

Perception of Crowding in Apparel Retail Environment and Its Behavioral Consequences - Differences in Its Influences across Retail Types -

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Abstract

The purpose of the study was to examine how shoppers perceive and are influenced by crowding in apparel retail environment. Because shopping occurs in a spatially defined environment within a relatively short time, both crowding and the consequences of experiencing it are very important to retailers and researchers. The study explores the consequences of retail crowding in terms of shoppers' perception of store image, shopping enjoyment, and repurchase intention across two retail types, department stores and wholesale markets.

The result showed that if shoppers perceived lower level of crowding, they perceived more positive store image, and spent more time in department stores. However, interestingly, retail crowding didn't influence store image of wholesale markets. Rather, if shoppers perceived higher level of crowding in wholesale markets, they had higher level of shopping enjoyment and repurchase intention. This can be interpreted as shoppers consider the crowding of retail environment as a token of attractive shopping places in terms of better deals and good quality in case of wholesale markets.

Key words: retail crowding, store image, shopping enjoyment, time spent in shopping, repatronage intention.

I. Introduction and Theoretical Background

The physical and psychological aspects of person-environment units are intrinsic and inseparable¹⁾. The physical environment provides the psychological state necessary to sustain behavior, and it may affect a variety of behavioral consequences.²⁾

Crowding is a state of psychological stress that results when one's demand for space exceeds the supply.³⁾ Crowding that violates one's

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¹ I. Altman and M. Gauvain, "A Cross-Cultural and Dialectic Analysis of Homes", eds. L. Liben, A. Patterson, and N. Newcombe, *Spatial Representation and Behaviour across the Life Span: Theory and Application*. (San Diego: Academic Press. 1981), 283-320.

² S. Winchup, M. Inman, and P. C. Dunn, "Stress Due to Crowding in Multifamily Dwelling Interior Spaces", *Home Economics Research Journal* 18 (1989): 179-88.

³ D. Stokols, "On the Distinction between Density and Crowding: Some Implications for Future Research", *Psychological Review* 79 (1972): 275-7.

personal space can cause intense discomfort^{4,5)} and stress.^{6,7)} Perceived crowding is a subjective experience of an excessively high rate and amount of environmental stimuli. All spatial and social stimuli comprising the amount of information offered in an environment determine the level of density that prevails there.⁸⁾ According to Milgram,⁹⁾ under high perceived density conditions people are likely to experience information overload whereby the rate and amount of environmental stimuli exceed their capacity to cope with them. This, then, results in feelings of being confined, out of control, and constrained.

Managers of retail and service outlets are increasingly recognizing that the store environment significantly affects sales,¹⁰⁾ product evaluations, and satisfaction.¹¹⁾ The patronage decision has been shown to also be influenced by the store environment. For instance, a study by Darden et al.¹²⁾ found that consumers' beliefs

about the physical attractiveness of a store had a higher correlation with patronage intentions than did merchandise quality, general price level, and other store/product beliefs. This lends support to the notion that store patronage is influenced, at least to some degree, by the store environment.

Regarding this, previous research has shown how ambient conditions, including store layout, design and signage, and employee and customer appearance, evoke varying levels of emotions among patrons.¹³⁻¹⁵⁾ These emotions impact store shoppers' willingness to buy;¹⁶⁾ price perceptions;¹⁷⁾ perceived value;¹⁸⁾ current period purchase behavior and customer satisfaction.¹⁹⁾ In addition, people in more positive emotional states will tend to reduce decision complexity and have shorter decision times.²⁰⁾ Donovan and Rossiter²¹⁾ suggested that environmental stimuli affect the emotional states of consumers in ways

⁴ J. D. Fisher and D. Byrne, "Too Close for Comfort: Sex Differences, Response to Invasions of Personal Space", *Journal of Personality and Social Psychology* 32 (1975): 15-21.

⁵ S. P. Sinha and M. Prakashvati, "Density and Ceiling Height as Factors in Task Performance and Feeling of Crowding", *DEI Research Journal of Education and Psychology* 8 (1990): 5-9.

⁶ Y. M. Epstein, "Crowding Stress and Human Behaviour", ed. G. W. Evans, *Environmental stress*, (New York: Cambridge University Press, 1982), 133-48.

⁷ S. P. Sinha and S. P. Sinha, "Personal Space and Density as Factors in Task Performance and Feeling of Crowding", *The Journal of Social Psychology* 131 (1991): 831-7.

⁸ S. A. Eroglu and K. A. Machleit, "An Empirical Study of Retail Crowding: Antecedents and Consequences", *Journal of Retailing* 66 (1990): 201-21.

⁹ S. Milgram, "The Experience of Living in Cities", *Science* 167 (1970): 1461-8.

¹⁰ R. E. Milliman, "The Influence of Background Music on the Behavior of Restaurant Patrons", *Journal of Consumer Research* 13 (1986): 286-9.

¹¹ M. J. Bitner, "Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses", *Journal of Marketing* 54 (1990): 69-82.

¹² W. R. Darden, O. Erdem, and D. K. Darden, "A Comparison and Test of Three Causal Models of Patronage Intentions", eds. W. R. Darden and R. F. Lusch, *Patronage Behavior and Retail Management*, (New York: North Holland, 1983), 38-46.

¹³ J. Baker, D. Grewal, and M. Levy, "An Experimental Approach to Making Retail Store Environmental Decisions", *Journal of the Academy of Marketing Science* 22 (1992): 328-39.

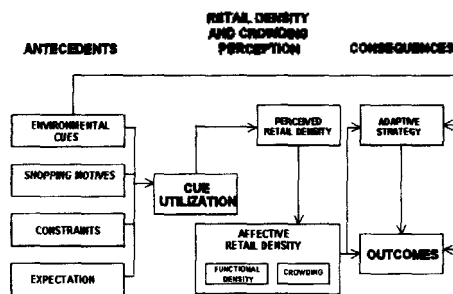
¹⁴ M. J. Bitner, "Servicescapes: The Impact of Physical Surroundings on Customers and Employees", *Journal of Marketing* 56 (1992): 57-71.

¹⁵ W. R. Darden and B. J. Babin, "Exploring the Concept of Affective Quality: Expanding the Concept of Retail Personality", *Journal of Business Research* 29 (1994): 101-9.

of which they may not be fully aware, but which can affect approach or avoidance behavior. Such behavior may be observed in retail patronage, store search, interactions with store personnel, and in-store behavior.

On the other hand, consumers' emotional states also affect the perception of retail environment. Eroglu and Machleit²² found that perceived risk and time pressure associated with purchase were shown to intensify shoppers' perceived retail crowding, and this affected shopping satisfaction negatively.

Fig. 1 diagrams some of the major relationships between consumer motives, constraints,



<Fig. 1> An Extended Model of Retail Crowding²³.

perceptions, responses, and outcomes under high density retailing conditions. In brief, the diagram suggests that the physical shopping environment along with shoppers' motives, constraints, and expectations influence the nature and number of environmental cues they perceive in retail settings. When density supports shopping motives, functional density occurs. Alternatively, when density inhibits achievement of shopping motives, crowding (or dysfunctional density) results. In either case, shoppers use adaptive strategies to cope with the environment. The last unit of the model is outcomes, which includes shoppers' evaluation of the retailing establishment and their repatronage intentions.

The concept of crowding in retail environments has major implications for researchers and practitioners alike since most shopping activities occur in spatially defined environments within reasonable time periods. Hence, identifying both antecedent stimuli that evoke crowding feelings and the consequences of experiencing crowding might provide guidelines for dealing with crowded shopping environments.

The objective of this study can be summarized as follows: (1) to examine the effects of retail crowding on shopping related variables

¹⁶ J. Baker, D. Grewal, and M. Levy, "An Experimental Approach to Making Retail Store Environmental Decisions", *Journal of the Academy of Marketing Science* 22 (1992): 328-39.

¹⁷ D. Grewal and J. Baker, "Do Retail Store Environmental Factors Affect Consumers' Price Acceptability? An Empirical Examination", *International Journal of Research in Marketing* 11 (1994): 107-15.

¹⁸ B. J. Babin, W. R. Darden, and M. Griffin, "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value", *Journal of Consumer Research* 20 (1994): 644-56.

¹⁹ B. J. Babin and W. R. Darden, "Good and Bad Shopping Vibes: Spending and Patronage Satisfaction", *Journal of Business Research* 35 (1996): 201-6.

²⁰ A. M. Isen, B. Means, R. Patrick, and G. Nowicki, "Some Factors Influencing Decision-Making Strategy and Risk Taking", eds. M. Clark and S. Fiske, *Affect and cognition*, (Hillsdale, NJ: Lawrence Erlbaum Associates, 1982), 243-61.

²¹ R. J. Donovan and J. R. Rossiter, "Store Atmosphere: An Environmental Psychology Approach", *Journal of Retailing* 58 (1982): 34-57.

²² S. A. Eroglu and K. A. Machleit, "An Empirical Study of Retail Crowding: Antecedents and Consequences", *Journal of Retailing* 66 (1990): 201-21.

²³ S. Eroglu and G. D. Harrel, "Retail Crowding: Theoretical and Strategic Implications", *Journal of Retailing* 62 (1986): 346-63.

such as perception of store image, shopping enjoyment, shopping time spent, and repatronage intention. (2) to explore the behavioral consequences of retail crowding across two retail types, department stores and wholesale markets.

Based on the literature review, the following hypotheses were developed.

- H 1 : Retail crowding is related negatively to the perception of store image.
- H 2 : Retail crowding is related negatively to shopping enjoyment.
- H 3 : Retail crowding is related negatively to shopping time spent.
- H 4 : Retail crowding is related negatively to repatronage intention.
- H 5 : There is a difference in the effect of crowding according to retail types.

II. Methods

The objectives of this research is to examine the effects of crowding on consumers' behavioral consequences according to the type of retailer such as department stores and wholesale markets. For this we examined relationships between retail crowding and perception of store image, shopping enjoyment, shopping time spent, and repatronage intention.

1. Sample

The respondents consisted of a convenience sample of 1,130 Korean adult consumers (702 females and 428 males) residing in Seoul metropolitan area. Respondents were limited as people who went apparel shopping within past twenty days. This resulted from the pilot test with eighty potential respondents asking how long the memory of apparel shopping endures. Because only respondents who went shopping within past twenty days were eligible to respond to the survey. 637 (431 females and 206 males) were valid to be used in the final analysis. Most (63.7%) of the respondents were between 17 and 25 years of age, with an average of 29.3 years.

2. Instrument

To test the hypotheses, a self-administered questionnaire was employed to collect data. The questionnaire, first developed in English, was translated from English into Korean, and back translated from Korean into English by two independent bilingual translators. To confirm the equivalency of English and Korean versions, back translation was continued until the meanings from both translations had no differences in meaning. The most important consideration was that the questionnaire translated into Korean should not be awkward and there should be no change in meaning from the English version. The translators' consensus was used to produce the final translation.

The instrument consisted of scales used to measure retail crowding, perception of store image, shopping enjoyment, and repatronage intention. All scales were seven point Likert typed. Even though all scales making up the instrument had already been tested except one scale for repatronage intention, modifications were made in the scales to reflect the context of clothing shopping. For example, the word, 'clothing' was put before 'shopping' in the original sentence as 'The shopping was not entertaining to me.' The scales used to measure each variable are shown in <Table 1>.

2. Analysis

To test the internal consistency of the data, Cronbach's alpha coefficient was employed. Using Statistical Package for Social Science (SPSS) Version 10.0, Pearson's correlation coefficient and t-test were used to analyze the data.

III. Results

For department stores, retail crowding influenced store image negatively ($r = -.36, p < .001$), shopping time spent positively ($r = .20, p < .001$) while it had no significant influences on shopping enjoyment and repatronage intention. Shoppers of department stores who perceived crowding had bad impression of store image and

<Table 1> Means, Standard Deviations, Cronbach's Alphas of the Final Scale Items (N = 632)

Items	Mean	SD
Retail Crowding (Machleit, Kellaris, & Eroglu, 1994)		
The store seemed very crowded to me.	3.13	1.10
The store was a little too busy.	3.04	1.03
There wasn't much traffic in this store during my shopping trip.(-)	3.14	1.01
There were a lot of shoppers in the store.	3.10	1.06
The store seemed very spacious. (-)	3.11	1.09
I felt cramped shopping in this store.	2.49	1.07
The store felt confining to shoppers.	2.75	1.16
alpha = .78		
Retail Store Image (Manolis, Keep, Joyce, & Lambert, 1994)		
Overall, I had a good impression.	3.60	.77
The store was doing well.	3.61	.65
The store's layout was good.	3.60	.72
The store had a good appearance.	3.31	.85
The store was in a good physical condition.	3.34	.91
The store offered good service.	3.47	.85
The store's salesperson made a good impression.	3.55	.88
alpha = .84		
Time Spent in Shopping		
How long have you spent in the store?	2.36	1.45
Shopping Enjoyment (Reynolds & Beatty, 1999)		
I enjoyed the clothing shopping.	3.42	.87
The clothing shopping was a waste of time. (-)	3.87	.83
The clothing shopping was a good way for me to relax.	3.23	.88
The clothing shopping picked me up on a dull day.	3.21	.88
The clothing shopping was not entertaining to me. (-)	3.61	.89
alpha = .78		
Repatronage Intention		
I'd like to visit and shop at the store again in future.	3.51	.81
I don't like to visit and shop at the store again.(-)	3.88	.93
alpha = .72		

they spent more time in shopping. This implicates that perceived crowding plays a negative role when shopping in department stores (Table 2).

For wholesale markets, retail crowding had positive relationships with shopping time spent

($r = .44$, $p < .001$), shopping enjoyment ($r = .21$, $p < .05$), and repatronage intention ($r = .12$, $p < .001$). Shoppers of wholesale markets who perceived higher level of crowding were found to enjoy shopping more and have stronger intention of repatronage. Different from department stores,

〈Table 2〉 The Effect of Retail Crowding on Shopping Behaviors

	Store Image		Shopping Time Spent		Shopping Enjoyment		Repatronage Intention	
	Dept.	Wholesale	Dept.	Wholesale	Dept.	Wholesale	Dept.	Wholesale
Retail Crowding	-.36***	-.19	.20***	.44***	-.06	.21*	.12	.33***

* $p < .05$, ** $p < .01$, *** $p < .001$.

〈Table 3〉 Differences in Shopping Variables by Store Types

	Place	Mean	SD	t-value
Retail Crowding	Department Store	16.65	3.81	-5.76***
	Wholesale Market	19.05	3.54	
Store Image	Department Store	35.49	5.20	4.89***
	Wholesale Market	32.70	4.84	
Shopping Enjoyment	Department Store	14.22	14.22	-1.33
	Wholesale Market	14.49	14.49	
Shopping Time Spent	Department Store	2.07	2.07	-5.05***
	Wholesale Market	2.94	2.94	
Repatronage Intention	Department Store	5.51	5.51	-1.90
	Wholesale Market	5.68	5.68	

* $p < .05$, ** $p < .01$, *** $p < .001$.

perceived retail crowding rather plays a positive role for wholesale markets (Table 2).

〈Table 3〉 presents the differences in shopping variables between department stores and wholesale markets. These two types of retail stores showed significant differences in perception of crowding, store image, and shopping time spent.

Shoppers perceived higher level of crowding ($M = 19.05$) than department stores ($M = 16.65$) ($t = -5.76, p < .001$). Shoppers had more positive store image from department stores ($M = 35.49$) than wholesale markets ($M = 32.70$) ($t = 4.89, p < .001$). Shoppers spent more shopping time in wholesale markets ($M = 19.05$) than department stores ($M = 16.65$) ($t = -5.05, p < .001$).

In a word, shoppers perceive higher level of retail crowding, spend more time in shopping, and have less positive store image from whole-

sale markets compared to department stores.

〈Table 4〉 shows the correlation among research variables in case of department stores. Retail crowding had negative relationship with store image ($r = -.36, p < .001$), and positive relationship with shopping time spent ($r = .20, p < .001$). Positive store image was associated shopping enjoyment positively ($r = .19, p < .001$). Shopping enjoyment had positive relationships with shopping time spent ($r = .15, p < .01$) and repatronage intention ($r = .20, p < .001$).

In department stores, if shoppers perceive high level crowding, they likely have negative image of stores, and this lowers their shopping enjoyment. As shopping enjoyment was related to repatronage intention positively, perceived crowding in department stores might play a negative role in shopper's shopping satisfaction.

〈Table 4〉 Correlation among Research Variables (Department Stores) (N=253)

	Retail Crowding	Store Image	Shopping Enjoyment	Shopping Time Spent	Repatronage Intention
Retail Crowding	1.00	-	-	-	-
Store Image	-.36***	1.00	-	-	-
Shopping Enjoyment	-.06	.19***	1.00	-	-
Shopping Time Spent	.20***	-.03	.15**	1.00	-
Repatronage Intention	.12	-.09	.20***	.03	1.00

* $p < .05$, ** $p < .01$, *** $p < .001$.

〈Table 5〉 Correlation among Research Variables (Wholesale Market) (N=159)

	Retail Crowding	Store Image	Shopping Enjoyment	Shopping Time Spent	Repatronage Intention
Retail Crowding	1.00	-	-	-	-
Store Image	-.19	1.00	-	-	-
Shopping Enjoyment	.21*	.10	1.00	-	-
Shopping Time Spent	.44***	-.17	.04	1.00	-
Repatronage Intention	.33	-.16	.30	.17	1.00

* $p < .05$, ** $p < .01$, *** $p < .001$.

Whereas, when shopping in wholesale markets, shoppers were found to have quite different attitudes toward crowding and consequential behavioral outcomes (Table 5). 〈Table 5〉 indicates that retail crowding did not affect store image significantly. Rather retail crowding was associated with shopping enjoyment ($r = .21$, $p < .05$), shopping time spent ($r = .44$, $p < .001$), and repatronage intention ($r = .33$, $p < .001$) positively. Shopping enjoyment was found to be related to repatronage intention positively ($r = .30$, $p < .01$).

In wholesale markets, if shoppers perceive high level crowding, they likely enjoy shopping more, and this increases their repatronage intention. Interestingly, perceived crowding in wholesale markets plays a role as a positive environmental stimulus.

IV. Discussion and Conclusion

Retail crowding was found to affect store image negatively when shopping in department stores but it didn't influence store image of wholesale markets. In addition, positive store image influenced shopping enjoyment of shoppers in department stores while it didn't in wholesale markets. Rather, if shoppers perceive higher level of crowding in wholesale markets, they have higher level of shopping enjoyment and repurchase intention. This can be interpreted as shoppers consider the crowding of retail environment as a token of attractive shopping places in terms of better deals and good quality. In addition, shoppers' expectations might influence judgments of settings and stimuli. Shoppers usually expect a wholesale market as a crowding place before going shopping. Hence, the crowding of wholesale market might not have negative effects. Even though a wholesale market is usually crowded, it also provides enjoy-

ment of hunting cheap-but-good products at the same time. In turn, this enhances the intention of shoppers' repatronage. For both department stores and wholesale markets, shopping enjoyment was found to be a determinant of repurchase intention.

The findings about the effects of retail crowding suggest several implications for retail management. Crowding perceptions are context dependent. The shoppers' tolerance for retail crowding may differ across types of retail establishments. The role of roomy and pleasant retail environment is more important for department stores. On the other hand, for the wholesale markets, retail crowding could be regarded as rather a positive stimulus.

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