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BRIEF COMMUNICATION ON PARENTS' SATISFACTION LEVEL AND SAFETY PERCEPTION ON PUBLIC CLIMBING EQUIPMENT IN MALAYSIA: A PRELIMINARY STUDY

Cheah Kah Ling[1]
Raja Ahmad Azmeer[2]
Mohd Shahrizal Dolah[3]
Saiful Hasley[4]
Jusang Bolong[5]

[1]Department of Industrial Design, Faculty of Design and Architecture, Universiti Putra Malaysia, Jalan UPM, 43400 Serdang, Malaysia. +60104195184, shannling1@gmail.com.,
[2]Department of Industrial Design, Faculty of Design and Architecture, Universiti Putra Malaysia, Jalan UPM, 43400 Serdang, Malaysia, +60389464067, +60192292810, rajaazmeer@yahoo.com.,
[3]Department of Industrial Design, Faculty of Design and Architecture, Universiti Putra Malaysia, Jalan UPM, 43400 Serdang, Malaysia, +60389464077, +60132633610, idai_ramones@yahoo.com.,
[4]Department of Industrial Design, Faculty of Design and Architecture, Universiti Putra Malaysia, Jalan UPM, 43400 Serdang, Malaysia, +60389464063, +601132521063, saifulhasley@gmail.com,.
[5]Department of Communication, Faculty of Modern Languages and Communication, Universiti Putra Malaysia, Jalan UPM, 43400 Serdang, Malaysia, +60389468663, +60126566664, jusang@upm.edu.my.

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Abstract: *Children injury caused by unsafe climbing equipment is a public concern topical issue. This study aimed to measure the satisfaction level and safety perception of parents on public climbing equipment in Malaysia. An online survey was conducted with 50 Malaysian residents who aged between 18 years old to 45 years old. Collected data was analysed descriptively using SPSS version 21.0. The findings showed the satisfaction level of parents towards the existing public climbing equipment were relatively low (90%). It reflected the low confidence level of parents towards the safety level of public climbing equipment which may lead them to reduce the usage of the equipment. 92% of parents agreed that by improving the design in terms of height, materials and protective shade can help to improve the safety level of public climbing equipment which will reduce falls injury. The result revealed that the safety level of existing public climbing equipment was extremely low and thus, parents have low confidence on the safety level of existing public climbing equipment. In this regard, this study can be further extended by investigating the unsafe features and generate a new guideline or design framework of public climbing equipment which will provide crucial information for equipment designer, developer, safety inspector and local authorities to fulfil their roles and responsibilities.*

Keywords: *Children Injury; Public Playground; Climber; Recreation Equipment; Outdoor Equipment; Urban Recreation Safety*

Introduction

Malaysia is edging towards industrialization and thus, outdoor play, specifically in playground is vital for a child's physical and mental development (Ripat & Becker, 2012). The special equipment which installed at outdoor playground, for example like climbing equipment, can stimulate active and unrestrained play among children (Stephenson, 2002). Recently, children injuries increased due to unsafe public playground equipment. According to Epidemiology of Injuries in Malaysia, there are about 3000 injury cases occurred in every three months, whereas falls from equipment accounted for 75% of playground injuries (Norraliza, 2012). This indicated that the safety level of our playgrounds is low and more should be done to make our playgrounds safer (Noriah, 2014). Besides that, children injuries in public playground are higher than indoor playground. Keays and Skinner (2012) stated that out of 39,730 cases selected, 84% happened in public playground.

Recent study stated that most of the playground-related injuries were related to playground equipment (Mani, Mehdi Hosseini, & Abdullah, 2012). Climbing equipments are always accounted for the most injury among children (Cassell & Clapperton, 2014), but it is one of the most prevalent equipments among children (Bourke & Sargisson, 2014; Mani, Mehdi Hosseini, & Abdullah, 2012; McDonald, 2001; Sargisson & McLean, 2013). In Wales, an observational study had been conducted and the results showed that 90% of all children injuries were related to the installed play equipment (Mott, Evans, Rolfe, Potter, Kemp & Sibert, 1994). 36% of all injuries in playgrounds of children treated in emergency departments in the United States between 1996 and 2005 were caused by climbing equipment (Vollman, Witsaman, Comstock, & Smith, 2009). A study in Canada showed that from year 2007 to 2008, climber is in the top five items accounted for children injury, which often involved height, speed or both (Branson, Latter, Currie, Nettel-Aguiree, Embree, Hagel, & Edward, 2012). Cassell & Clapperton, (2014) state that there are three types of equipment that accounted for children injuries in Victoria which are climbing equipment, trampolines and slides whereas climbing equipment-related falls accounted for more than 80% of injury.

This showed that there was a high frequency of children injuries caused by unsafe public playground equipment and need to be concerned by public. There were least researches done on measuring satisfaction level of public playground user compared to parental concern and behavioural investigation. Although, some of the studies have showed interest on studying the effectiveness of safety regulation and maintenance, however, study on measuring satisfaction level and safety perception of Malaysian parents on public climbing equipment has never been done before. As Malaysia is edging towards industrialization, result of the study could certainly advance playground designer and developer on improving the safety level of public climbing equipment.

Methodology

Respondents

This study covered response from 12 states and two federal territories in Malaysia. The survey was subjected to all Malaysian parents and guardians aged between 18 to 45 years old.

Instrument

An online survey was employed using questionnaire to collect data from 50 respondents residing in Malaysia. The questionnaire was divided into two parts, part A and part B. Part A was about profile info, and part B was about satisfaction level and safety perception. From an earlier article, "Likert Scale" developed by Likert (1932) to investigate technique for the measurement of attitudes was used with five point scale to measure attitudes and response of

parents to a series of statement in terms of the extent of which they agree with. All questions in part B came with five categorical answer (I) = Strongly disagree, (II) = Disagree, (III) = Fairly Agree, (IV) = Agree and (IV) = Strongly Agree. All questions in part A and part B were compulsory questions.

Data Analysis

The collected data was analysed using SPSS version 21.0. Descriptive analysis was used to measure the satisfaction level of Malaysia parents towards the existing public climbing equipment, and level of acknowledgement of propose safety perception on improving safety level of particular equipment.

Result and Discussion

The study found that majority of the parents who aged between 18 to 25 years old (58%) residing in terrace house with low monthly income less than RM1, 499 have significantly low satisfaction level towards existing public climbing equipment. This study covered response from 12 states and two federal territories in Malaysia. Results showed parents nowadays prefer to have small number of children either one (68%) or two (20%) children.

This study also found that over half of parents (52%) like public climbing equipment and thus making it in top two preferences for their children, showing coincidental result with past studies where public climbing equipment known to be one of the popular equipment choice among children and parents (Bourke & Sargisson, 2014; Mani, Mehdi Hosseini, & Abdullah, 2012; McDonald, 2001; Sargisson & McLean, 2013; Vollman, Witsaman, Comstock, & Smith, 2009). However, parents (90%) showed unoptimistic response of satisfaction level in public climbing equipment and thus, for safety purpose, this may lead to their unwillingness to allow their children to use the existing public climbing equipment in Malaysia. Besides, 32% of the parents brought their children to public playground quite frequently, usually once a week spending about half an hour to one hour on their favourite play equipment. Hence, with respect to high frequency of visit, the higher chances of children to get hurt by unsafe public climbing equipment.

In relation to the satisfaction level, the findings showed that approximately half of the respondents complained that the ineffectiveness of Malaysian public playground safety regulation and maintenance on public climbing equipment. The study also showed majority of the parents were not satisfied with the existing standard on falls prevention in climbing equipment. This indicated the design guideline of current standard was not meeting their expectations. In terms of safety perception, majority of respondents (92%) agreed that by applying playground shade, reduce height, improve material and focus on reducing falls can improve the safety level of public climbing equipment. Overall, the satisfaction level of parents was significantly low. This proved that more safety improvement in public climbing equipment researches need to be conducted to regain parents' trust in the future. More importantly, every child deserves a safe play environment and secure recreation environment.

Table 1: Profile of respondents (N=50)

Age group		18 – 25	26 – 35	36 – 45
Variables	Description	No. (%)	No. (%)	No. (%)
Relationship	Parent	3(6)	12(24)	5(10)
	Guardian	26(52)	4(8)	-
Monthly personal	Less than RM1,499	19(38)	1(2)	-
Income	RM1,500 – RM3,999	9(18)	12(24)	1(2)
	RM4,000 – RM6,999	-	3(6)	4(8)
	RM7,000 and above	1(2)	-	-
State/City	Perlis	1(2)	-	-
	Kedah	3(6)	-	-
	Penang	2(4)	-	-
	Kelantan	2(4)	1(2)	-
	Terengganu	-	1(2)	-
	Perak	5(10)	1(2)	-
	Pahang	2(4)	-	-
	Selangor	4(8)	3(6)	-
	Kuala Lumpur	3(6)	5(10)	5(10)
	Putrajaya	-	1(2)	-
	Negeri Sembilan	1(2)	4(8)	-
	Malacca	2(4)	-	-
	Johor Bahru	3(6)	-	-
	Sarawak	1(2)	-	-
Housing Type	Apartment	3(6)	2(4)	3(6)
	Condominium	-	1(2)	1(2)
	Bungalow	10(20)	1(2)	-
	Terrace house	15(30)	10(20)	1(2)
	Semi-detached	1(2)	2(4)	-
Number of children	One children	22(44)	9(18)	3(6)
	Two children	1(2)	7(14)	2(4)
	Three children	5(10)	-	-
	None	1(2)	-	-

Table 2: Frequency of visit to public playground (N=50)

Frequency		I	II	III
Variables	Description	No. (%)	No. (%)	No. (%)
Time spend	Two to four times a week	1(2)	8(16)	5(10)
	Once a week	5(10)	16(32)	1(2)
	Once a month	4(8)	6(12)	3(6)
	Other	-	1(2)	-

Note: I = Less than 30 minutes II =Half an hour to one hour III = One hour to two hours

Table 3: Parents' favourite equipment (N=50)

Time spend		I	II	III
Variables	Description	No. (%)	No. (%)	No. (%)
Favourite play area	Area with equipment	10(20)	25(50)	6(12)
	Open space	-	6(12)	3(6)
Favourite equipment	Climber	4(8)	16(32)	9(18)
	See-saw	4(8)	20(40)	2(4)
	Swing	8(16)	20(40)	7(14)
	Spring rider	6(12)	13(26)	2(4)
	Outdoor gym	-	3(6)	-
	Slide	4(8)	15(30)	6(12)
	Other	-	-	1(2)

Note: I = Less than 30 minutes II =Half an hour to one hour III = One hour to two hours

Table 4: Level of satisfaction on climbing equipment (N=50)

Level of satisfaction	I	II	III	IV	V	Mean($\bar{X}$)	Std. Deviation(σ)
Low popularity	3	20	18	6	3	2.72	0.970
Effective safety regulation & maintenance	5	21	20	3	1	2.48	0.839
Caused less injury	6	25	14	5	0	2.36	0.827
Effective standard on falls prevention	6	27	15	2	0	2.26	0.723
	Overall mean value = 2.45						

Note: I = Strongly disagree II = Disagree III = Fairly agree IV = Agree V = Strongly agree

Table 5: Level of Satisfaction (N=50)

	Frequency (No.)	Percent (%)
Low satisfaction ($\bar{X}$ = 1-3)	45	90.0
High satisfaction ($\bar{X}$ = 3.01-5)	5	10.0
Total	50	100.0

Table 6: Safety perception on improving climbing equipment (N=50)

Safety Perception	I	II	III	IV	V	Mean($\bar{X}$)	Std. Deviation(σ)
Playground shade	2	2	13	25	8	3.70	0.931
Reduce height	3	1	4	27	15	4.00	1.010
Improve material	4	4	11	22	9	3.56	1.128
Reduce falls	1	1	6	26	16	4.10	0.839
	Overall mean value = 3.84						

Note: I = Strongly disagree II = Disagree III = Fairly agree IV = Agree V = Strongly agree

Conclusion

In conclusion, in a public playground, children prefer to play with climbing equipment. But, their parents may not allow them to play it due to low confidence level on the safety. The overall satisfaction level of parents on public climbing equipment was relatively low (90%). Majority of parents agreed that applying playground shade, reduce height, improve material and focus on reducing falls injuries can improve the safety level of public climbing equipment. This study showed significance implication to our society, nation and economy since the non-stop increasing injuries cases of children caused by unsafe playground equipment may lead to the decreasing time of children spend at outdoors. The result of this study appealed to all concerned parties in improving the safety level of existing public climbing equipment. In this regard, this study can be further extended on investigating the unsafe features of public climbing equipment and produce a new guideline in standard design. The guideline will serve better and help in providing vital and necessary information for climbing equipment developers to produce safer product for our children.

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