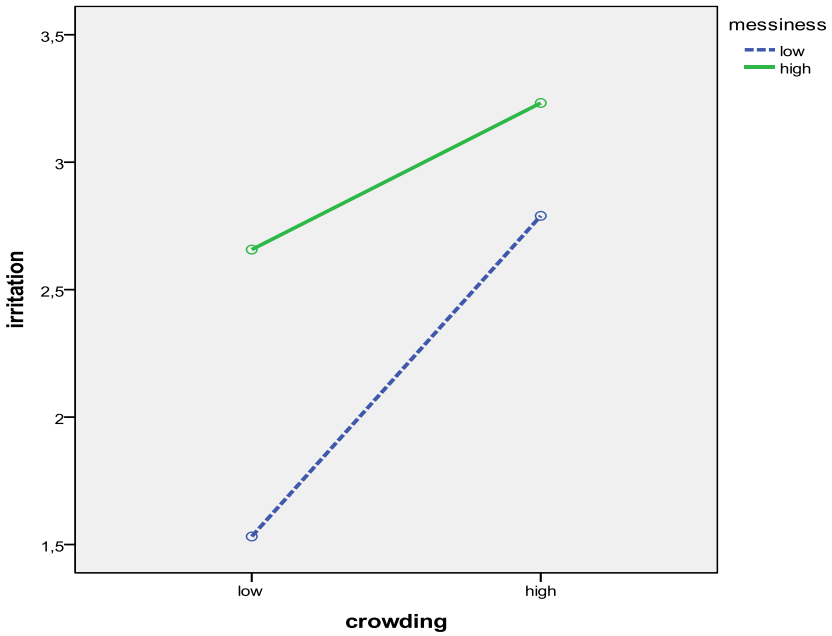

Figure 2.2 : Interaction between crowding and messiness on "irritation" dimension (Study 1).

4.1.2.1.Mediation Analysis

To explore whether the retail shopper confusion state as a summated measure of three subsystems of confusion (irritation, inefficiency and helplessness), mediated the effect of human crowding and store messiness as two independent variables on each shopping behavioral intention measures as dependent variables, the indirect effect of crowding and messiness on shopping behavioral intentions were examined with the help of Hayes' (2013) PROCESS procedure. Hayes' (2013, Model 4) PROCESS procedure was used with %95 bias corrected [BC] confidence interval [CI] for the indirect effects of the human crowding and visual messiness on behavioral intentions via retail shopper confusion using a bootstrapping analysis with 10000 re-samples was estimated (Preacher and Hayes, 2014). Mediation analysis with bootstrapping was conducted for each independent variable and for each behavioral intention construct.

The results found that a 95% confidence interval (CI) for the indirect effect of crowding was significant and excluded zero (95% CI, [−,92 −.42]), supporting the mediation effect of retail shopper confusion on revisit intention and for messiness also the results supported the mediation of retail shopper confusion with a 95% confidence interval (CI) for the indirect effect was significant and excluded zero

(95% CI, [−,80 −.35]). Direct effects of each atmospheric factor on revisit intention were significant, specifically crowding influences directly revisit intention (β=,3480, SE= ,14; (95% CI, [−,05 −.63]) and messiness also influences directly revisit intention (β= - ,31, SE= ,14; (95% CI, [−,059 −.03]). So it can be stated that retail shopper confusion is a partial mediator between crowding. messiness and revisit intention. Also analysis revealed that retail shopper confusion influences revisit intention (β= -,80, SE= ,08, p < .001) with (95% CI, [−,96 −.63]), when shoppers are confused from high crowding and messiness, then their revisit intention will decrease.

For in-store exploration intention, the results found that a 95% confidence interval (CI) for the indirect effect of crowding was significant and excluded zero (95% CI, [−1,05 −.05]), supporting the mediation effect of retail shopper confusion and for messiness also the results supported the mediation of retail shopper confusion with a 95% confidence interval (CI) for the indirect effect was significant and excluded zero (95% CI, [−,93 −.41]). Direct effect of store crowding on in-store explore intention were not significant, (β=-,13, SE= ,15; (95% CI, [−,44 .17]) but messiness influences directly in-store explore intention (β= - ,29, SE= ,15; (95% CI, [−,59 −.01]). So it can be stated that retail shopper confusion is a partial mediator between messiness and retail shopper confusion but full mediator between crowding and in-store explore intention. Also analysis revealed that retail shopper confusion influences in-store exploration intention (β= -,92, SE= ,08, p < .001) with (95% CI, [−1,10 −.74]), when shoppers are confused from high crowding and messiness, then their in-store explore intention will decrease.

For spending time intention, a 95% confidence interval (CI) for the indirect effect of crowding was significant and excluded zero (95% CI, [−,84 −.36]), supporting the mediation effect of retail shopper confusion on spending time intention and for messiness also the results supported the mediation of retail shopper confusion with a 95% confidence interval (CI) for the indirect effect was significant and excluded zero (95% CI, [−,75 −.29]). Direct effect of store crowding on spending time intention were not significant, (β=-,05, SE= ,18; (95% CI, [−,30 .41]) but messiness influences directly spending time intention (β= - ,47, SE= ,17; (95% CI, [−,82 −.12]). So it can be stated that retail shopper confusion is a partial mediator between messiness and retail shopper confusion but full mediator between crowding and spending time

intention. Also analysis revealed that retail shopper confusion influences spending time intention (β= -,72, SE= ,10, p < .001) with (95% CI, [−,93 −.51]), when shoppers are confused from high crowding and messiness, then their spending time intention will decrease.

Table 4.4 : Mediation analysis results (Study 1).

Path	β	LLCI	ULCI	SE	Significance
Direct effect (without mediator)					
HC→ Revisit Intention	.35	.06	.64	.15	p< .05*
HC→ In-Store Exploration	-.14	-.44	.17	.15	p> .05
HC→ Spending Time	.06	-.3	.41	.18	p> .05
HC→ Store Patronage Intention	.09	-.2	.39	.15	p> .05
HC→ Unplanned Expenditure	.08	-.29	.44	.18	p> .05
SM→Revisit Intention	-.32	-.6	-.04	.14	p< .05*
SM→ In-Store Exploration	-.3	-.59	-.01	.15	p< .05*
SM→Spending Time	-.48	-.82	-.13	.18	p< .05*
SM→Store Patronage Intention	-.32	-.6	-.03	.15	p< .05*
SM→Unplanned Expenditure	-.36	-.72	-.01	.18	p< .05*
Indirect effect (with mediator)					
HC→ Revisit Intention	-.66	-.92	-.43	.13	p< .05*
HC→ In-Store Exploration	-.77	-1.05	-.51	.14	p< .05*
HC→ Spending Time	-.6	-.86	-.37	.12	p< .05*
HC→ Store Patronage Intention	-.73	-1.01	-.48	.13	p< .05*
HC→ Unplanned Expenditure	-.46	-.7	-.26	.11	p< .05*
SM→Revisit Intention	-.57	-.8	-.35	.11	p< .05*
SM→ In-Store Exploration	-.66	-.94	-.41	.14	p< .05*
SM→Spending Time	-.51	-.75	-.3	.11	p< .05*
SM→Store Patronage Intention	-.63	-.88	-.39	.13	p< .05*
SM→Unplanned Expenditure	-.4	-.6	-.21	.1	p< .05*

Abbreviations: LLCI, lower limit confidence interval; ULCI, upper limit confidence interval; SE: Standard Estimation; **β** : unstandardized coefficient HC, human crowding; SM: Store Messiness

For store patronage intention, the results found that a 95% confidence interval (CI) for the indirect effect of crowding was significant and excluded zero (95% CI, [−1,0 −.47]), supporting the mediation effect of retail shopper confusion on store patronage intention and for messiness also the results supported the mediation of retail shopper confusion with a 95% confidence interval (CI) for the indirect effect was significant and excluded zero (95% CI, [−,87 −.38]). Direct effect of store crowding on store patronage intention were not significant, (β= ,05, SE= ,15; (95% CI, [−,20 .38]) but

messiness influences directly store patronage intention (β= - ,31, SE= ,14; (95% CI, [−,60 −,02]). So it can be stated that retail shopper confusion is a partial mediator between messiness and retail shopper confusion but full mediator between crowding and in- store patronage intention. Also analysis revealed that retail shopper confusion influences store patronage intention (β= -,87, SE= ,08, p < .001) with (95% CI, [−1,05 −.70]), when shoppers are confused from high crowding and messiness, then their store patronage intention will decrease.

Last, for unplanned expenditure intention the results found that a 95% confidence interval (CI) for the indirect effect of crowding was significant and excluded zero (95% CI, [−,69 −.26]), supporting the mediation effect of retail shopper confusion on unplanned expenditure intention and for messiness also the results supported the mediation of retail shopper confusion with a 95% confidence interval (CI) for the indirect effect was significant and excluded zero (95% CI, [−,60 −.21]). Direct effect of store crowding on unplanned expenditure intention were not significant, (β= ,07, SE= ,18; (95% CI, [−,28 .44]) but messiness influences directly unplanned expenditure intention (β= - ,36, SE= ,17; (95% CI, [−,71 −,09]). So it can be stated that retail shopper confusion is a partial mediator between messiness and retail shopper confusion but full mediator between crowding and unplanned expenditure intention. Also analysis revealed that retail shopper confusion influences unplanned expenditure intention (β= -,56, SE= ,10, p < .001) with (95% CI, [−,77 −.35]), when shoppers are confused from high crowding and messiness, then their unplanned expenditure intention will decrease.

Mediation analysis results suggest the indirect effects of human crowding and store messiness on revisit and store patronage intentions, spending time, in-store exploration and unplanned expenditure. Also, the direct effect of human crowding on revisit intention was significant, showing a partial mediation of retail shopper confusion. However, there was no significant direct effect of human crowding on in-store exploration, spending time, store patronage intention, and unplanned expenditure thus suggesting support for **H3** for all shopping behavioral intentions except revisit intention for a full mediation. Further, the direct effect of store messiness on revisit intention, store patronage intention, spending time, in-store exploration, and unplanned expenditure was significant. The results suggest that retail shopper confusion mediates the effect of store messiness on all shopping

behavioral intentions, thus supporting **H4.** Also, results suggest that retail shopper confusion state directly influences revisit intention, store patronage intention, spending time, in-store exploration, and unplanned expenditure, thus supporting **H5.** (see Table 4.4 and Table 4.5).

Table 4.5 : Results for direct effect of RSC on behavioral intentions.

	β	**SE**	**R-sq**	**Significance**
Shopping Behavioral Intentions				
revisit	-.8	.08	.51	p< .00
in-store exploration	-.92	.09	.59	p< .00
spending time	-.72	.10	.41	p< .00
store patronage	-.88	.09	.56	p< .00
unplanned expenditure	-.56	.11	.28	p< .00

To investigate whether any of the effects found , could be accounted for by differences in participants' age and gender, additional analyses were conducted to contol these variables' any significant effect. Hayes PROCESS (model 4) was used to investigate whether there is any difference for age and gender groups for mediation effect results. According to the results, age or gender do not have any significant effect on the relationship between human crowding, messiness and retail shopper confusion or any other behavioral intentions. Table 4.6 shows the results for control variables of age and gender that all p values are non-significant. ($p > .05$).

4.1.3 Discussion for Study 1

According to the findings of Study 1, as we anticipated that disordered shopping environment with high human crowding and also high store messiness confused shoppers in a clothing store. Study found out that the behavioral responses of a confused shopper as indicated intentions have been less in-store exploration, less spending time in browsing, less revisit intention, less store patronage and less unplanned expenditure. Study also revealed that retail shopper confusion is a mediator between the crowding-messiness effect on shopper behavioral intentions. Crowding and messiness level in a clothing store influence behavioral intentions through retail shopper confusion- when crowding and messiness increases, shopper behavioral intentions decrease with increasing confusion state.

Table 4.6 : Results for control variables (Study 1).

Human Crowding (X1)	**β**	**SE**	**t**	**p**
RSC (M)				
Age	-,00	,06	-,26	,79
gender	-,07	,14	-,47	,63
Revisit (Y1)				
age	-,00	,00	-,19	,84
gender	,20	,13	1,52	,13
Explore (Y2)				
age	-,00	,00	-,40	,68
gender	-,08	,14	- ,59	,55
Spending Time (Y3)				
age	-,00	,00	-,37	,70
gender	,07	,21	,33	,73
Store Patronage (Y4)				
age	-,00	,00	-,25	,80
gender	,16	,20	,80	,42
Unplanned Expenditure (Y5)				
age	-,00	,00	-,92	,35
gender	-,01	,19	-,05	,95

Store Messiness (X2)	**β**	**SE**	**t**	**p**
RSC (M)				
age	-,00	,00	-,61	,54
gender	-,28	,15	-1,8	,06
Revisit (Y1)				
age	,00	,00	,09	,92
gender	,23	,12	1,70	,09
Explore (Y2)				
age	-,00	,00	-,25	,79
gender	-,03	,14	-,22	,82
Spending Time (Y3)				
age	-,00	,00	-,41	,67
gender	,08	,17	,47	,63
Store Patronage (Y4)				
age	-,00	,00	-,39	,69
gender	,14	,14	,99	,32
Unplanned Expenditure (Y5)				
age	-,00	,00	-1,04	,29
gender	-,01	,17	-,06	,95

The effect of crowding and messiness levels on confusion state was interacted for emotional confusion dimension- "irritation". High messiness in a low crowded store irritated shoppers. But high crowding in a low or in a high messy store has no significant impact on irritation feeling. The results from study 1 suggest that across variables human crowding is seen as less problematic than store messiness. Research

suggests that human crowding can lead to positive impact on consumers (Machleit, Eroglu, & Mantel, 2000). Further, the literature on messiness suggests that messy shopping ambience can negatively affect human anxiety, distract consumers' attentions, and dilute human experiences thus leading to irritation and confusion (Lim, 2013).

4.2 Study 2

Study 2 is an online experimental study as Study 1 and the study aims to investigate the moderating role of shopping motivations on the relationship between retail shopper confusion and shopping behavioral intentions. Previous studies revealed that situational shopping motivations can influence the effect of store environmental factors on emotional responses and behavioral intentions (Kaltcheva and Weitz, 2006; Lunardo and Mbengue, 2009; Orth et. al.,2016). So we manipulated the shopping motivations within the shopping scenarios used in Study 1.

The purpose of study 2 was to replicate the results of study 1 for H1 and H2 and to examine H6 and H7. We employed a 2 (crowded: high vs low) x 2 (messiness: high vs low) x 2 (motivation: task vs recreational) between-subjects factorial design where participants were randomly assigned to one of the 8 treatments. A usable sample of 324 respondents (mean age=37.40 years, SD=12.28 ; %47 female) was recruited from Amazon Mechanical Turk (mTurk) and paid a small monetary compensation of $.50 to take the study. Figure 4.3 shows the conceptual model for Study 2.

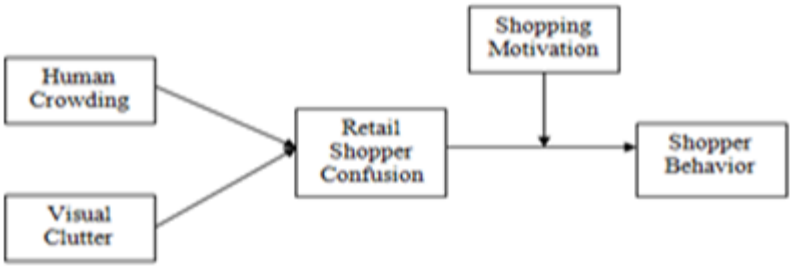

Figure 4.3 : Conceptual model for Study 2.

4.2.1 Data Analysis

4.2.1.1 Reliability and Validity of the Measures

In first step, for retail shopper confusion, the realibility analysis tested the subscales' thresholds for their Cronbach's alpha and construct validity. Following the same

steps in Study 1, for Study 2, reliability analyses of the measures were made. The measure of Retail Shopper Confusion consists of 13 items related to 3 subscales of confusion state as "irritation" (emotional confusion), "inefficiency" (cognitive confusion) and "helplessness" (conative confusion). In first step, the reliability analysis tested the thresholds of subscales for their Cronbach's alpha and construct validity. The correct item-to-total correlations didn't exceed the threshold of 0.50 for the item "careful" in the "inefficiency" dimension so this item is excluded from analyses. Cronbach's alfa values are suitable for threshold of 0.70 for each of the three dimensions. ($\alpha_{irritation}$ = .90; $\alpha_{inefficiency}$ = .92 ; $\alpha_{helplessness}$ = .92). An exploratory factor analysis tested the proposed three-dimensional structure of the retail shopper confusion construct for 12 items after "careful" item was exluded. The Kaiser-Meyer-Olkin (KMO) measure confirms the sampling adequacy of the analysis (KMO= .90). Bartlett's test of sphericity (X^2 = 3252.899.11, df= 66, p< .001) showed that the correlations were suitable for factor analysis. Twelve items loaded on three factors and accounted for 79.4% of the variance in the items. In summary, the EFA results suggest the three-dimensional conceptualization of the retail shopper confusion scale (see Table 4.7).

Table 4.7: Statistics for retail shopper confusion scale (Study 2).

Dimension	Items	Mean	SD	λ	Cronbach's α
Irritation (Emotion)	Annoyed	2.72	1.37	.773	.90
	Irritated	2.65	1.36	.798	
	Unnerved	2.34	1.28	.807	
Inefficiency (Cognition)	Efficient*	3.44	1.26	.827	.92
	Productive*	3.31	1.27	.919	
	High Performing*	3.47	1.30	.917	
Helplessness (Conation)	Helpless	1.96	1.13	.805	.92
	Lost	2.09	1.25	.798	
	Awkward	2.32	1.26	.676	
	Baffled	2.08	1.20	.806	
	Weak	1.61	.92	.865	
	Overstrained	2.12	1.26	.719	

Notes: * reversed items. Retail Shopper Confusion scale was measured with a 5- point rating scale. λ =factor loading, α =Cronbach's alfa

After retail shopper confusion measurement, respondents were asked to indicate their shopping behavioral intentions. The reliability analysis of the behavioral intentions measured with multiple items - "revisit intention" and "in-store exploration" yielded satisfactory Cronbach's alphas ($\alpha_{revisit} = .90$; $\alpha_{storexplore} = .87$). Table 8 shows the construct realibility values and statistics for measured constructs in Study 2.

4.2.1.2 Manipulation Checks

To test whether our store manipulations for crowding and messiness were successful, a one-way ANOVA was conducted. Items for crowding and messiness manipulations are same with Study 1. A summated scale (mean of items) was calculated for crowding and messiness manipulation measures. ($\alpha_{crowding} = .96$; $\alpha_{messiness} = .97$**).**

Results confirmed that participants in the high crowded situation perceived the store as more crowded ($M_{high}=4.02$; SD= .95) than participants in the low crowded situation ($M_{low}=1.65$; SD= .95; $F(1, 322) =508.505$, $p < .001$). In the high messiness situation, participants perceived the store as messier ($M_{high=}4.30$; SD= .86) than participants in the low messy situation ($M_{low}=1.64$; SD= .88; $F(1, 322)= 763.206$, $p < .001$).

Also, we conducted a two-way ANOVA to see if there is any interaction effect between crowding and messiness that is not intended for manipulations not to prevent their main effects. The interaction effect between crowding and messiness is non-significant for all crowding ($F (.1.034) = p > .05$; $\eta=.003$) and messiness ($F (.017) = p > .05$; $\eta= .000$) manipulation measures.

To test whether our situational shopping motivation was successful, a one way ANOVA was conducted and results revealed that participants in the task orientation situation indicated their reason of visiting shopping mall as to acquire some needed products ($M_{task}=1.07$ vs $M_{recreational}=1.90$); than in the recreational orientation situation. $F(1.321)= 692.076$; $p< .005$. (two items were coded as 1 - to acquire some needed products) and 2 -to gain enjoyment during the shopping trip and spend leisure time).

Table 4.8 : Statistics for construct measures (Study 2).

Variables	Mean	SD	Cranach's Alfa
HumanCrowding (manipulation check items)			**.96**
The store is crowded with people	2.85	1.57	
There are too many shoppers	2.78	1.52	
StoreMessiness (manipulation check items)			**.97**
The store's merchandise looks cluttered	3.00	1.60	
The store's merchandise looks disorganized	3.03	1.63	
Shopping Motivations (manipulation check items)			-
what is your fundamental reason of visiting the shopping mall...			
- to gain enjoyment during the shopping trip and spend leisure time	1.90	.49	
- toacquire some needed products	1.07	.49	
Shopping Behavioral Intentions			
Revisit Intention			**.90**
I intent to visit this store again	2.95	1.11	
I would avoid returning to this store*	3.03	1.22	
The likelihood that I would shop in this store in future is high	2.87	1.16	
In-store Exploration			**.87**
I would explore this store more thoroughly	2.93	1.26	
I would avoid looking around in this store*	2.98	1.28	
Spending Time			-
I would spend more time in this store than initially planned	2.76	1.26	
Store Patronage			-
I would enjoy shopping in this store	2.78	1.22	
Unplanned Expenditure			-
This is a kind of store where I would spend more money than I expected.	2.46	1.09	

Notes:—not applicable because the respective variable was either single-item measured. * reversed items

4.2.2 Hypoteses Testing and Findings

A multivariate ANOVA (MANOVA) was conducted, with crowding and messiness as independent (between-subjects) variables and composite scores of the three confusion dimension- irritation, inefficiency and helplessness- as dependent variables. A MANOVA revealed that high crowding and high messiness situations lead confusion state than low crowding and low messiness situations. Analysis revealed that respondents had higher scores on each of the three shopper confusion dimensions for high crowding and high messiness situations.

Results show that there is a main of effect of crowding for three retail shopper confusion dimensions (irritation: 3.02 vs 2.10; inefficiency: 3.81 vs 2.99; helplessness: 2.23 vs 1.81,Wilks' Lambda V= .763; F(3, 322)= 33.411, p< .01). Also a significant main effect of messiness for each retail shopper confusion dimension was found out. Compared to a tidy store, a messy-messiness store led to confusion (irritation: 3.13 vs 1.99; inefficiency: 3.91 vs 2.89; helplessness: 2.40 vs 1.63, Wilks' Lambda V= .672; F(3, 322)= 52.507, p< .01). **H1** and **H2** are supported. The interaction effect between crowding and messiness was significant only for emotional confusion state- "irritation" and cognitive confusion state- "inefficiency"; (irritation: F(3, 322)= 12.468, p< .038, η^2 = .037; inefficiency: F(3, 322)= 12.089; p< .001, η^2 =.038). There is no significant interaction for helplessness dimension. (p> .05). Table 4.9 shows the results of MANOVAs for Study 2. The interaction effect between crowding and messiness on RSC was significant for "irritation" (F (3, 320) = 12.47, p < .038, η^2 = .037) and "inefficiency" (F (3, 320) = 12.90; p< .001, η^2 =.038). There was no significant interaction for "helplessness" dimension (p > .05). The results further suggest that in both crowding situations (high and low), increasing the messiness level in the store significantly irritated the shoppers (Low Crowding: M_{low}=1.34 vs M_{high}=2.86, p< .000; High Crowding: M_{low}=2.64 vs M_{high}=3.40, p< .000).

Table 4.9 : Results of (M)ANOVAs - Study 2.

Dependent Variables	**High crowded** Mean(SD)	**Low Crowded** Mean(SD)	F	p- value	**Messy** Mean(SD)	**Tidy** Mean(SD)	F	p- value
Irritation (Emotion)	3.02(.076)	2.10(.075)	74.830	p< .001	3.13(.074)	1.99(.076)	114.373	p< .001
Inefficiency (Cognition)	3.81(.076)	2.99(.075)	58.033	p< .001	3.91(.074)	2.89(.077)	90.233	p< .001
Helplessness (Conation)	2.23(.070)	1.81(.069)	17.934	p< .001	2.40(.068)	1.63(.070)	62.399	p< .001
Revisit	2.69(.068)	3.22(.069)	22.406	p< .001	2.40(.067)	3.53(.069)	123.482	p< .001
In-store Exploration	2.42(.075)	3.47(.074)	79.963	p< .001	2.49(.073)	3.45(.075)	64.597	p< .001
Unplanned Expenditure	2.20(.077)	2.61(.075)	18.637	p< .001	2.05(.076)	2.90(.078)	58.184	p< .001
Store Patronage	2.39(.078)	3.15(.077)	33.994	p< .001	2.18(.076)	3.42(.079)	111.682	p< .001
Spending Time	2.26(.085)	3.24(.084)	58.640	p< .001	2.34(.083)	3.16(.086)	46.76	p< .001

These results thus suggest that increasing the messiness in a store for both low and high crowding situation, does lead to irritation (with negative emotions) among shoppers. Further, the results indicate that for both crowding situations (high and low), increasing of the messiness level in the store significantly make the shoppers feel inefficient (Low Crowding: M_{low}=2.29 vs M_{high}=3.69, p<.000; High Crowding: M_{low}=3.49 vs M_{high}=4.13, p< .000). These results thus suggest that increasing the messiness in a store for both low and high crowding situation, does lead to inefficiency among shoppers (see Figure 4.4 and 4.5).

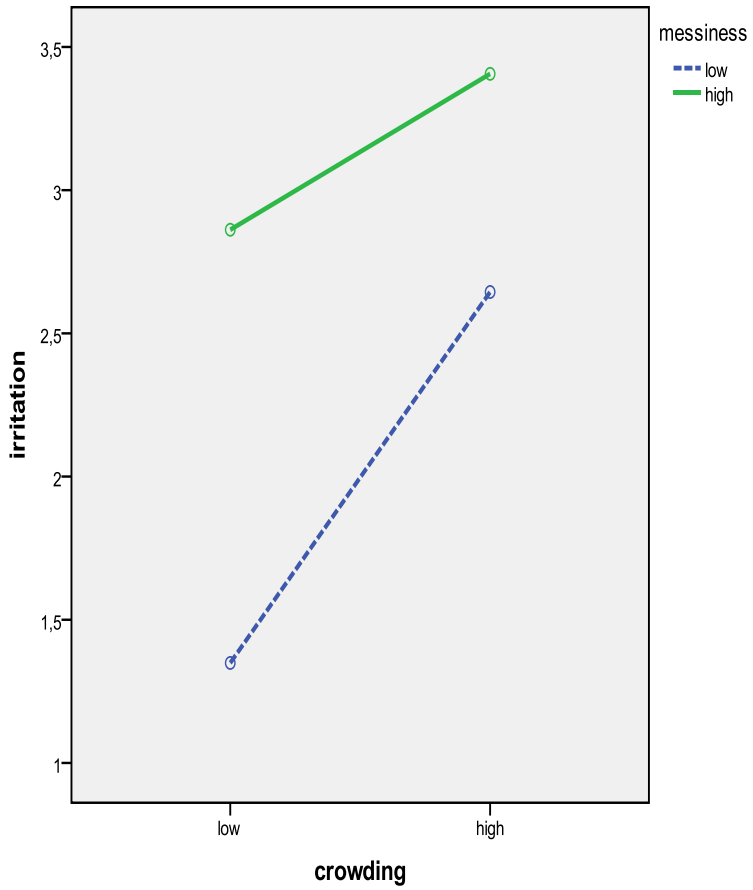

Figure 4.4 : Interaction between crowding and messiness on "irritation"dimension (Study 2).

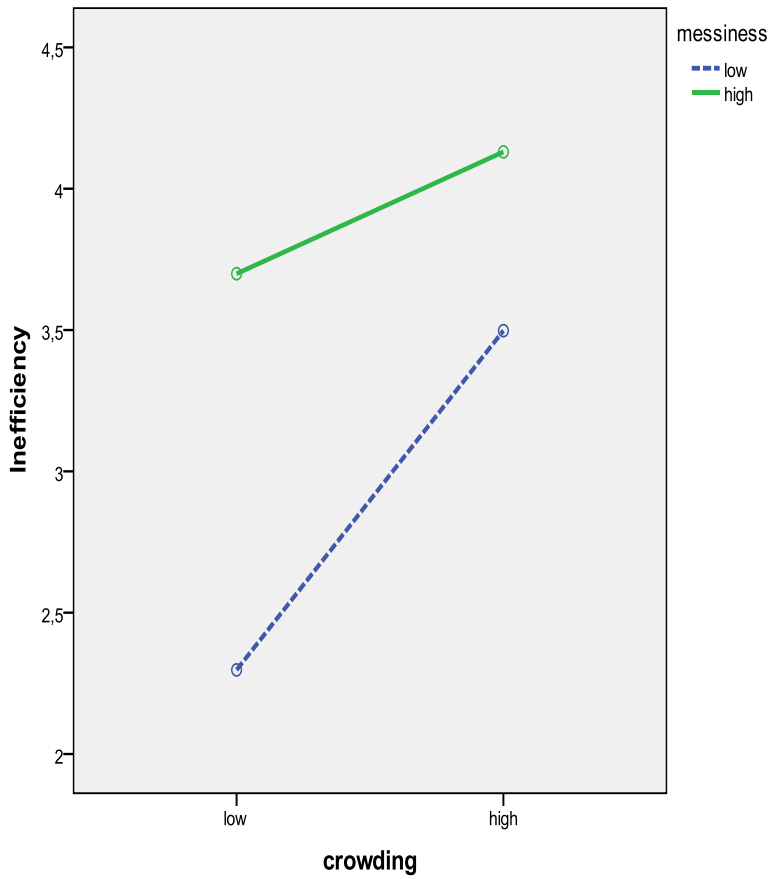

Figure 4.5 : Interaction between crowding and messiness on "inefficiency" dimension (Study 2).

4.2.2.1 Moderated Mediation Analysis

To test H6 and H7, which proposed that shopping motivations moderated the relationship between the mediator retail shopper confusion and the dependent variables, each shopping behavioral intention. Analyses were completed using Process , model 14 with 10,000 bootstrapping method.

According to the results of the moderated mediation analysis, retail shopper confusion mediates the effect of crowding on revisit intentions for both task oriented shoppers with BC (95% CI, [-.64 to -.37]) and recreational shoppers BC 95% CI,-.74 to -.41. This indicates that the effect of crowding on revisit intentions through confusion is significant for both task and recreational oriented shoppers. But there is no significant interaction effect between confusion and shopping motivation on revisit intentions with BC 95% CI,-.03 to .18 including zero that means the effect of confusion derived from crowding on revisit intention does not vary with shopping motivations.

For messiness, the results also show that there is no significant interaction effect between confusion and shopping motivation on revisit intentions with BC 95% CI,-.05 to .24 including zero that means the effect of confusion derived from messiness on revisit intention does not vary with shopping motivations although mediation effect of confusion on revisit intentions for both shopping motivations is significant with task: BC 95% CI, -.87 to -.53 and recreational: BC 95% CI,-.99 to -.60. So these results means confusion derived from crowding and messiness decreases revisit intentions for both task and recreational oriented shoppers, but there is no significant difference between them.

Moderated mediation analysis revealed that retail shopper confusion mediates the effect of crowding on store exploration for both task oriented shoppers with BC 95% CI, -.65 to -.30 and recreational shoppers BC 95% CI,-.83 to -.47. This indicates that the effect of crowding on store exploration intentions through confusion is significant for both task and recreational oriented shoppers. Also analysis showed that there is interaction between confusion and motivation (βcrowding= .24; t(2.61); p=. 009) that means confusion is moderated mediation with different type of shopping motivations with BC 95% CI, .05 to .30. Compared to task oriented shoppers, recreational oriented shoppers indicated that they have less in-store exploration intention when there is high crowding so the negative effect of retail shopper confusion on in-store exploration intention is stronger for recreational shoppers than task oriented ones.

For messiness, moderated mediation analysis revealed that retail shopper confusion mediates the effect of messiness on store exploration for both task oriented shoppers with BC 95% CI, -.86 to -.47 and recreational shoppers BC 95% CI,-1.11 to -.70. This indicates that the effect of messiness on store exploration intentions through confusion is significant for both task and recreational oriented shoppers. Also analysis showed that there is interaction between confusion and motivation (βmessiness= .24; t(2.61); p=. 009) that means confusion is moderated mediation with different type of shopping motivations with BC 95% CI, .06 to .44. Compared to task oriented shoppers, recreational oriented shoppers indicated that they have less in-store exploration intention when there is high messiness so the negative effect of retail shopper confusion on in-store exploration intention is stronger for recreational shoppers than task oriented ones (see Figure 4.6).

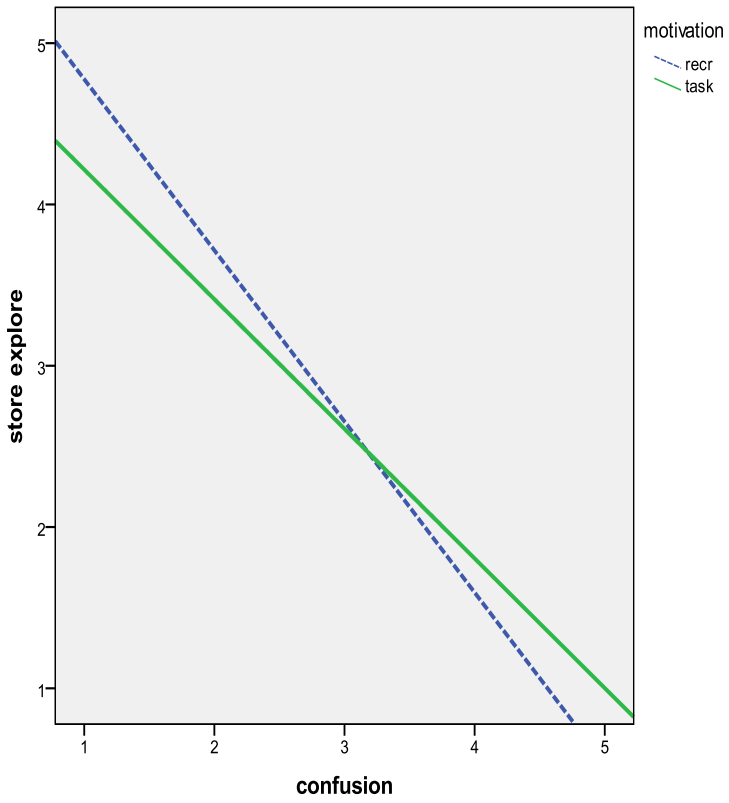

Figure 4.6 : Interaction between confusion and shopping motivation on store exploration (Study 2).

Moderated mediation analysis revealed that retail shopper confusion mediates the effect of crowding on spending time for both task oriented shoppers with BC 95% CI, -.65 to -.25 and recreational shoppers BC 95% CI,-.79 to -.41. This indicates that the effect of crowding on spending time intentions through confusion is significant for both task and recreational oriented shoppers. Also analysis showed that there is interaction between confusion and motivation (βcrowding= .23; t(2.02); p=. 04) that means confusion is moderated mediation with different type of shopping motivations with BC 95% CI, .009 to .32. Compared to task oriented shoppers, recreational oriented shoppers indicated that they have less spending time intention when there is high crowding so the negative effect of retail shopper confusion on spending time intention is stronger for recreational shoppers than task oriented ones.

For messiness, moderated mediation analysis revealed that retail shopper confusion mediates the effect of messiness on store exploration for both task oriented shoppers with BC 95% CI, -.81 to -.37 and recreational shoppers BC 95% CI,-1.06 to -.58. This indicates that the effect of messiness on spending time intentions through confusion is significant for both task and recreational oriented shoppers. Also

analysis showed that there is interaction between confusion and motivation (βmessiness= .23; t(2.02); p=. 04) that means confusion is moderated mediation with different type of shopping motivations with BC 95% CI, .01 to .46. Compared to task oriented shoppers, recreational oriented shoppers indicated that they have less spending time intention when there is high messiness so the negative effect of retail shopper confusion on spending time intention is stronger for recreational shoppers than task oriented ones (see Figure 4.7).

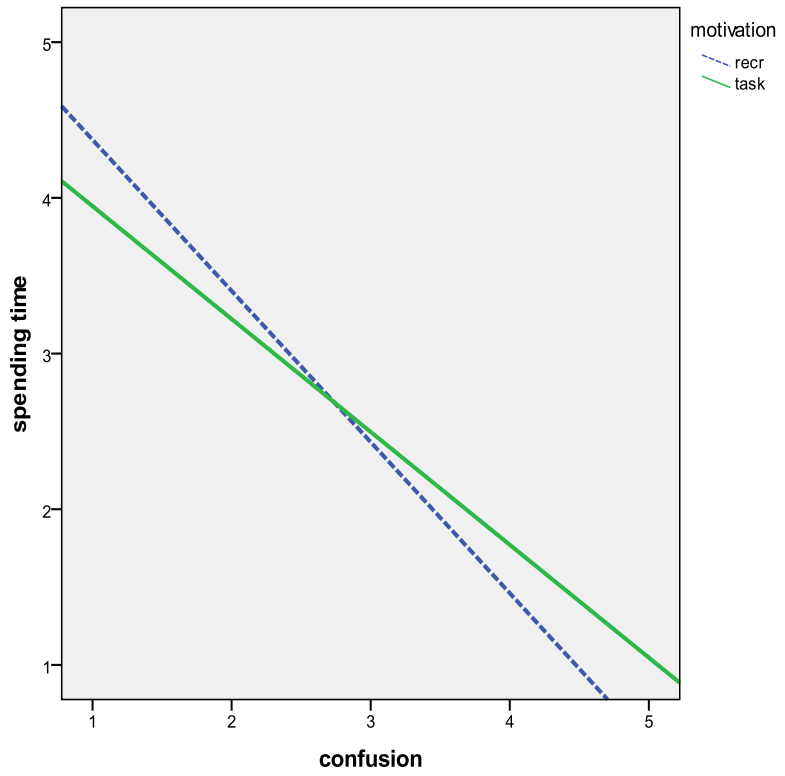

Figure 4.7 : Interaction between confusion and shopping motivation on spending time (Study 2).

Thus, compared to task-oriented shoppers, recreational oriented shoppers exhibit less in-store exploration and less spending time when there is high human crowding and store messiness. Shopping motivation was not a significant moderator between retail shopper confusion and revisit intention, store patronage intention, and unplanned expenditure. The results thus suggest a partial support for H6 and H7 (see Table 4.11).

To investigate whether any of the effects found could be accounted for by differences in participants' age and gender, additional analyses were conducted to contol these variables' any significant effect. Hayes PROCESS (model 14) was used

to investigate whether there is any difference for age and gender groups for moderated mediation effect results. According to the results, the effect of human crowding and store messiness on retail shopper confusion or effect of retail shopper confusion on behavioral intentions do not change with respect to different gender groups. But for revisit intention, spending time and unplanned expenditure change with respect to the increasing age. Older shoppers were affected more negatively from the confusing effect of human crowding and store messiness. Table 4.10 shows the results for control variables' effect.

4.2.3 Discussion for Study 2

In study 2, we further examine the moderating role of shopping motivations on the relationship between retail shopper confusion and shopping behavioral intentions. The results suggest that in high crowded and messy stores, the negative effect of retail shopper confusion on in-store exploration and spending time will be stronger for consumers pursuing recreational-shopping motivations as compare to task-oriented consumers. These findings support prior research that acknowledges the relevance of shopping value for understanding consumer behavior (Eroglu et al., 2005).

Consumers with hedonic shopping values tend to do less in-store exploration and spend less time when subjected to high crowded and messy retail conditions. However, no moderation effect was found for revisit intention, store patronage intention, and unplanned expenditures. One possible explanation of the results might be that utilitarian-task oriented shopping value shows the minimum requirement of a shopping task.

Consumers with task-oriented motivations expect to obtain a certain product and, if they fulfill that required shopping task to maintain the status quo and are satisfied with their shopping experience (Garaus, 2017). However, for consumers with hedonic shopping motivations, retail environments like crowdedness and messiness tend to create negative emotions and avoidance behaviors thus leading to unpleasant shopping experiences.

Table 4.10 : Results for control variables (Study 2).

Human Crowding (X1)	**β**	**SE**	**t**	**p**
RSC (M)				
age	,00	,00	,07	,93
gender	-,01	,09	-,16	,87
Revisit (Y1)				
age	-,01	,00	-3,14	,00
gender	-,11	,07	-1,48	,13
Explore (Y2)				
age	-,00	,00	-1,37	,17
gender	-,02	,08	,24	,80
Spending Time (Y3)				
age	-,01	,00	-2,38	,01
gender	-,07	,10	-,69	,48
Store Patronage (Y4)				
age	-,00	,00	-1,37	,17
gender	-,13	,09	-1,37	,17
Unplanned Expenditure (Y5)				
age	-,01	,00	-2,69	,00
gender	-,12	,10	-1,14	,25

Store Messiness (X2)	**β**	**SE**	**t**	**p**
RSC (M)				
age	,00	,00	,09	,92
gender	-,12	,09	-1,33	,18
Revisit (Y1)				
age	-,01	,00	-3,26	,00
gender	-,08	,07	-1,15	,24
Explore (Y2)				
age	-,00	,00	-1,52	,12
gender	,03	,09	,42	,67
Spending Time (Y3)				
age	-,01	,00	-2,28	,02
gender	-,05	,10	-,52	,59
Store Patronage (Y4)				
age	-,00	,00	-1,52	,12
gender	,03	,09	,42	,67
Unplanned Expenditure (Y5)				
age	-,01	,00	-2,73	,00
gender	-,08	,10	-,85	,39

4.3 Study 3

The study 3 aims to test H8 - H19 Considering the effect of human crowding and store messiness in a fashion retail store context through the influence of perceived scarcity and perceived competition on behavioral intentions as in-store hoarding and in-store hiding behavior are investigated. Figure 4.8 shows the conceptual model for Study 3.

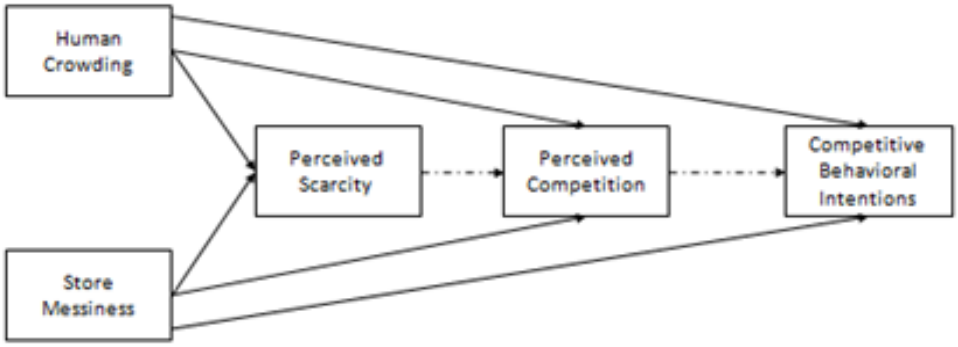

Figure 4.8 : Conceptual model for Study 3.

To test the causal effect of store messiness and human crowding on perceived scarcity, perceived competition and in-store competitive behaviors, this study conducted a 2 (crowded: high x low) x 2 (messiness: messy x tidy) between-subjects factorial design with an online experiment where participants were randomly assigned to one of the 4 treatments. Data for main experiment were collected through Amazon Mechanical Turk (MTurk). The usable sample consisted of 154 participants. In total, 48 per cent of all respondents are female, the average age is M=37.84 (SD=12.47) ranging from 20 to 71 years. The participants of the experiment are mainly well educated (57.3 per cent had university degree) and 85 per cent of them were employed, 12.4 per cent of them were currently unemployed and 2.6 per cent of them were students. Also 49 per cent of respondents had spent most of their life in an urban area while 39.9 per cent had spent in a small town and 11.1 per cent had spent in a rural area.

Table 4.11 : Results for moderated mediation (Study 2).

Human Crowding (X1)	**Task Oriented(Wa)**					**Recreational Oriented(Wb)**					**Moderated Mediation Model**				
Retail shopper confusion(M)	**β**	**LLCI**	**ULCI**	**SE**	**p-value**	**β**	**LLCI**	**ULCI**	**SE**	**Significance**	**β**	**LLCI**	**ULCI**	**SE**	**p-value**
repeat visit (Y1)	-.50	-.65	-.37	.07	p< .05 *	-.56	-.74	-.41	.08	p< .05 *	.07	-.04	.18	.06	p> .05
in-store exploration (Y2)	-.47	-.65	-.31	.09	p< .05 *	-.64	-.84	-.48	.09	p< .05 *	.17	.05	.30	.06	p< .05 *
spending time (Y3)	-.42	-.62	-.25	.09	p< .05 *	-.58	-.80	-.41	.90	p< .05 *	.16	.01	.32	.08	p< .05 *
store patronage (Y4)	-.50	-.67	-.37	.08	p< .05 *	-.57	-.78	-.41	.09	p< .05 *	.07	-.05	.19	.06	p> .05
unplanned expenditure (Y5)	-.28	-.46	-.14	.08	p< .05 *	-.32	-.50	-.17	.08	p< .05 *	.03	-.13	.19	.08	p> .05
Store Messiness (X2)															
Retail shopper confusion (M)															
repeat visit (Y1)	-.69	-.87	-.54	.08	p< .05 *	-.78	-1.0	-.61	.10	p< .05 *	.01	-.06	.24	.08	p> .05
in-store exploration (Y2)	-.65	-.87	-.47	.10	p< .05 *	-.89	-1.11	-.71	.10	p< .05 *	.23	.07	.44	.09	p< .05 *
spending time (Y3)	-.58	-.81	-.38	.11	p< .05 *	-.81	-1.07	-.59	.12	p< .05 *	.22	.01	.46	.11	p< .05 *
store patronage (Y4)	-.70	-.90	-.53	.09	p< .05 *	-.80	-1.04	-.60	.11	p< .05 *	.09	-.08	.27	.09	p> .05
unplanned expenditure (Y5)	-.40	-.60	-.20	.10	p< .05 *	-.45	-.67	-.24	.11	p< .05 *	.04	-.17	.28	.11	p> .05

Abbreviations: LLCI, lower limit confidence interval;ULCI, upper limit confidence interval; SE: Standard Estimation, **β** : unstandardized coefficient, X1, X2: manipulated independent variables (high crowded/messy =1; low crowded/messy=0), M: mediator, W: moderator Y1-Y5: dependent variables

4.3.1 Data Analysis

4.3.1.1 Reliability and Validity of the Measures

Table 4.12 shows the construct measures statistics including factor loadings for construct validity and Cronbach's α for construct reliability. Principal component analysis was conducted to examine the factor structure of the variable measurement scales. The analysis suggests a significant Bartlett's test of sphericity (p=.00) and a satisfactory value for KMO (KMO=.81). All scales had acceptable factor loadings above .70. Also, cronbach's α value for each construct was found to be more than .70, which is satisfactory ensuring the reliability of the data (Nunnally, 1978).

Table 4.12 : Statistics for construct measures (Study 3).

Variables	Mean	SD	Cranach's Alfa
HumanCrowding (manipulation check items)			**.96**
The store is crowded with people	2.85	1.42	
There are too many shoppers	2.78	1.54	
StoreMessiness (manipulation check items)			**.96**
The store's merchandise looks cluttered	3.01	1.61	
The store's merchandise looks disorganized	2.98	1.63	
Perceived Scarcity			**.73**
Products of interest will be often scarce.	2.83	1.26	
I find items with limited availability.	2.83	1.12	
Perceived Competition			**.85**
I feel competition with other customers.	2.64	1.32	
I will be conscious about other customers' behaviors.	2.97	1.21	
I feel like I am competing with other shoppers for products.	2.71	1.36	
Competitive Behaviors			
In-StoreHoarding			**.76**
Sometimes when I select a product, I do not want to put it down although I am not sure if I would buy it or not.	2.91	1.20	
I would carry more products than what I intend to buy.	2.65	1.21	
In-Store Hiding			**.92**
I would purposely hide them within the store in secret hiding places so other customers might not buy them.	1.92	1.06	
I would put them in completely different section where nobody else could see.	2.01	1.12	
I would hide items so that they would be available to me later.	2.06	1.21	

4.3.1.2 Manipulation Checks

A summated scale (mean of items) was calculated for crowding and messiness manipulation measures (αcrowding = .96; αmessiness = .95).One-way ANOVA analysis was conducted. Results confirmed that participants in the high crowded situation perceived the store as more crowded (Mhigh=4.04; SD= .94) than participants in the low crowded situation (Mlow=1.65; SD= .99; F(1, 153) =235,776, p < .001). In the high messiness situation, participants perceived the store as more messy (Mhigh=4.24; SD= .89) than participants in the low messy situation (Mlow=1.63; SD= .95; F(1, 153)= 311,060, p < .001).

Also, we conducted a two-way ANOVA to see if there is any interaction effect between crowding and messiness that is not intended for manipulations. For crowding, the main effect of messiness does not reach significance and also for messiness, the main effect of crowding does not reach significance (p> .05). The interaction effect between crowding and messiness is non-significant for all crowding (F(,27)= p > .05; η2=.00) and messiness (F(.567)= p > .05; η2= .004) manipulation measures. These findings confirm the effectiveness of the manipulations.

4.4.2 Hypoteses Testing and Findings

First, a two-way ANOVA was conducted to see the main and interaction effects of human crowding and store messiness on perceived scarcity. Analyses revealed that respondents had higher scores on perceived scarcity for high crowding and high messy situations. Results show that there is a main effect of crowding on perceived scarcity (highcrowd=3,18 ; lowcrowd= 2,46, (F(1, 153)= 22,626, p< .01). Also there is a main effect of messiness on perceived scarcity (highmessiness=3,12; lowmessiness=2,51, F(1,153)=16,239, p< .01). The interaction effect between crowding and messiness was not significant for perceived scarcity (F(1,153)= ,395, p> .05). So **H8** and **H9** are supported.

Then a two-way ANOVA was conducted to see the main and interaction effects of human crowding and store messiness on perceived competition. According to the findings, respondents had higher scores on perceived competition for high crowding and high messy situations. Results show that there is a main effect of crowding on perceived competition (highcrowd=3,30 ; lowcrowd= 2,06; (F(1, 153)= 48,618, p<

.01) and a main effect of messiness on perceived competition (highmessiness=2,87; lowmessiness= 2,50; F(1,153)=4,36 , p< .01). Also interaction effect between crowding and messiness was not significant for perceived competition (F(1,153)=,013 , p> .05). **H10** and **H11** are supported.

When we analyze the effect of human crowding and store messiness on in-store hoarding and in-store hiding, two different two-way ANOVAs were used. First the main effect of human crowding on in-store hoarding is significant (highcrowd=2,98; lowcrowd= 2,57, (F(1, 152)= 5,40, p< .01) and **H12** is supported. But the main effect of store messiness on hoarding is not significant (F(1,152)=,014, p> .05); so **H13** is not supported. Also the interaction effect of human crowding and messiness on hoarding is not significant (F(1,152)=1,32, p> .05). Then the main and interaction effect of human crowding and store messiness on in-store hiding behavior is analyzed by using a two-way ANOVA. Analysis suggest that there is no main effect of human crowding on in-store hiding behaviour (F (1,152) =.696, p> .05) but there is significant main effect of store messiness on in-store hiding behaviour ($high_{messy}$=2,16; low_{messy}= 1,82, (F (1,152) = 5.40, p< .05). Lastly, the interaction effect between human crowding and store messiness on in-store hiding was found non-significant (F (1,152) = 0.50, p> 0.05). So **H14** is not supported but **H15** is supported. Table 4.13 shows the ANOVA results.

Table 4.13 : ANOVA results- Study 3.

Store Messiness	**Low Messiness (n=72)**		**High Messiness (n=82)**		**ANOVA**	
	Mean	**SD**	**Mean**	**SD**	**F**	**Sig**
Perceived Scarcity	2.51	1.06	3.12	0.95	16.23	<0 .01
Perceived Competition	2.50	1.32	2.87	1.19	4.36	< 0.01
Hiding	1.82	1.03	2.16	1.05	5.40	< 0.01
Human Crowding	**Low Crowding (n=81)**		**High Messiness (n=73)**		**ANOVA**	
	Mean	**SD**	**Mean**	**SD**	**F**	**Sig**
Perceived Scarcity	2.46	1.03	3.18	0.93	22.62	< 0.01
Perceived Competition	2.06	1.09	3.30	1.12	48.61	< 0.01
Hoarding	2.57	0.98	2.98	0.91	5.40	< 0.01

4.4.2.1 Serial Mediation Analysis

To examine whether the perceived scarcity and perceived competition serially mediated the effect of store messiness and human crowding on competitive behaviors, the indirect effect of messiness and crowding on in-store hoarding and hiding were examined by using Hayes' (2013) serial mediation analyses. The model with two serial mediators was tested using Hayes' PROCESS macro, model 6 (Hayes, 2013) as a computational tool.

In-Store Hoarding

Mediation analysis results suggest that perceived scarcity is a mediator between the human crowding, store messiness and also in-store hoarding as the 95% confidence interval for the indirect effect did not include zero (crowding: BC 95% CI [,00 to, 33]; messiness: BC 95% CI [,00 to ,30]). The analysis also confirmed that perceived competition acted as a mediator of the relationship between crowding and in-store hoarding intention as the 95% confidence interval for the indirect effect did not include zero (BC 95% CI [,05 to ,38]) but between messiness and in-store hoarding intention, perceived competition is not a mediator- as the 95% confidence interval for the indirect effect included zero (messiness: BC 95% CI [-.06 to .12]).

But as predicted there is a significant indirect effect of human crowding on in-store hoarding intentions through both perceived scarcity and perceived competition. (BC 95% CI [.04 to .24]). Also a significant indirect effect of store messiness on in-store hoarding intentions through both perceived scarcity and perceived competition was found out (BC 95% CI [.05 to .25]). Hence, the results show that crowding and store messiness influence in-store hoarding intentions through perceived scarcity and perceived competition sequentially with the serial mediation effect. **H16** and **H17** are supported.

In-Store Hiding

The analysis confirmed that perceived competition acted as a mediator of the relationship between crowding and in-store hiding intention as the 95% confidence interval for the indirect effect did not include zero (BC 95% CI [.13 to .49]) but between messiness and in-store hiding intention, perceived competition is not a mediator- as the 95% confidence interval for the indirect effect included zero (messiness: BC 95% CI [-.09 to .16]). There is no significant path from human

crowding and store messiness to in-store hiding through the mediating effect of perceived scarcity.

But as predicted there is a significant indirect effect of human crowding on in-store hiding intentions through both perceived scarcity and perceived competition. (BC 95% CI [.04 to .25]). Also a significant indirect effect of store messiness on in-store hiding intentions through both perceived scarcity and perceived competition was found out (BC 95% CI [.03 to .24]). Hence, the results show that crowding and store messiness influence in-store hiding intentions through perceived scarcity and perceived competition sequentially with the serial mediation effect. So **H18** and **H19** are supported. Table 4.14 shows the serial mediation analysis results.

In conclusion, results suggest that consumers have tendency for in-store hoarding and hiding behavioral intentions when there is high human crowding or high store messiness through perceived scarcity and competition. When they see there is a high crowding and messiness in the store, they perceived a scarce environment so they feel competition. This feeling leads them to behave in a competitive manner as in-store hoarding and hiding.

Table 4.14 : Serial mediation analysis results for Study 3.
Perceived Scarcity → Perceived Competition

	β	LLCI	ULCI	SE	Sig
Mediation effect for in-store hoarding					
Store Messiness	0.13	0.05	0.25	0.05	< 0.05
Human Crowding	0.12	0.04	0.24	0.04	< 0.05
Mediation effect for in-store hiding					
Store Messiness	0.11	0.03	0.24	0.05	<0 .05
Human Crowding	0.13	0.04	0.25	0.05	<0 .05

Notes: LLCI, lower limit confidence interval;ULCI, upper limit confidence interval;
SE: Standard Estimation, β : unstandardized coefficient

Age and gender effect as control variables were also checked to see whether they have differentiating effect on the results. According to the results obtained from Hayes PROCESS macro (model 6), age and gender do not have any differentiating effect on the relationship between constructs.Table 4.15 shows the results for control variables effect.

4.4.3 Discussion for Study 3

According to the results, it can be stated that human crowding and store messiness influence competitive behavioral intentions, namely in-store hoarding and hiding through perceived scarcity and perceived competition. In general, when there is high crowding and high messiness in store, shoppers both perceive scarcity in the environment and feel competition among themselves and other customers.

Table 4.15 : Results for control variables (Study 3).

Human Crowding (X1)	**β**	**SE**	**t**	**p**
Scarcity (M1)				
age	-,0054	,00	-,83	,40
gender	,07	,16	,45	,65
Competition(M2)				
age	-,00	,00	-,96	,33
gender	-,14	,16	-,87	,38
In-Store Hoarding(Y1)				
age	-,00	,00	-,41	,67
gender	-,26	,13	-1,89	,05
In-Store Hiding(Y2)				
age	-,01	,00	-2,09	,06
gender	-,10	,16	-,61	,54
Store Messiness (X2)	**β**	**SE**	**t**	**P**
Scarcity(M1)				
age	,00	,00	,09	,92
gender	,13	,16	,83	,40
Competition(M2)				
age	-,00	,00	-,39	,69
gender	-,07	,17	-,43	,66
In-Store Hoarding(Y1)				
age	-,00	,00	-,60	,54
gender	-,26	,13	-1,92	,05
In-Store Hiding(Y2)				
age	-,01	,00	-1,74	,08
gender	-,11	,15	-,72	,46

Notes: X1,X2:independent variables; M1,M2: mediators; Y1,Y2: dependent variables

Findings suggest that human crowding influences in-store hoarding intentions but high messiness does not influence in-store hoarding directly. On the other hand, high crowding does not influence in-store hiding directly. In general, messiness directly influences hiding intentions, crowding directly influences hoarding intentions. When consumers see the messiness, they find easier to hide merchandise in a place away from the other consumers' view. And when store is crowded, they feel that the products will be gone immediately so they have tendency to hoard items if they are not sure to purchase them. Both of these environmental cues influence hoarding and hiding through the effect of perceived scarcity and perceived competition in the context of this study.

5. CONCLUSIONS

Retailers have always tried to investigate the buying decisions of shoppers and how their decisions can be triggered and distroyed. It can be stated that seventy percent of thepurchasing decisions of consumers are made in–store and sixty–eight percent of them are unplanned (Kotler 2012). This dissertation generally aims to understand how retail shopper confusion, as a specific negative feeling derived from store disorderliness with high human crowding and store messiness, influence shoppers' behavioral intentions and also their competitive behaviors in a fast-fashion clothing store.

Although offline retailers suffer because of the increasing trend of online shopping, so many shoppers still prefer going shopping in a physical store for shopping experiences, touch and see the products they are interested in before their last decisions. So offline retailers should not miss the consumer-centric experiential retailing issues. It is important to understand which atmospheric factors in a retail store influence shoppers' decisions, evaluations and satisfactions.

The current research offers a theoretical understanding on the effects of visual complexity and disorderliness on retail shopper confusion that further influence the shopper behavioral intentions. The findings of Study 1 and Study 2 suggest a main effect of crowding and messiness for each dimension of retail shopper confusion which further leads to negative behavioral reactions within the store. Further, in both studies an interaction effect between crowding and messiness on emotional confusion state, "irritation" is suggested. Study 2 further suggest an interaction effect between crowding and messiness on cognitive confusion state, "inefficiency." These results suggest that increased messiness in low and/or high crowded conditions does lead to irritation and inefficiency among the shoppers. These findings support prior research that suggests the role of messy online shopping sites in causing irritation and thus confusion in online shoppers (Lim, 2013). The study suggests that messy

online websites lead to increased human anxiety, distract consumers' attentions, and dilute human experiences, thus causing irritation and inefficiency.

This study is among the first studies to investigate the effect of visual complexity (disordered and cluttered with human crowding and merchandise) on retail shopper confusion, which in turn influences shopper behavior. According to the findings, disordered shopping environment with high human crowding and also high messiness confused shoppers in a clothing store. The findings of Study1-2 suggest a mediation role of retail shopper confusion between crowding, messiness, and shopper behavioral intentions. When shoppers see a store very crowded and messy, then they feel confusion and this negative feeling lead them avoidance behaviors as less revisit, less in-store exploration, less time spending, less unplanned expenditure and also less store patronage.

We further examine the moderating role of shopping motivations on the relationship between retail shopper confusion and shopping behavioral intentions and also competitive shopper behaviors. In Study 2 shopping motivation has been manipulated as a situational motivation and we found that shopping motivation is a moderator between retail shopper confusion and shoppers' behaviors in the store.

Shopping motivation is a moderator between retail shopper confusion and shopper behavioral intentions for only spending time and in-store exploration intentions. The moderating effect of motivation is not as expected- because rather than task oriented shoppers, recreational oriented shoppers were more confused by high crowding and high messiness levels in store to intend for more time spending and exploration in store.

Contrary to previous findings, we find out that recreational oriented shoppers were influenced more negatively by high crowding and clutter. In line with our findings ,the study of Fennis and Wiebenga (2015) stated that when environmental factors trigger an experience of disorder, or when people have a chronic need for order, and hence when they are motivated to restore perceptions of order, people are more attracted to well-defined and concrete goals and motivated to accomplish them.- disorderliness increases need for order and it increases motivation in goal pursuit. The study of Albrech et. al. (2017) mentioned that for customers with a task-oriented shopping motivation, there is a monotonic relationship between shopping stress and

purchase abandonment, because they may percieve stress as a threat to their purchase goal. However, for recreation-oriented customers, the results suggested a curvilinear, inverted U-shaped relationship - means that purchase abandonment first increases as shopping stress level rises, but then it decreases at higher levels. Their study mentioned that beyond a medium threshold level of stress experienced in store, recreation-oriented shoppers may change their goals from getting enjoyment from shopping to making a purchase, which in turn decreases the intention to leave the store without making any purchase. Prior literature supports the current results and suggests that increasing levels of visual complexity and stress make it difficult or even impossible for consumers with hedonic shopping values to enjoy their shopping activity and having fun while shopping (Lazarus & Folkman, 1984; Lunardo & Mbengue, 2009). The information overload and obstacles to having fun and enjoyment lead recreation-oriented shoppers to renew their hedonic seeking goals and re-direct their efforts towards alternative new goals that are other than getting enjoyment from shopping activity (Brandtstädter & Renner, 1990). These goals can be more functional such as making a purchase rather than seeking fun by indulging in in-store exploration (Wrosch et al., 2003). This findings may be a rational underlying mechanism to our results but it should be investigated in further research.

Some previous research investigated the effect of perceived scarcity and perceived competition that derived from scarcity messages or product-related scarcity strategies within a fashion store on consumer perceptions, values and competitive behavioral intentions (Byun & Sternquist, 2008; 2011, Gupta & Gentry, 2016). Fashion retailers generally communicate scarcity messages by offering high inventory turn-over, by stocking limited quantities of products per style or limited time promotions. Thus, they give a signal to shoppers such as “you can buy it now or you can never find it again” which threatens the shoppers’ freedom to delay buying decisions or to search other options in the marketplace. So consumers tend to do in-store hoarding and in-store hiding to gain time to make their final decision.

Previous research found out that perceptions of limited product availability leads perceived scarcity which in turn influences in-store hoarding. Besides, perceived scarcity in a fashion store leads urgency to buy for males and in-store hoarding and in-store hiding intentions for females. But until now, according to our knowledge there is no empirical study to investigate the effect of store environmental factors,

especially both human crowding and also store messiness as drivers of scarcity and competition perception which in turn influence competitive behavioral intentions, in-store hoarding and hiding (Gupta & Gentry, 2016). Study 3 found out it can be stated that human crowding and store messiness influence competitive behaviours, namely in-store hoarding and hiding through perceived scarcity and perceived competition. In general, when there are high crowding and high messiness in store, shoppers both perceive scarcity in the environment and feel competition among themselves and other customers. Findings suggest that human crowding influences in-store hoarding intentions but high messiness does not influence in-store hoarding directly. On the other hand, high crowding does not influence in-store hiding directly. In general, messiness directly influences hiding intentions, crowding directly influences hoarding intentions. When consumers see the messiness, they find easier to hide merchandise in a place away from the other consumers' view. And when the store is crowded, they feel that the products will be gone immediately so they have a tendency to hoard items although they are not sure to purchase them. Both of these environmental cues influence hoarding and hiding through the effect of perceived scarcity and perceived competition in the context of this study.

The results of these three studies are expected to contribute by providing academic and practical implications.

5.1 Theoretical Implications

This study advances Garaus et. al.'s (2015) recently developed conceptual framework "retail shopper confusion" with three emotional subsystems of a human mind by testing empirically within the context of human crowding and messiness that are rarely studied together in retail store environment literature.

The findings of this study contributed to the literature by revealing that levels of human crowding and messiness lead confused mental states that influence shoppers' behavioral intentions in the store. Garaus et. al. (2015) and Garaus and Wagner (2016) tested the effect of general store environmental factors as cognitive fit between brand image and store atmospheric cues as well as more holistic environmental cues such as signage, store entrance and department arrangement, however, in a more specific focus, human crowding and messiness as complexity dimensions have not been studied in the context of shopper confusion. So the

findings advanced and supported the general supposition that store environmental cues cause retail shopper confusion and influence shoppers' behavioral intentions negatively.

Our study findings also suggest that shoppers with hedonic motives in a fashion retail store are affected more negatively from the high level of crowding and messiness compared to shoppers with low hedonic motives for their behavioral intentions- as found in our previous studies within this dissertation. Hedonic shoppers would like to have active engagement in the store to satisfy their recreational needs related to fun, adventure, variety and novely but the confusion feeling make them avoid such shopping related goals such as hoarding, hiding or time spending in the store. This is also a contradictory finding for the literature stated that utilitarian shoppers- with low hedonic motives will be influenced more negatively in a confusing, high crowded and messy store (Van Rompay et al. 2012; Orth et al., 2016). This contradictory result can be related to the context studied as fast-fashion retailing and should be investigated further.

Findings of this study also contributed to the literature by investigating the effect of human crowding and also store messiness that has been not studied before in terms of drivers of scarcity and competition perceptions and also in-store hoarding and hiding behaviours. This study contributed to the retailing literature by finding a significant relationship between human crowding, store messiness and competitive behaviours through perceived scarcity and competition. Store hoarding and hiding, as competitive behaviours have been not studied in detail before and this study will be leading to further research aims to investigate the store atmospheric antecedents of in-store competitive behaviors. Previous research investigate the effect of perceived scarcity on in-store haording and hiding and only the effect of human crowding on perceived competition but there is no empirical study investigate the effect of store disorderliness with both human crowding and store messiness on perceived scarcity and perceived competition which in turn influence in-store hoarding and hiding.

5.2 Practical Implications

Retailers may suffer from shoppers' avoidance intentions based on a complex store environment due to human crowding and merchandise messiness. The results suggest that consumers are more likely to be irritated and inefficient when stores are highly

crowded and messy. Fast fashion retailers have similar scenarios where due to new product offerings, the stores tend to be extremely crowded and messy. To avoid negative shopper behaviors, such stores need to re-design their stores to help in decreasing the level of human crowdedness. Also, these retailers need to have efficient frontline employees that could help keep the store organized and thus less messy. Further, besides fast fashion retailers, these results may be useful for specialty retailers as they satisfy consumers' recreational shopping motivations. As per the study, consumers pursuing recreational shopping motivations are more likely to exhibit negative effects from retail shopper confusion on in-store exploration and time spent if the stores are crowded and messy.

Retailers should pay attention to the antecedents of shoppers' behavioral intentions and also competitive behaviors. Managers in the store should pay attention to the level of crowding and messiness and then when they observe a high level of crowding or messiness, they can make some promotional based scarcity in the store to reduce the negative effect of disordered and complex store environment. Also to reduce in-store hiding behaviors that negatively effect the financial performance of a retailer, store managers and employees should pay attention to the organization and messiness of products. Human crowding directly influences in-store hoarding and store messiness directly influences in-store hiding. So employees in the store should pay attention to the level of crowding and messiness and then when they observe a high level of crowding or messiness, they should take control of the hoarding behaviours such as by driving shoppers to carry a bag and putting a limit to carry not more than suitable number of products in the bag. Also, they can prevent in-store hiding behaviours by paying attention to the organization and messiness of products in the store shelves or displays.

5.3 Limitations and Future Research

This research has a few limitations. First, it uses lab experimental methodology and it suffers from the lack of external validity. For a better understanding of retail shopper confusion, shoppers' confusion in a real crowded and messy store need to be examined. Thus, conducting a field experiment can further contribute to the findings of the research and generalize it to the retail industry.

Second, this research examines the effects of store disorderliness with human crowding and store messiness within the context of fast fashion retailers; so by studying different retailer contexts, generalizability needs to be provided by further research. Also further research should examine the effect of store disorderliness in a discount and departmental retail store.

Third, this study examines the role of human crowding in influencing retail shopper confusion. A future study that examines the role of spatial crowding on retail shopper confusion will be relevant.

Fourth, the sample in this study consisted of consumers from the United States. A cross-cultural study will help us better understand how consumers across cultures perceive crowding and messiness. There is a possibility that across cultures, crowding and messiness may have different meaning thus influencing retail shopper confusion, differentially. Also, there may be different operational definitions to these constructs across cultures that may have differentially effect on retail shopper confusion.

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APPENDICES

APPENDIX A: Store visuals (Study 1, 2, 3)
APPENDIX B : Shopping scenarios used for manipulations
APPENDIX C. Questionnaire Form

APPENDIX A: Store Visuals (Study 1, 2, 3)

Figure A.1: High crowded- high messy.

Figure A.2: High crowded- low messy.

Figure A.3: Low Crowded- high messy.

Figure A.4: Low crowded- low messy.

APPENDIX B. Shopping scenarios used for manipulations

Study 1 and Study 3

High Crowded -High Messy

Imagine that it is weekend and you are strolling around in a shopping mall. When passing a clothing store, you decide to go in and browse. You enter and notice that **the store is very crowded** and **filled with many people**. Because of the large number of other customers, it is really hard to move smoothly through the store. Other people often bump into you. Also, **the store's merchandise is very cluttered** on the displays and racks and it looks **messy** making it difficult to find some stuff.

High Crowded- Low Messy

Imagine that it is weekend and you are strolling around in a shopping mall. When passing a clothing store, you decide to go in and browse. You enter and notice that **the store is very crowded** and **filled with many people**. Because of the large number of other customers, it is really hard to move smoothly through the store. Other people often bump into you. Also, **the store's merchandise is very organized** on the displays and racks and it looks **tidy** making it easy to find some stuff.

Low Crowded – High Messy

Imagine that it is weekend and you are strolling around in a shopping mall. When passing a clothing store, you decide to go in and browse. You enter and notice that **the store is fairly empty with only a few customers**. Because of the lack of other customers, it is really easy to move smoothly through the store. Other people do not bump into you. Also, **the store's merchandise is very cluttered** on the displays and racks and it looks **messy** making it difficult to find some stuff.

Low Crowded – Low Messy

Imagine that it is weekend and you are strolling around in a shopping mall. When passing a clothing store, you decide to go in and browse. You enter and notice that **the store is fairly empty with only a few customers**. Because of the lack of other customers, it is really easy to move smoothly through the store. Other people do not bump into you. Also, **the store's merchandise is very organized** on the displays and racks and it looks **tidy** making it easy to find some stuff.

Study 2

High Crowded-High Messy- Task Shopping Motivation

Imagine that you are going to holiday this weekend and **you realize that you do not have enough suitable clothes and you need a few new pieces of T-shirts and sweaters for the trip**. As a result, you decide to go shopping **to purchase at least one of your needs.** You drive to a shopping mall where you think you can find some good options. When passing a clothing store, you decide to go in and browse. **All you want to do is to find some suitable clothes and leave the store.** When you enter the store, **you find it very crowded** and **filled with many people.** Because of the large number of other customers, it is really hard to move smoothly through the store. Other people often bump into you. Also, **the store's merchandise is very cluttered** on the displays and racks and it looks **messy** making it difficult to find some stuff.

High Crowded-High Messy - Recreational Shopping Motivation

Imagine that it is a weekend afternoon and none of your friends are around. The weather is also raining and you can't do anything outdoors like going for a walk or running. Also, you find what's on TV too dull to watch. You feel very bored. You decide to stroll around in a shopping mall near your home **to spend your leisure time and to relieve the sense of boredom**. When passing a clothing store, you decide to go in and browse. You enter and notice that **the store is very crowded** and **filled with many people**. Because of the large number of other customers, it is really hard to move smoothly through the store. Other people often bump into you. Also, **the store's merchandise is very cluttered** on the displays and racks and it looks **messy** making it difficult to find some stuff.

High Crowded-Low Messy - Task Shopping Motivation

Imagine that you are going to holiday this weekend and **you realize that you do not have enough suitable clothes and you need a few new pieces of T-shirts and sweaters for the trip**. As a result, you decide to go shopping **to purchase at least one of your needs**. You drive to a shopping mall where you think you can find some good options. When passing a clothing store, you decide to go in and browse. **All you want to do is to find some suitable clothes and leave the store**. When you enter the store, **you find it very crowded** and **filled with many people**. Because of the large number of other customers, it is really hard to move smoothly through the store. Other people often bump into you. **Also, the store's merchandise is very organized** on the displays and racks and it looks **tidy** making it easy to find some stuff.

High Crowded-Low Messy - Recreational Shopping Motivation

Imagine that it is a weekend afternoon and none of your friends are around. The weather is also raining and you can't do anything outdoors like going for a walk or running. Also, you find what's on TV too dull to watch. You feel very bored. You decide to stroll around in a shopping mall near your home **to spend your leisure time and to relieve the sense of boredom**. When passing a clothing store, you decide to go in and browse. You enter and notice that **the store is very crowded** and **filled with many people**. Because of the large number of other customers, it is really hard to move smoothly through the store. Other people often bump into you. Also, **the store's merchandise is very organized** on the displays and racks and it looks **tidy** making it easy to find some stuff.

Low Crowded-High Messy - Task Shopping Motivation

Imagine that you are going to holiday this weekend and **you realize that you do not have enough suitable clothes and you need a few new pieces of T-shirts and sweaters for the trip**. As a result, you decide to go shopping **to purchase at least one of your needs**. You drive to a shopping mall where you think you can find some good options. When passing a clothing store, you decide to go in and browse. **All you want to do is to find some suitable clothes and leave the store.** When you enter the store, **you find it fairly empty with only a few customers**. Because of the lack of other customers, it is really easy to move smoothly through the store. Other people do not bump into you. Also, **the store's merchandise is very cluttered** on the displays and racks and it looks **messy** making it difficult to find some stuff.

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APPENDIX C. Questionnaire Form

Dear Respondents,

We are marketing academicians and this survey is a part of our research study which we are conducting in the USA.

We appreciate your willingness to help us.
The purpose of our study is to investigate customers' views related to a retail store experience.
Participation in this study is voluntary. If you accept to participate, it will take approximately 8-10 minutes. But you are given 20 minutes to complete the survey.
You will receive $0.50 for your participation after you complete the survey.
When you accept to take this survey:
You will be presented with
- some pictures of a clothing store
- a shopping experience scenario related to this store.

Please imagine yourself as the shopper in the scenario and then answer the related questions.
Please read the directions for each section and answer ALL the questions. Some of the questions may sound similar, or a little strange, but they all have a purpose. There are no right or wrong answers. All your answers will only be used for academic purposes. All the information collected in this survey will be kept completely confidential. If you have any questions about your rights as a research participant or if you have any comments about the study, please contact Merve Coskun, as one of researchers at mervecoskun@itu.edu.tr

We greatly appreciate your help!!!
THANK YOU

1. **Your age is above 18.**
Yes
No

Next page, first you will be given a picture shows some fields of a clothing store and then a shopping experience scenario.
Please look at the pictures for a while and then read the shopping scenario.
While reading the scenario, imagine yourself shopping in this store and answer the related questions.

VISUALS AND SCENARIOS

2. Considering the scenario, please indicate how would you feel if you were shopping in this store. (Study 1,2)
I would feel....

	1 not at all	2	3 moderate	4	5 very much
annoyed					
irritated					
unnerved					
efficient					
careful					
productive					
high performing					
helpless					
lost					
awkward					
baffled					
weak					
overstrained					

3. Please indicate how would you rate your experience in this store described. (Study 3)

While shopping in this store

	1 strongly disagree	2 disagree	3 neither disagree nor agree	4 agree	5 strongly agree
I am encouraged to act quickly to purchase something.					
Products of interest will be often scarce.					
I find items with limited availability.					
I feel competition with other customers.					
I will be conscious about other customers' behaviors.					
I feel like I am competing with other shoppers for products.					

4. If you were a shopper in this store described, how would you rate your shopping experience. (Study 1, 2)

	1 strongly disagree	2 disagree	3 neither disagree nor agree	4 agree	5 strongly agree
I intent to visit this store again					
I would avoid returning to this store					
The likelihood that I would shop in this store in future is high					
I would explore this store more thoroughly					
I would avoid looking around in this store					
I would spend more time in this store than initially planned.					
I would enjoy shopping in this store					
This is a kind of store where I would spend more money than I expected.					

5. If you were a shopper in this store described, how would you rate your shopping experience. (Study 3)

While shopping in this store

	1 strongly disagree	2 disagree	3 neither disagree nor agree	4 agree	5 strongly agree
I hurry to grab products of interest and keep them to myself.					
Sometimes when I select a product, I do not want to put it down although I am not sure if I would buy it or not.					
I would carry more products than what I intend to buy.					
I would purposely hide them within the store in secret hiding places so other customers might not buy them.					

I would put them in completely different section where nobody else could see.

I would hide items so that they would be available to me later.

The following questions are related to your views of the scenario you have read. Please indicate your level of agreement to each statement.

6. Please evaluate the store described in the scenario.(Study 1,2,3)

	1 strongly disagree	**2 disagree**	**3 neither disagree nor agree**	**4 agree**	**5 strongly agree**
The store is crowded with people.					
There are too many shoppers.					
The store's merchandise looks cluttered.					
The store's merchandise looks disorganized.					

7. What is your fundamental reason of visiting the shopping mall according to the situation given in the scenario? (Study 2)

To acquire some needed products.
To gain enjoyment during the shopping trip and spend leisure time.

The following questions are related to your views of the scenario you have read. (Study 1,2,3)

8. I think there can be a clothing store like that in real life.

Yes
No

9. The scenario is believable.

Yes
No

10. I was able to adopt the role of the customer described in the scenario.

Yes
No

11. I think purpose of the study was

To learn about customer's views about fashion store shopping experiences
Don't know
Other (Please specify your answer)

DEMOGRAPHIC QUESTIONS (Study 1,2,3)

12.What is your age?

13.What is your gender?
Female
Male

14.Which race/ethnicity best describes you? (Please choose only one.)
American Indian or Alaskan Native
Asian / Pacific Islander
Black or African American
Hispanic
White / Caucasian
Multiple ethnicity / Other (please specify)

15.In which setting have you spent most of your life?
Urban
Small Town
Rural

16.What is your nationality?
United States of America
Other
If you select other, please specify your nationality.

17.What is your education level?
Less than high school
High school
Some college, but no degree
Currently attending college
Associate degree
Bachelor degree
Graduate degree(s)

18.What is your current employment status?
Full time white collar
Full time blue collar
Part time white collar
Part time blue collar
Currently unemployed
Student

19.What is your annual household's income before taxes?
Less than $20,000
$20,000 - $39,999
$40,000 - $59,999
$60,000 - $79,999
$80,000 - $99,999
$100,000 or above

CODE FOR MTURK

In order for us to compensate you for your time and effort, we need you to make up a 6 digit completion code number, enter it below first, and then again on MTurk.

Please make up a 6-digit completion code number (e.g., first 6-digits of your phone number). We ask you not to choose 123456. Please make a note of this number if you think you'll have trouble remembering it, as you'll have to enter same number on Mechanical Turk again after submitting this survey.

YOUR CODE FOR MTURK

PLEASE REMEMBER TO ENTER THIS CODE INTO THE MECHANICAL PAGE AFTER SUBMITTING THIS SURVEY ON THE NEXT PAGE OTHERWISE, WE WON'T KNOW THAT YOU COMPLETED THE SURVEY AND WE WON'T BE ABLE TO COMPENSATE YOU

THANKS FOR YOUR PARTICIPATION TO OUR STUDY!
PLEASE NOW SUBMIT YOUR ANSWERS AND THEN YOU CAN ENTER THE CODEYOU MADE UP TO MTURK PAGE

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PUBLICATIONS, PRESENTATIONS AND PATENTS ON THE THESIS:

Coskun, M., Gupta, S., and Burnaz, S., "Human Crowding and Store Messiness: Drivers of Retail Shopper Confusion and Behavioral Intentions" *Journal of Consumer Behaviour*, (*accepted for publication*, SSCI; ABDC B Category)

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OTHER PUBLICATIONS, PRESENTATIONS AND PATENTS:

Coskun, M., Keles, F.H and Burnaz, S. (2017), "Türkiye ve Türk Ürünlerine Yönelik Ulusal Kalıp Yargılar Üzerine Bir Araştırma." Tüketici ve Tüketim Araştırmaları Dergisi, 9(2), 297-316.

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Coskun, M., Keles, F.H., and Burnaz, S. (2017), "Brand Name and Ad Execution Format: Influence of Stereotypical Associations in Utilitarian Service Context", American Marketing Association (AMA) Summer Marketing Educators' Conference, 4-6 August 2017, San Francisco, USA

Coskun, M. and Keles, F.H. (2015), "Congruence of Brand Name, Service Type and Ad Appeal with respect to Perceived Hedonism", American Marketing Association (AMA) Summer Marketing Educators' Conference, 14-16 August 2015, Chicago, USA