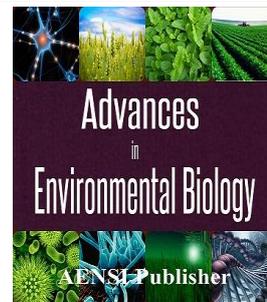




AENSI Journals

Advances in Environmental Biology

ISSN-1995-0756 EISSN-1998-1066

Journal home page: <http://www.aensiweb.com/AEB/>

Relationship between accessibility and safety criterias with the uses of the street: A case study of urban commercial street in Kuala Lumpur city centre

¹Norhafizah Abdul Rahman and ²Siti Rasidah Md Sakip

^{1,2}Faculty of Architecture, Planning, and Surveying, Universiti Teknologi MARA (Perak)

ARTICLE INFO

Article history:

Received 12 October 2014

Received in revised form 26 December 2014

Accepted 1 January 2015

Available online 17 February 2015

Key words:

street uses, urban commercial street, accessibility, safety

ABSTRACT

There has been a growing concern in Malaysia towards promoting streets that are friendly to all users. People are more ready to use the street if the streets are improved to meet their needs. Accessibility and safety are two of the main qualities that contribute to the friendly streets. This research explores the notion of friendly urban environment. The primary concern is to identify the relationship between accessibility and safety criterias with the uses of the street. This research was conducted in the context of an urban commercial street in Kuala Lumpur city centre. The study was quantitative in nature and involved asking users of the street to answer face to face survey. In this research the 289 respondents were participated. The construct safety on the street (SOS) employed 11 items and the construct of accessibility and proximity (ANP) involved 10 items. EFA is used in the early stages to gather information about the interrelationships among variables. The Cronbach's Alpha (α) value was used to determine the level of reliability through the internal consistency for each factor. The result for validity of construct from EFA demonstrated the SOS achieved Alpha (α) value exceeding 0.70 and ANP = 0.84. The finding indicate that, there is a significant correlation between the criterias of safety on the street and accessibility and proximity. There is also significant correlation between SOS criterias with the group of marital status, level education, age, ethnicity and type of users are significant. Meanwhile for SOS, the result only shows significant correlation with age background.

© 2015 AENSI Publisher All rights reserved.

To Cite This Article: Norhafizah Abdul Rahman and Siti Rasidah Md Sakip., Relationship between accessibility and safety criterias with the uses of the street: A case study of urban commercial street in Kuala Lumpur city centre. *Adv. Environ. Biol.*, 9(5), 47-49, 2015

INTRODUCTION

Malaysia is undergoing rapid growth in most of the towns and cities. It has contributed to the degradation of the environment qualities [1] that give a tremendous influence on the relationship between the urban users and the social spaces [2]. Street is a vital component in the urban form and the most public of all city spaces that are utilized by all city dwellers. The 'user-friendliness' of the street is an important factor in order to bring people onto the street. The qualities of the street (such as safety and accessibility) for pedestrian street users in many cases are unpleasant and unfriendly. Therefore, the understanding of the needs of current users in specific context is important [3]. By understanding the contextual needs in space (their perceptions on criterias that contribute to great street that make them used the street), a remedy leading to the improvement of the street can be made [4]. Kuala Lumpur City Plan 2020 states several main issues have been considered in respects of the needs of the people to create a world class city. These include promoting safe and accessible quality of the urban environment. Apart from the physical environment, socio-demographic background of the users in the street in respect of the need and use of the space [6]. Different cultural and social groups tend to have different perceptions, habits and traditions with regards to use the street place [7].

Methodology:

This study is quantitative in nature using a questionnaire. The survey involved asking respondents to answer a questionnaire which was administered using face to face interview. The sampling of the research is the users of the street in Kuala Lumpur city centre. There were 289 respondents were participated. The case study chosen in this research is Jalan Tuanku Abdul Rahman, which is one of the main urban commercial streets in

Corresponding Author: Siti Rasidah Md Sakip, Faculty of Architecture, Planning, and Surveying, Universiti Teknologi MARA (Perak)
E-mail: sitir704@perak.uitm.edu.my

Kuala Lumpur city centre. The questionnaire divided into three parts; (i) demographic background, (ii) the construct of safety on the street and, (iii) the construct of accessibility and proximity. The responses from different types of users from different socio-demographic background (such as age group, gender, marital status, distance from residence, occupation and ethnicity) help to identify the significant of the criterias of safety and accessibility that contribute to the uses of the street from different perspective of users. The validity of construct was used to each criteria under safety and accessibility was used to verify the items that valid to measure using exploratory factor analysis. Pearson product-moment correlation coefficient was used to identify the correlation of variables studied.

RESULTS AND DISCUSSION

(i) Validity of Construct:

The construct safety on the street (SOS) employed 11 items and the construct of accessibility and proximity (ANP) involved 10 items. Each items was rated using a Likert scale ranging from 1 to 4 ranging from “Strongly Unimportant” to “Strongly Important”. The high score will indicate that the conduct is good and vice versa if the score obtained is low. The reason for using a 4-point Likert scale without a neutral answer was to induce the respondent to take a stance. Furthermore, the technique of providing the scales “Strongly Unimportant” to “Strongly Important” will give the result intensity from respondents, thus impacting the distribution of the respondents’ score.

The validation on the construct is important to verify the items of each construct are valid to measure the dimension using the exploratory factor analysis. EFA is used in the early stages to gather information about the interrelationships among variables. The ratio of subjects to items recommends a 10 to 1 ratio in EFA [1]. In this research at least 50 samples required to answer for each variable. And this research the 289 respondents was participated. The Cronbach’s Alpha (α) value was used to determine the level of reliability through the internal consistency for each factor. An item-to-scale value of 0.3 and above was used as the minimum value for a unidimensional scale [2] while the scale was considered reliable if the alpha value was 0.6 and above [3].

Result from EFA demonstrated the SOS achieved Alpha (α) value exceeding 0.70 and ANP = 0.84. There are 5 items from SOS construct was eliminated because of a corrected item-to-total correlation value is below 0.3. The Cronbach’s Alpha value for all construct as shown in Table 1.

Table 1: Results of the reliability of safety on the street accessibility and proximity

Constructs	Items	Description of Items	Corrected Item-Total Correlation	Reliability
Safety on the Street (SOS)	1	Presence of people	-	0.7
	2	Presence of security official and patrol police	-	
	3	Presence of activities	-	
	4	Safe crossing device	0.47	
	5	Full of activities <u>dan</u> and night	-	
	6	Safe environment for elderly, disable and children	0.35	
	7	Low traffic flow and speed	-	
	8	Free of accidents	0.38	
	9	Low crime statistics	0.45	
	10	Free of the presence of anti-social <u>behaviors</u>	0.40	
	11	No graffiti and vandalism	0.43	
Accessibility and Proximity (ANP)	1	Easy access by public transport	0.48	0.8
	2	Easy to get to by foot	0.31	
	3	Sufficient parking	0.59	
	4	No physical barrier, wall, building, fence, curb	0.56	
	5	Well connected to paths of circulation or other places	0.57	
	6	Easy to connect with people	0.06	
	7	Meeting places for people from different culture	0.44	
	8	Visibility of different activities	0.50	
	9	Distance to areas from the parking area	0.60	
	10	Distance to areas from public transport	0.62	

The study was quantitative in nature and involved asking users of the street to answer a face-to-face survey. It contained several sections aimed at ascertaining the background information of the respondents, and their perception of safety and accessing on the street in the area. The respondents were randomly selected and 289 respondents participated in the survey. Of the respondents, 59.4% were male and 40.6% were female, indicating

that proportion of the participants appears to be reasonably balanced. The range of age is from 18 to 60 years, with a mean of 2.88 and standard deviation of 0.87.

(ii) *Correlation of Variables:*

The study aimed to test the correlation between safety on the street (SOS) and accessibility and proximity (ANP) by using the Pearson product-moment correlation coefficient. Preliminary analysis was performed to ensure no violation of the assumption or normality, linearity and homoscedasticity. There was a moderate, positive correlation between the two variables [$r=.353$, $n=281$, $p<.0005$]. These findings show that when the accessibility is good there is also the safety of the street also good. This output is shown in Table 2.

Table 2: Pearson product-moment correlation between safety on the street accessibility and proximity

		Correlations	
		Safety on the street	Accessibility and Proximity
Safety on the Street	Pearson Correlation	1	.353**
	Sig. (2-tailed)		.000
	N	288	281
Accessibility and Proximity	Pearson Correlation	.353**	1
	Sig. (2-tailed)	.000	
	N	281	282

** . Correlation is significant at the 0.01 level (2-tailed).

In this study, demography background of marital status, level education, age, ethnicity and type of users are significant with SOS but not significant with ANP unless age background.

Summary:

The result of this study shows significant correlation between the criterias of safety and accessibility with the uses of street in urban commercial street in Kuala Lumpur city centre. This finding supporting [11] , whereby they found a positive relation between built environment (accessibility, green and open space, number of street intersection) and walking activity. According to [11], at the user level, perception of safety for walking related to high levels of walking activity. These criterias have strong have significant relationship with the uses of the street in urban areas. However, different group of users have different perceptions on criterias that make them used the street. The findings fulfil the gap in knowledge by identifying the most significant needs and user's perception of a street based on the situation in Malaysia.

REFERENCES

- [1] Jusoh, H., R.A. Abdul, 2008. Efficiency in urban governance towards sustainability and competitiveness of city: A case study of Kuala Lumpur, Paper presented at World Academy of Science, Engineering and Technology (WASET), Paris 4-6.
- [2] Shamsuddin, S., N.Abdul Rahman, A.B. Sulaiman, 2010. How walkable is our city? Its influence in creating sustainable city centre design, In proceeding of the 1st International Conference on Sustainable Architecture and Urban Design (ICSAUD), Univesiti Sains Malaysia.
- [3] Knox, P.L., 2005. Creating ordinary places: Slow cities in a fast world, *Journal of Urban Design*, 10(1): 1-11.
- [4] Gehl, J., 2010. *Cities for People*, Island Press, London.
- [5] KLCH, 2003. Kuala Lumpur Structure Plan 2020. Kuala Lumpur: Kuala Lumpur City Hall.
- [6] Abdul Rahman, N., 2013. User-friendly street in Malaysia, Unpublished. Ph.D. Theses, University Of Nottingham
- [7] Lawson, B., 2001. *The Language of Space*, Architectural Press.
- [8] Nunnally, J.C., I.H. Bernstein, 1994. *Psychometric Theory*. New York: McGraw-Hill.
- [9] De Vaus, D.A., 1986. *Surveys in Social Research*, London, Academic Divison of Unwin Hyman Ltd.
- [10] De Vellis, R.F., 1991. *Scale Development: Theory and Application.*, Thousand Oaks, CA, Sage.
- [11] Fuzhong Li, K.John Fisher, 2004. Ross C.Brownson and Mark Bosworth, *Journal Epidemiology and Community Health*, 59(7): 558-564.