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Place Attachment of Shoppers: A Study of Palms Mall, Ibadan, Nigeria

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ABSTRACT

The shopping mall has emerged as an important component of many cities. While the rapid development of malls and the increasing patronage show their viability and acceptance by the populace, respectively, there is a dearth of studies that examine the impact of its physical and behavioural attributes on attachment. This study examines the effect of physical characteristics, activities, and socioeconomic characteristics on place attachment to the first standalone mall in Ibadan, Nigeria. From a sampling frame of 7, 115 shoppers, quantitative data was obtained from 350 respondents using systematic sampling on April 29, 2017, through a structured questionnaire. The data was analysed using mean, factor analysis, cross-tabulation, correlation, and categorical regression. The findings show that the most prevalent activities are meeting others ($\alpha = 0.77$); leisure ($\alpha = 0.75$); and, parties and hanging out ($\alpha = 0.70$). The important physical attributes are circulation, wayfinding, and aesthetics ($\alpha = 0.87$); access to mechanical conveyors, mall decoration, and quality materials ($\alpha = 0.80$); and, ambience ($\alpha = 0.79$). However, the regression results show that the most important factors of attachment are access to mechanical conveyors, mall decoration, and quality materials ($\beta = 0.334$); leisure ($\beta = 0.279$); purchasing activities ($\beta = 0.236$); and, meeting others ($\beta = 0.165$). Hence, these factors should be considered in creating new malls in the city. In the context of urbanism, this is key to the social and economic revitalization of cities.

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Highlights:

- Circulation, wayfinding, and aesthetics represent the most valued physical quality of the mall
- The most prevalent activity at the mall is meeting others
- Access to mechanical conveyors, mall decoration, and quality materials enhance bonding with the mall
- Leisure is an important activity for attachment to the mall
- Sustaining the factors of attachment to malls can enhance the social and economic development of cities

Contribution to the field statement:

This study adds to the existing knowledge of place attachment by highlighting the important physical, behavioural, and socioeconomic factors that make people bond with the mall. It also shows that a valued aspect of the mall may not necessarily result in attachment.

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1. Introduction

Malls are emerging in different locations across the globe, and the city of Ibadan is no exception. They constitute a building typology that is new to the people's retailing culture and urban lifestyle. The gradual increase in the number of malls suggests that it is an impactful development in the city. It is very likely that certain physical, psychological and social attributes of the mall make it impactful. It is, therefore, essential to explore the factors that make people bond with the mall.

Place attachment (or the bonds with places) is a relevant concept for examining factors which make people feel attached to malls. It is an essential evaluative place construct that shows the role of place in people's lives. It is a measure of the bond that exists between people and place (Lee & Jeong, 2021). According to Scannell and Gifford (2010), it is a multidimensional construct that develops through affect, cognition, and behaviour. On the one hand, Widya et al. (2019) and Zhu et al. (2012) consider that this bond could be cognitive or affective. On the other hand, Reese et al. (2019) describe it as a cognitive-emotional construct. Their approaches show that place attachment may be a unidimensional or multidimensional construct in a residential setting. However, there is little information about the nature of attachment in a retailing typology such as the mall.

Examining place attachment in the mall has some invaluable benefits. A study of place attachment to the mall is critical because it can elucidate the impact of the mall on urban living. Understanding place attachment to malls can assist policymakers in the decision-making process to enhance the economic and social development of cities, consequently providing input into policies for the development of new malls in the city and the designs of new cities.

Furthermore, examining place attachment facilitates programming and post-occupancy evaluation of the mall (Horayangkura, 2012). The results of a place attachment study provide invaluable feedback for existing malls and implications for future mall designs. A study of place attachment can uncover essential factors for design consideration, consequently assisting the design and urban planning process. Such data can help designers and planners to effectively communicate to clients the spatial and functional aspects of malls, which make people attached to the mall. Such information will result in more needs-responsive designs in the future.

Another benefit of evaluating bonds with the mall is that the results will reveal the comfort and affordances that people derive at the mall. Such comfort and affordances may be related to cleanliness, lifts and escalators, a relaxed atmosphere, large cinema screens, and aesthetically pleasing facades and interiors. Such information can guide retailers on the type of services to offer at the mall, including an effective organization and appearance of the physical environment of their stores. Therefore, the purpose of this study is to examine the factors that make people bond with the mall.

1.1 Literature review

Existing literature suggests that people develop emotional bonds to third places¹ such as coffee shops and wine bars. Muchmore, the literature shows that there are different kinds of factors that make people attached. One such group of factors is physical factors. For example, Debenedetti et al. (2014) utilized a qualitative approach to examine the bonds people have with commercial places. The study found that attachment to such commercial places increased because people were familiar with such places, considered them unique, and had a feeling of safety in them. Consequently, users found it a homey place, participated in wine preparation activities and were also financially generous to the attendants.

Furthermore, Waxman (2006) utilized an interview approach and found that cleanliness, good scent, sufficient lighting, comfortable seats, and the ability to view exterior activities were the most valued design characteristics in certain coffee shops. Also, Van den Berg et al. (2021) found that some physical attributes in a shopping area positively affected the sense of place in the Netherlands. However, they were not explicit about these attributes in their study. In addition, Kusumowidagdo et al. (2015) conducted interviews at the mall and found that circulation, layout, spatial organization, zoning of stores, ambience, and interior design increased place attachment to the mall. Though insightful findings, it is not clear

¹ Third places are public places that facilitate social interaction beyond the dwelling and workplace (Finlay et al., 2019; Williams & Hipp, 2019)



which of the physical attributes are the most important in determining attachment to the mall. This knowledge gap may have resulted, in part, from the utilization of a qualitative approach for the study. Though a qualitative approach ensures an in-depth understanding of place attachment, a quantitative method helps to quantify important factors of attachment and make predictions and inferences about such variables (Babbie, 2020). Utilizing a quantitative approach, Idoko et al. (2019) found that mall layout and aesthetics enhanced shoppers' attitude to malls in Nigeria. However, there is limited knowledge about the importance of this factor compared to other physical factors, for place attachment to malls.

The literature also provides evidence concerning the role of certain physical factors on attachment to other place types. For example, studies show that internal improvement using floor tiles (Furtado & Renski, 2021) and internal layout, universal entrance design, and sunlight (Shiran, 2019) affect bonding to homes. However, an understanding of the extent to which these physical factors can affect bonding to malls remains a gap in the literature.

Another critical factor that the literature has shown makes people attached to places is activities. Activities are practices that occur due to the affordances that a particular setting offers (Cresswell, 2011). In their scoping review, Pettersen et al. (2023) found that leisure, hanging out, and socializing, which some shopping malls afforded, motivated the use of shopping centres. Also, Kusumowidagdo et al. (2015) found that adolescents used malls for hanging out, visiting the gymnasium, doing internet-based activities, and seeking ideas for design projects. These studies focused on the *motivation to use space* and the *use of space*. Nevertheless, there is a dearth of knowledge of the impact of activities on place attachment.

The closest study of the effect of activities on attachment to retail settings was conducted by Kim and Park (2018), who studied the effect of shopping frequency on bonding. They reported that shopping frequency, a measure of activity, affected place attachment with a mall and with street shops. However, an understanding of the activities which are important for place attachment to the mall remains unclear even though the mall affords a lot of shopping activities.

Interestingly, the literature shows the effect of activities on place attachment regarding other types of places. For example, Amole (2014) reported that decoration behaviour improved students' attachment to halls of residence in southwestern universities in Nigeria. However, activities such as decoration may not be possible in the mall because the mall is not a personal place. Consequently, a gap still exists with respect to the types of activities which encourage place attachment in the mall.

Another factor in literature that affects the bonds people have with places is the characteristics of the people. The mall is an enculturated typology in the city. Moreso, it is of a Western civilization. It is likely that people's self-identity and attributes will affect how they evaluate the physical characteristics of the mall and what they do there. The literature on attachment to homes suggests that age, marital status, education, income, and duration of stay determine place attachment. In Nigeria, Ayoola et al. (2019, p. 33) and Adewale et al. (2020, p. 8) found that the length of stay improved attachment, but Dlamini et al. (2021, p. 6) reported a negative effect in South Africa. Also, Lu et al. (2018, p. 147) found an inverse effect of income on attachment. However, the moderating effect of socioeconomic characteristics on the impact of physical characteristics and activities on attachment to the mall specifically has not been well studied.

Finally, although studies of mall attachment have been conducted in developed countries such as the Netherlands, America, and France, no known study of place attachment exists concerning malls in Nigeria, especially in West Africa's largest city, Ibadan. A study such as this is necessary because malls, like most other building typologies, are culture-specific. It is likely that the factors that enhance attachment to this mall may or may not be the same as those of other countries. As such, this study will aid the understanding of how culture-specific place attachment is as a concept.

Given these gaps, the objectives of this study are thus: to examine the dimensions of the physical attributes of the mall, to describe the activities at the mall, to examine the strength of place attachment to the mall, and to examine the simultaneous effects of the dimensions of the physical attributes, activities, and socioeconomic characteristics on place attachment to the mall. Figure 1 illustrates the conceptual framework for the study. First, it shows that physical attributes and activities can enhance place

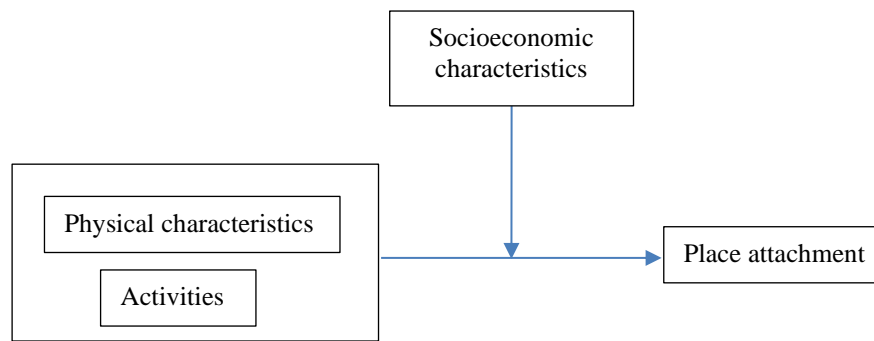


Figure 1. Conceptual framework of the study.

attachment to the mall. Second, the effect of physical attributes and activities on place attachment may be subject to the socioeconomic characteristics of users.

This study comprises five sections. The first section shows the state of the literature regarding attachment to the mall, other retail typologies, and other place types. The second section discusses the research methods utilized in pursuing the research objectives, and the third section presents the study's findings. The fourth section discusses the results, while the final section covers the conclusion.

2. Materials and Methods

2.1 Research design

The study is part of a more extensive study of culture and sense of place of shoppers in a mall in a city. A case study of a single mall was done because this study considers that malls are highly contextual and culture-specific. The study's result will apply to this mall and allow the understanding of the issues of design, layout, and behaviour concerning place attachment.

2.2 Sample size

Within this single mall, a sample of respondents was obtained. To do this, a preliminary survey was conducted to get the number of shoppers who visited the mall. Consequently, foot and car counts were performed. Since the mall's opening period was from 9 a.m. to 9 p.m. daily, counting took place two hours each in the morning (10 – 12 a.m.), afternoon (1 – 3 p.m.), and evening periods (5 – 7 p.m.). To facilitate the counting process, the corresponding author and five well-trained research assistants took turns for seven days. In the end, an average of 7,115 daily shoppers were counted. From this sampling frame, a sample size of 356 was estimated based on Cochran's formula set at a 95% confidence level (Cochran, 1977). However, the study utilized a sample size of 400 to account for unforeseen rejection and to reduce the achieved margin of error.

2.3 Measures

Quantitative data were obtained using structured questionnaires. The questionnaire was designed to elicit responses regarding physical characteristics, activities, place attachment, and socioeconomic characteristics. Socioeconomic characteristics such as age and sex, were designed as nominal or interval variables. Physical characteristics were operationalized as the physical quality of the mall. Fourteen (14) statements were used to measure the physical quality of the mall, and these statements were related to circulation, aesthetics, spaciousness, accessibility of mechanical conveyors, acoustics, smell, and temperature. General design criteria such as lighting, circulation, and aesthetics were adapted from Zandvliet (2014). Items that are more specific to the mall, such as the accessibility of lifts, stairs, and escalators, were added by the authors.

Activities were operationalized as the strength of activities and were measured with twenty statements regarding shoppers' activities at the mall. The variables were related to eating, social interaction, purchase, window shopping, watching movies, and playing games. Items related to social interaction, unplanned purchases, and physical exercise were adapted from Michon and Chebat (2004), while items



such as sitting at the food court and eating at the mall were designed by the authors of this study, based on the onsite observation of the activities afforded by the mall, during the presurvey of the mall.

Place attachment was conceptualized as a unidimensional construct. It was measured with four attachment statements. They were all adapted from Lalli (1992). See Appendix 1 for the scale items.

In the questionnaire, all the variables that measured physical quality, strength of activities, and attachment were designed as ordinal variables on a 5-point Likert scale of agreement; "1" represented strongly disagree, while "5" signified strongly agree.

2.4 Data collection

Data collection occurred on the last Saturday in April 2017. This day was selected because it had been identified from the preliminary survey as the day with the highest number of visits to the mall. Four trained research assistants participated in the distribution and collection of questionnaires. The field workers were positioned at the three access locations at the mall. A systematic random technique was used to select one of every twenty shoppers who entered the mall across those accesses to participate in the survey. Potential respondents were encouraged to complete the questionnaire at their convenience during their visit and return it to field workers on exiting the mall. The introductory section of the questionnaire elucidated the purpose of the research and clarified that it only took about 10 minutes to complete. As their identity regarding the name or house address was not required, shoppers' information was kept anonymous. The data collection exercise lasted the whole day.

2.5 Data analysis

Data cleaning was done after the data collection process to exclude improperly filled and missing data. In the end, 350 questionnaires were valid for analyzing the data. The Statistical Package for Social Sciences (SPSS) version 20 was utilized for statistical analysis. The variables and responses were coded and inputted directly to the software.

Means, modes, frequencies, and percentages were utilized to describe respondents' socioeconomic characteristics, physical characteristics, activities, and strength of attachment. Higher scores on physical quality, activities, and attachment were interpreted as higher physical quality, higher strength of activity, and higher strength of attachment, respectively.

To describe the strength of place attachment, an overall place attachment score was computed for each respondent by summing each respondent's scores on all the four variables that measured place attachment. After this, respondents were grouped in two groups: those with low attachment scores (representing the low attachment group) and those with high attachment scores (representing the strong attachment group). Principal component analysis and a varimax rotation were utilized to obtain the critical dimensions of physical quality and activities concerning place attachment in this mall. The varimax rotation ensured that independent factors were obtained. The set criterion was to retain factors with an eigenvalue of at least 1. Cronbach's alpha coefficient (α) was used to ensure that the overall scales and subscales consistently measured the same thing. This was achieved by suppressing correlation values that were less than 0.4. A Kaiser-Meyer-Olkin (KMO) value showed the significance of each factor.

Categorical regressions were used to test the predictive effects of the physical attributes, activities, and socioeconomic variables on place attachment. In the first model, the independent variables for the categorical regression model were the dimensions of the physical quality and strength of activities, while the dependent variable was place attachment. The second model tested the moderation effects of socioeconomic characteristics on the effects of physical attributes and activities on place attachment. A goodness of fit value, R^2 , was utilized to ascertain the significance of the models. Before the regression analysis, each variable was associated with place attachment. This association was done to elucidate an understanding of an independent relationship with place attachment. Also, cross-tabulation helped to ascertain the effect of each socioeconomic variable on place attachment, and chi-square tests showed the significance of each result. Spearman's correlation was used to test the relationship between the physical attributes, activity dimensions, and place attachment.

3. Results

3.1 Socioeconomic characteristics

The findings show that more males (57.7%) visited the mall. In addition, most respondents were between 20 and 35 years (68.6%), singles (70.3%), Yorubas (84.6%), well-educated (84.9%), employed (84.3%), earned between N18 000 and N40 000 monthly (\$20 - \$50) 28.9%, and have used the mall for more than two years (35.7%). See Table 1 for detailed statistics.

Table 1. Socioeconomic characteristics of shoppers (N = 350).

Variable	Value	Frequency	Percent
Sex	Male	202	57.7
	Female	148	42.3
Age*	<19	49	14.0
	>19 – 35	240	68.6
	> 35 – 55	53	15.1
	>55	8	2.3
Marital status*	Single	246	70.3
	married	104	29.7
Ethnic group*	Yoruba	296	84.6
	Non-yorubas	54	15.4
Education*	Low	53	15.1
	High	297	84.9
Employment status*	Unemployed	55	15.7
	Employed	295	84.3
Monthly income	< N 18 000	87	24.9
	18 000 – N 40 000	101	28.9
	40 000 – N 80 000	59	16.9
	80 000 – 150 000	41	11.7
	> 150 000	62	17.7
Length of time of use of mall*	First time	25	7.1
	< 1 year	102	29.1
	1 – 2 years	98	28.0
	> 2years	125	35.7

*Variable was recoded to improve interpretation.

3.2 Dimensions of physical quality and activities

3.2.1 Dimensions of physical quality

Three factors were obtained. Each factor had significant items (KMO = 0.84). A Cronbach's alpha ($\alpha = 0.9$) showed that items in the overall scale consistently measured the same thing. Also, the internal consistency results within the subscales showed that the scales adequately measured the mall's physical quality. Table 2 shows an overview of the items, factors, and Cronbach's alpha coefficient values. Five items had strong loadings on the first and second factors, while the third factor had four variables loaded on it. The first, second, and third factors accounted for 23.4%, 19.7%, and 19.4% of the total variance in the physical quality of the mall. All the factors explained 62.5% of the total variance in the physical quality.



Table 2. Dimensions of the physical quality of the mall.

Factor (% variance)	Variable	Mean	SD	Loading	Cronbach's alpha (α)
F1: Circulation, wayfinding, and aesthetics (23.4%)	I can easily move around in this mall	4.2	0.84	0.779	0.87
	The corridors are wide enough to accommodate my movement	4.2	0.85	0.756	
	I can easily find my way around this mall	4.1	0.81	0.754	
	The mall environment here is spacious for the activities I engage in	4.1	0.82	0.716	
	I find this mall to be beautiful and attractive	4.2	0.85	0.691	
F2: access to mechanical conveyors, mall decoration and quality materials (19.7%)	I easily access the escalator while moving around this mall	3.6	1.03	0.817	0.80
	I easily access the lift while moving around this mall	3.5	1.05	0.749	
	The physical arrangement of the settings in this mall provides a sense of culture through its decorations	3.7	0.97	0.646	
	I can easily access the staircase while moving around this mall	3.9	0.86	0.643	
	This mall is well constructed with quality materials	4.0	0.89	0.525	
F3: The ambience (19.4%)	The lighting in this mall is adequate for what I do here	4.2	0.81	0.755	0.79
	This mall smells good	4.1	0.79	0.751	
	The noise level in this mall is comfortable to perform my activities	3.7	1.05	0.715	
	The temperature in this mall is comfortable to perform my activities	4.2	0.82	0.670	

Total variance explained = 62.5%.

“Circulation, wayfinding and aesthetics” – CIRCUC, “access to mechanical conveyors, mall decoration and quality materials” – ACCESS, and “the ambience” – AMB, were used to describe the first, second, and third factors, respectively. CIRCUC explained the most variance, while ACCESS and AMB explained similar variances in the physical quality of the mall.

3.2.2 Dimensions of activities

The extracted factors obtained explained a total variance of 58.4% in the strength of activities. After rotation, the first factor accounted for 14.8%, while the second, third, fourth, and fifth factors accounted for 14.6%, 13%, 8.1%, and 7.9%, respectively. A KMO of 0.84 value showed that each factor contained significant items ($p < 0.05$). A Cronbach's alpha reliability value of 0.9 showed that the scale was adequate in measuring the internal consistency of the variables for activities. Only 18 items of the 20 were retained in the scale. The items *'I park my car at the mall'* and *'I pass time at the mall'* were removed because the first was the only item on a factor, while the other did not load on any factor. Five items each loaded on the first and second factors, three on the third, and two on the fourth and fifth factors. The first to fifth factors were described as “meeting others” – MEET, “leisure” – LEI, “parties and hanging out” – PAR, “purchasing activities” – PURCH, and “socializing and entertainment” - SOCI, respectively. MEET explained the most variance, while SOCI explained the least variance in the strength of activities at the mall. See Table 3 for the factors, their loadings, and the mean values of the variables in each factor.



Table 3. Dimensions of the activities of shoppers at the mall.

Factor (% variance)	Variable	Mean	SD	Loading	Cronbach's alpha
F1: Meeting others (14.8%)	I sit at the food court	3.0	1.18	0.789	0.77
	I eat at the mall	3.3	1.19	0.761	
	I come here for a business meeting	2.6	1.14	0.617	
	I walk in the mall for the purpose of exercise	2.7	1.17	0.565	
	I interact with other shoppers in the mall	3.2	1.12	0.581	
F2: Leisure (14.6%)	I read at the mall	2.5	1.14	0.736	0.75
	I go to bar	2.7	1.23	0.724	
	I play games at the mall	2.8	1.22	0.686	
	I take pictures at the photographers' stand	2.8	1.18	0.569	
	I participate in contests	2.6	1.14	0.514	
F3: Parties and hanging out (13%)	I follow the trend in fashion	3.2	1.10	0.797	0.70
	I go to celebrate occasions	3.1	1.13	0.699	
	I engage in unplanned purchasing	3.3	1.15	0.686	
	I go for window shopping	3.3	1.19	0.479	
F4: Purchase activities (8.1%)	I purchase household items	3.6	1.09	0.815	0.52
	I buy food items at the mall	3.7	1.05	0.709	
F5: Socializing and entertainment (7.9%)	I watch movies at the mall	3.5	1.17	0.835	0.51
	I meet with family and friends	3.6	1.01	0.549	

Total variance explained = 58.4%.

3.3 Strength of place attachment

Table 4 shows the mean and modal values of variables that measured place attachment. The feeling of relaxation at the mall was the most rated attachment variable, while a feeling of separation from the mall was the least rated variable.

Table 4. Mean scores of place attachment variables.

	Variable	Mean	Mode
Attachment	ATTACH 1	3.8	4
	ATTACH 2	3.4	3
	ATTACH 3	3.3	3
	ATTACH 4	3.0	3 ^a

The lowest and highest scores obtained for attachment were 4 and 20, respectively. Scores from 4 to 12 were described as low attachment, while those from 13 to 20 were described as strong attachment. The statistics show that most shoppers (61.4%) had a strong attachment to the mall. Figure 2 illustrates the statistics of the strength of attachment.

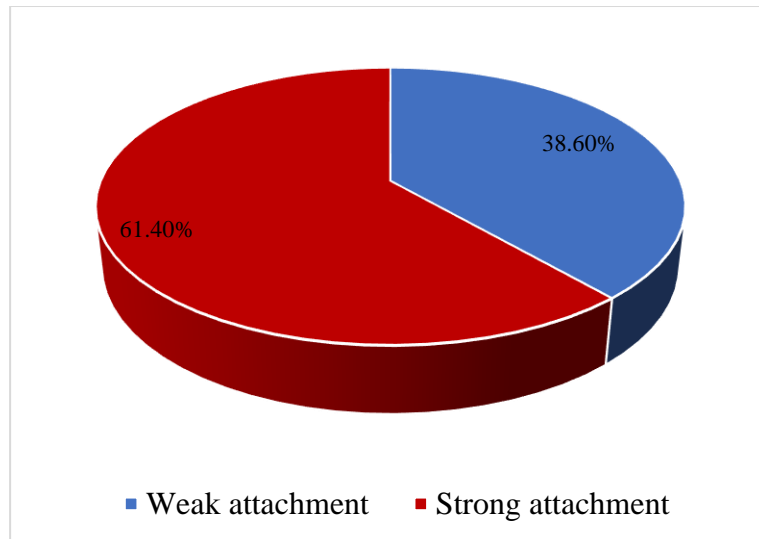


Figure 2. Strength of attachment.

3.4 Place attachment, physical characteristics, activities, and socioeconomic characteristics

3.4.1 Association of place attachment with criterion variables

Of all the socioeconomic variables, only ethnic group ($\chi^2 = 7.774$; $df = 1$; $p < 0.01$) was related to place attachment. Gender ($\chi^2 = 0.825$; $df = 1$; ns), age ($\chi^2 = 2.302$; $df = 3$; ns), marital status ($\chi^2 = 0.872$; $df = 1$; ns), level of education ($\chi^2 = 2.870$; $df = 1$; ns), employment status ($\chi^2 = 0.134$; $df = 1$; ns), monthly income ($\chi^2 = 3.340$; $df = 4$; ns), and length of time of use of mall ($\chi^2 = 7.050$; $df = 3$; ns), were not related to place attachment. However, Spearman correlations results showed that place attachment was positively associated with CIRCUC ($r = 0.2$), ACCESS ($r = 0.5$), AMB ($r = 0.3$), MEET ($r = 0.4$), LEI ($r = 0.4$), PAR ($r = 0.3$), PURCH ($r = 0.2$), and SOCI ($r = 0.2$), at $p < 0.001$. ACCESS had the most substantial relationship with place attachment, while CIRCUC, PURCH, and SOCI had the least effect on place attachment.

3.4.2 Regression results

The model that explained the predictive effects of the physical factors and activities was a good fit ($F = 5.06$, $p < 0.01$). It was significant with the predictor variables. The coefficient of determination (R^2), the model's measure of goodness of fit, showed that the independent variables explained 35.8% of the total variance in place attachment. In addition, all the predictor variables were strongly correlated with the predicted variable (multiple $R = 0.623$). Table 5 shows the variables and their standardized Beta values. The table shows that CIRCUC, PAR, and SOCI did not significantly predict attachment. On the other hand, ACCESS ($\beta = 0.334$) had the most substantial predictive effect on place attachment, followed by LEI ($\beta = 0.279$), PURCH ($\beta = 0.236$), and MEET ($\beta = 0.165$). These factors had linear predictive relationships with place attachment. As such, a unit increase in ACCESS, LEI, PURCH, and MEET would increase place attachment by .334, .279, .236, and .165, respectively.

In the second regression model, the control variables were included. The result was a good fit ($F = 5.813$, $p < 0.01$). All the predictor variables were strongly correlated with place attachment ($R = 0.702$). The coefficient of determination (R^2) value showed that the independent variables explained 40.8% of the variance in place attachment. The beta values of all the predictor variables obtained in the first model were slightly reduced except for AMB. In this regression, the variable with the most predictive effect on place attachment was ACCESS ($\beta = 0.272$), followed by monthly income ($\beta = -0.232$), PURCH ($\beta = 0.219$), LEI ($\beta = 0.205$), AMB ($\beta = 0.19$), level of education ($\beta = -0.172$), and MEET ($\beta = 0.158$). Only monthly income and level of education had inverse relationships with place attachment. As such, a unit increase in monthly income and education would result in a decrease of .23 and .17 in place attachment, respectively.



Table 5. Categorical models of place attachment.

Variable	Model 1		Model 2	
	Beta	F	Beta	F
Circulation, wayfinding and aesthetics	-.210	1.630	-.187	1.336
access to mechanical conveyors, mall decoration and quality materials	.334***	6.011	.272***	6.655
The ambience	.159	1.934	.190**	3.509
Meeting others	.165**	3.391	.158***	4.647
Leisure	.279***	9.117	.205***	6.137
Parties and hanging out	-.156	0.552	.032	.030
Purchasing activities	.236***	6.138	.219**	5.165
Socializing and entertainment	.110	0.466	.032	.043
Sex			.057	2.019
Age			.059	.401
Marital Status			.012	.080
Ethnic Group			.046	1.590
Education level			-.172*	4.673
Employment Status			.091	3.411
Monthly income			-.232***	7.774
Length of use of the mall			-.044	.354
	R = 0.668, R ² = 0.358, df = 48; F = 5.06, p < 0.001		R = 0.702, R ² = 0.408, df = 50; F = 5.813, p < 0.001	

*p < 0.05 **p < 0.01 ***p < 0.001

4. Discussion

4.1 Physical quality and activities at the mall

In this study, “circulation, wayfinding, and aesthetics” was the most important physical attribute of the mall. For some reason, this result supports Afacan’s (2012) finding that circulation was the most important physical quality of a mall in Turkey. This is because circulation was used in that study to describe the use of mechanical conveyors and the legibility of the mall. The reason why the accessibility of mechanical conveyors may not be the most important in this study may be due to their location. The layout of the mall in this study shows that the escalator, lift, and staircase are positioned towards the rear exit of the mall. They provide access to the food court, cinema, and bar, which are located in the mall's basement. As such, shoppers who may not engage in the activities in the basement may not have the opportunity to see or experience these mechanical conveyors.

Besides the physical qualities of the mall, this study found that the mall provided the opportunity for engaging in many activities including leisure. This result supports Erkip’s (2003) finding that leisure was an essential activity at the mall, and Vural Arslan et al.'s (2010) result that leisure and socializing activities were the reasons people used the mall. Based on this trend, the mall may be described as a multi-purpose typology and an important place for leisure activities.

4.2 Place attachment to the mall

4.2.1 Strength of place attachment

This study found that most shoppers had a strong place attachment to the mall. This result was expected because people tend to bond towards places which they adjudge to be comfortable, useful, and symbolic (Scannell & Gifford, 2017). Moreover, the literature shows that place attachment increases with a better assessment of place (Casakin et al., 2021; Dlamini et al., 2021, p. 6). Since respondents had good assessments of certain physical attributes of the mall and could also engage in many activities in one place, it was not surprising that they had a strong attachment to the mall.

4.2.2 Factors of place attachment to the mall

The factors of attachment to malls differ by context. Idoko et al.'s (2019) result indicated that aesthetics enhanced shoppers' attitudes to malls in Nigeria, and Kusumowidagdo et al.'s (2015) found that circulation, spatial layout, and ambience influence bonding with malls; however, this study found that access to elevator, escalator, and stairs, as well as the use of quality materials, are the most critical factors of attachment. This may have occurred because elevators and escalators are not common in many public buildings in the city of Ibadan. Since shoppers had free access to them at the mall, the presence of these conveyors may have contributed strongly to their memories of the mall and invariably to their attachment to the mall.

Furthermore, this study shows that the most important activity that makes people bond with the mall is "leisure activities". Trenberth and Dewe (2002) demonstrated that leisure is an important activity which enhances well-being and alleviates stress. Given this finding, leisure is an essential aspect of human lives. Since people were attached to the mall because of this activity, the mall may be described as an important place for rejuvenation. Although Kim and Park (2018) found that shopping frequency makes people attached to the mall, this study shows that leisure activities such as playing games and reading are more critical for attachment to the mall than shopping activities. Since Rosenbaum et al. (2016) recorded an increased attachment towards malls with green and natural features, complementing the provision of settings for leisure with natural elements can optimize this activity, consequently enhancing bonding with the mall.

The next important activity after "leisure activities," which makes people attached to the mall, is "purchasing activities." Such activities are related to the purchase of food and household items. According to Maslow, food is a fundamental need of humans (Zalenski & Raspa, 2006), so it was expected that people would bond with the mall since it was a place where they could actualize these basic needs.

This study also found that "meeting others" enhanced attachment to the mall. This result buttresses Idoko et al.'s (2019) finding that social connections affect the attitude of shoppers.

Furthermore, this study found that specific human characteristics impacted the effects of physical and behavioural factors on place attachment. In this study, "the ambience" became important when socioeconomic attributes influenced the model. Of all the socioeconomic variables, only monthly income and level of education predicted attachment, and both relationships with attachment were negative. A possible explanation for the negative effect of both variables on place attachment could be that those who earned more could afford such settings, while those who earned less may need help to afford the luxury and comfort of the mall. As such, those with lower incomes might have appreciated the mall's relaxed environment better than those who earned more. The result concerning the relationship between education and attachment is consistent with studies of other place types. Authors speculate that lower levels of education increased attachment in residential environments (Belanche et al., 2021; Rollero & De Piccoli, 2010).

Another change which occurred in the second model as a result of the effect of socioeconomic attributes is that all the critical factors of place attachment in the first model recorded slight reductions in their predictive strengths. This was an expected result because the emergence of the effect of new variables can suppress existing factors. Also, monthly income became the strongest predictor of place attachment



after "access to mechanical conveyors, mall decoration, and quality materials." This was an expected result because most services and products at the mall are at a price. As such, the ability to acquire these affordances would affect the bonding with the mall.

4.3 Recommendations for designers, mall managers, and policymakers

The findings of this study are useful for design professionals, managers, and policymakers. Designers should consider that the presence of stairs, lifts, and escalators is important for attachment. Therefore, future design considerations should ensure that they are easily sighted, functional, and accessible. In addition, leisure settings should be prioritized. Settings for playing games, reading, taking photographs, and work spaces should be considered in future designs. Even for the existing mall under study, certain rearrangements can be made to provide for these settings. Hence, mall managers, in collaboration with designers, should consider how the mall may be reorganised to cater to leisure activities.

Apart from leisure activities, socializing activities are critical for attachment to the mall. However, the provisions of such settings in the mall are connected to floor areas for different food vendors and the bar. Because there are certain restrictions to utilizing the sitting areas for those who do not patronize the food vendors or the bar, socializing activities may be inhibited, resulting in low attachment. This study suggests that settings for social interaction (e.g., eating, sitting, and holding business meetings), which are not attached to any food vendors but managed as dedicated settings for meeting others, should be provided for the existing mall and subsequent mall developments.

Finally, policymakers should consider that the mall is not just a useful place but also a place that appeals to users. Therefore, the development of more malls can provide opportunities for more people to enjoy its benefits, and sustaining the factors of attachment can increase the patronage and sustainability of the mall. In the context of urbanism, this is key to the social and economic revitalization of cities.

5. Conclusions

5.1 Summary

This study examined the most critical factors of attachment to the mall. First, it examined the dimensions in which the physical attributes and activities were evaluated. Second, it examined the effect of these factors and the role of socioeconomic characteristics on place attachment to the mall. Circulation, wayfinding, and aesthetics; access to mechanical conveyors, mall decoration, and quality materials; and the ambience, described the physical attributes of the mall. Meeting others; leisure; parties and hanging out; purchasing activities; and socializing and entertainment were the types of activities that respondents engaged with at the mall. The most critical factor of attachment was access to mechanical conveyors, mall decoration, and quality materials. This factor was followed by leisure activities; purchasing activities; and, meeting others. The ambience, income, and education became important factors upon the influence of socioeconomic attributes.

The findings of the study have the following implications. First, a good evaluation of the mall may not necessarily result in an attachment to the mall. As such, studies need to be cautious in making conclusions about the effect of valued attributes of the mall on attachment without verifying such connections to the mall. Second, other activities apart from shopping have been consistently overlooked in the studies of place attachment. Meanwhile, such activities may have a greater impact on attachment than shopping. Third, attachment to the mall is based on how useful and appealing a place is, and this is more important than the length of time people spend in it. Some places, such as the mall, evoke strong connections even at a first visit, while other places may require spending a lot more time for attachment to occur.

5.2 Limitations of the study

In this study, the factors of attachment accounted for less than 40% of the total variance in place attachment. This minimal effect may be, in part, a result of using a scale measure comprising a mix of items utilized in other studies and those the authors of this study added based on an observation of the mall. Future research may account for more design and behavioural factors by utilizing a mixed method that is based purely on the mall(s) under study. First, a qualitative approach should be utilized to document



the activities of people at the studied mall and also the valued physical aspects of the mall. These attributes may be subsequently used to design a questionnaire to assess the critical factors of place attachment.

Another limitation of this study is the clarity and distinctiveness of the factors of attachment, especially regarding the physical attributes—specific factors related to more than one theme. Therefore, rather than factorising through analytical methods, the author(s) can group similar items into factors. Then, a confirmatory test can be used to investigate the relatedness of the items in each factor. A third limitation relates to the construct of place attachment. The items in the scale were general place attachment items, so we could not check for social and physical attachment. A more robust finding can be obtained if the place attachment scale contains general, physical, and social items.

5.3 Strengths and Recommendations

This study is the first to examine the critical physical and behavioural factors of place attachment in an emerging retailing typology. Besides shopping, it considered the role of other activities in attachment. Consequently, it presented the factors of attachment in a hierarchy that serves as a scale of preference for maximizing future design and planning efforts. As such, its results are useful for designers, planners, and policymakers: designers should pay more attention to the provision of leisure spaces; planners should identify potential locations for the development of new malls; and policymakers should invest in the provision of new malls.

This study also has implications for future research endeavours. Future studies that seek the most important factors of attachment should be done in other malls to develop a theoretical understanding of the contextual nature of malls. Also, since the physical attributes set the stage for activities, some activities may likely impact attachment through design qualities. Therefore, future research may consider using path models to ascertain this.

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Appendix 1. Scale items of place attachment.

	Variable
Attachment	I feel relaxed when I’m in this mall (ATTACH 1) I feel happiest when I’m in this mall (ATTACH 2) This shopping mall is my favourite place to be (ATTACH 3) I really miss this shopping mall when I’m away for too long (ATTACH 4)



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