DESIGN OUT CRIME IN SCHOOL
Measuring Validity and Reliability Sense of Safety in Secondary School: A Pilot Survey

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ABSTRACT

The paper presents the reliability and validity of the 71 items in the questionnaire. A pilot survey was conducted at secondary school in Seri Iskandar, Perak to measure the validity and reliability of the instrument. A random sample of 53 students from Form 1 and Form 2 students.The results found the level reliability and validity using Cronbach Alpha (α) index for all components of Sense of Safety are 0.70 and above.

Keywords: *school, safety, fear*

INTRODUCTION

Crime cases in school have repetitively occurred throughout the year. Schools are the safest place for some children to be, with the more unlawful act and violent occurring away from the school rather than at school. School appears to be a welcoming place where children feel safe everywhere in the school environment (Beaudoin & Roberge, 2015). School as for early environmental experience is supposed to be a place for learning, socialisation and psychological development (Durán-Narucki, 2008). But how safe is today school for nowadays children? Crime cases in school have repetitively occurred throughout the year. In the year 2013, approximately three percent of students ages between 12 and 18 years old reported being victimised at school during the previous six months (Robers, Zhang & Morgan, 2015). Compare with the rate of violent victimisation occur, the rate occurs greater at school (37 per 1000) than away from school (15 per 1000) (Robers et al., 2015).

In the past, security and safety concerns are lower in the list of priority in building process and design. However, some places are more exposed to crime than others because of inappropriate physical design, layout (Newman, 1972) and overlooked of unused spaces. The environmental design could influence the bullying behaviour since most of the cases occurred at the hidden places without good surveillance. Many of unused space will give an opportunity to the student to bully another student. According to Poyner (1983), human movement and behaviour is critically affected by the design and layout of the physical environment. Architectural design and layout of buildings, street networks and so on can influence significantly how people interact, use, and move in their environment (Reynald, 2014).

A focus on school safety helps create a learning environment which has a positive impact on behaviour, attendance/drop-out rates, and ultimately, academic achievement. It involves planning for the prevention, intervention, and mitigation of, and recovery from the variety natural, physical, social and technological threats to the school and the entire school community. Thus, this studyintends to identify the validity and reliability of a certain instrumentbefore it is utilised in the actual fieldwork aspect of study.

LITERATURE REVIEW

Bullying in Malaysia has been a concern, especially for parents. The bullying phenomenon has reached a point where it can now be considered a social epidemic. The mass and social media depict rising crime rates among the students, consequently illustrating an uncivil, dangerous and unsafe environment. Misused of technology that had given had make it worst. Videos of bullying crimes were uploaded on to the Internet and, thus, making it viral among Malaysians. According to Ministry of Education Datuk Seri Mahdzir Khalid, in year 2012 as many as 4,159 cases of bullying recorded in the school followed by 4,120 cases in 2013, 2, 825 cases in 2014 and 2, 968 cases in 2015 (Sabapatty, 2016). Recently, in September 2016, a student in Vocational College had claimed been beaten by six students at the school last Saturday night after being accused stealing a mobile phone. Two seniors and four other peers had alternately hit him witnessed by several other students that did not have courage to help. The incident caused him trauma to return to school (Bernama, 2016). Meanwhile, a month before, in August, a Form Two student coma after was beaten up and had his head slammed against the wall in the 10 am incident, leading him to sustain a serious head injuries (Awani, 2016). Bullying makes the lives of its victims miserable. It undermines their confidence and destroys their sense of security. It can also affect children and young people's attendance and progress at school. And there's evidence that, for some people, being bullied regularly as a child can also be linked to emotional problems that considered a serious problem among the victims which included high levels of anxiety, depression, (Hawker & Boulton, 2000; Nakamoto & Schwartz, 2010; Reijntjes Kamphuis, Prinzie, & Telch, 2010; Ken Rigby, 2003) and suicidal thinking (Rigby, 2003; Sourander et al., 2011).

Environmental Design and School Crime

Achieving good design is about creating places, buildings, or spaces that work well for everyone, look good, last well, and will adapt to the needs of future generations. Main office for teachers, classrooms, assembly halls and libraries are the key elements which often come to mind when considering school design. Lacking in school design can give opportunity to offender. Unmonitored areas are hotspots for bad behaviour in schools, with classroom (R. S. Atlas & Pepler, 1998; Rapp-paglicci, Dulmus,

Sowers, & Theriot, 2004), corridors, stairwells, hallways (Astor, Meyer, & Behre, 1999; Stephenson & Smith, 1989; Vidourek, King, & Merianos, 2016), school toilets and remote parts of the playground (Fite et al., 2013; Dan Olweus, 1993; Stephenson & Smith, 1989), cited as key areas where violence, intimidation and vandalism occur. Poor design such as dim lighting, poor lines of sight and narrow corridors are cited by young people as being to blame for the sense of fear and risk associated with these out of the way places (Lee & Ha, 2015). Lack of monitoring has made these out of the way locations prime spots for vandalism and graffiti. The main office within a school can serve as the critical component in safe school design (Schneider & Tod, 1998).

Through daily interactions with the physical and social environment, individuals learn about their places in society, their value, appropriate and in appropriate behaviour (Durán-Narucki, 2008). As part of children development, they actively look for cues on how to behave, who they are, or what they can achieve in environments in which they spend time mostly (Durán-Narucki, 2008). Rivlin and Weinstein (1984) had claimed the physical characteristics of a setting can influence the behaviour of its users. Crime is believed to be related to the physical environment (Liebermann & Kruger, 2004) as it plays an important aspect in the developing behaviours (Durán-Narucki, 2008). The opportunity that exists in an environment encourages a criminal to act on a targeted victim (Liebermann & Kruger, 2004). In deciding whether or not to commit an act of crime, the environmental element is one of the factors considered by criminals (Anastasia & John, 2007).

Based on the four major areas of school safety (Rivlin & Weinstein, 1984; Schneider, Tod; Walker, Hill; Sprague, 2000), the most neglected source of vulnerability is the physical setting of the school building which focused on design, supervision and the use of space effectively. School planners relatively paid less consideration to the safety and security when the majority of the nation's school facilities were designed in the past due to the lower list of priorities. However, the safe design of a school must be given priority nowadays as children are constantly interacting with the physical environment of their schools during structured or unstructured time, consciously or unconsciously ("School and Classroom Environment," 2005). There are some discrepancies in the results of the studies, which

examined the influence of physical school environment, e.g. the size of the school, the size of the classroom (D. Olweus, 1984).

Therefore, through the analysis of physical characteristic of the school environment which increase the number of misconduct and crimes could be investigated (Astor et al., 1999). Wilcox et al. (2006) have studied entirely in the school environment and its relationship to school crime. Data were obtained using survey data from 3682 students, 1351 teachers, and observation of 65 Kentucky schools. The survey was analysed using multilevel and linear regression. The result indicated that few significant between the physical environment and misconduct in school. A longitudinal study for two years that applied under a grant from Robert Wood Johnson Foundation was conducted to examine the influence of the school's physical environment on adolescents' level of truancy and use of cigarettes, alcohol, and marijuana (Kumar, M. O' Malley, & D. Johnston, 2008). Data were obtained through survey and field interview. The result based on multilevel logistic and linear regression analysis by Kumar et al. (2008) indicated that school's physical environment contributes to problem behaviours among students. A positive school environment likely to encourages the involvement of the student in school by significantly decreasing the likelihood of truant behaviour. As the above discussion implies, not much of empirical work linking the environmental design and crime has been done at the school level.

Fear of Crime in School Environment

The built environment is believed to be one of the factors influencing crime and the level of fear of crime in society (FOC) (Sakip, Johari, & Salleh, 2012). According to Skogan and Maxfield (1981), in Melde and Esbensen (2009), the environment such lacks of maintenance as poorly kept buildings and unsupervised referred as "sign of crime" and people tend to fear with this environment which may develop a reputation for high levels of criminal behaviour. According to Ferrero, based on theory of criminal behaviour by Cohen and Felson (1979), in Melde and Esbensen (2009), the criminal will examine instant environment behalf of the victimisation when the three factors were present; (1) motivated offenders, (2) suitable targets and (3) the lack of capable guardian; to judge the potential for future victimisation.

Several factors in the physical environment are perceived to impact on fear of crime including visibility and signs of neglected (Lee & Ha, 2015; Lorenc et al., 2013). Dirt, decay, graffiti, litter and other sign of neglect of the environment are seen as drivers of fear (Lorenc et al., 2013; Wilcox et al., 2006). A good surveillance and lighting at night are able to improve the visibility of the area thus reducing the fear of crime (Kitchen & Schneider, 2007; Perkins, Meeks, & Taylor, 1992) as to create visual clarity to the surrounding area. Although most exterior spaces of elementary schools are high-visibility areas, the hottest spots were behind the buildings areas which were low in visibility (Lee & Ha, 2015). A place which is not visible because of isolated which are obstructed by landscaping and building design are believed to increase the risk of attack, and hence fear (Lorenc et al., 2013). Certain 'hot spots' that indicated to be un-owned spaces such as hallways, dining areas, and parking lot where are the sights of more crime event and greater fear among students (Astor et al., 1999). Astor et al. (1999) claimed the presence sense of ownership of these locations has the potential to drastically decrease the prevalence of victimisation in schools. A good maintenance strategy directly impacts the fear of crime due to awareness of responsibility and caring for the targeted crime. It allows for the continued use of a space for its intended purpose. The most common locations for student victimisation are on the playground (Fite et al., 2013; & Olweus, 1993; Stephenson & Smith, 1989), classroom (R. S. Atlas & Pepler, 1998; Rapp-paglicci et al., 2004), and hallways (Astor et al., 1999; Stephenson & Smith, 1989; Vidourek et al., 2016). R. Atlas (2013) in his book had indicated potential environment design problems for schools that are; poorly defined school borders, hidden informal gathering areas, hidden niches throughout the building, corridor features that create blind spots and classroom located away from supervision.

Safe-school Environment

As a general rule, safer schools tend to be ones that; are well led, have positive climates and atmospheres, inclusive of all students and academically effective (Schneider, Tod; Walker, Hill; Sprague, 2000). Student safety and well-being are enhanced when students feel connected to their school, have positive and respectful relationships with their peers and teachers, feel confident about their social and emotional skills and satisfied with their learning experiences at school (National Safe Schools Framework, 2010).

The term "school safety" refers to and includes the critical and necessary environment in which effective teaching and learning can take place. School safety supports student learning by creating and promoting a physically, emotionally, socially, and academically secure climate for students, staff, and visitors.

Schools encounter vulnerabilities to their safety and security in four major areas; (1) the design, supervision and use of school space, (2) the administrative operations and practices of the school, (3) the neighbourhoods and surrounding communities served by the school and (4) the behavioural characteristics and histories of the students who are enrolled in the school (Schneider, Tod; Walker, Hill; Sprague, 2000). Normally, in the search for school-safety, educators' and researcher attention is focused primarily on student backgrounds, characteristics, attitudes and behaviour patterns. However, the remaining three sources of vulnerability also countered for significant variation in the relative safety of schools. Threats to a school can be external (threats from outside influences and persons) or internal (threats from students' violence).

There is a greater challenge for an educator nowadays to create a positive learning environment for all students. Schools need to have suitable security measures to create a safe environment for staff, students and protect school property. Feeling safe is important for a student to have a positive learning environment in school. National Safe Schools Framework (Council & Scseec, 2010) stated that in a safe and supportive school, the risk from all types of harm is minimised, diversity is valued and all members of the school-community feel respected and included and can be confident that they will receive support in the face of any threats to their safety or well-being.

METHODOLOGY

The main objective of this research paper is to identify the measurement of sense of safety in school components. Towards achieving the objective, 54 respondents were randomly selected from secondary school in Seri Iskandar, Perak. The respondents involved in this pilot survey were students from the lower form. The survey was done for a period of two days, beginning at 7.20 am until 2.00 pm. A duration of 10-15 minutes

was required for each respondent to fill the respected questionnaire forms. The measurement design of the sense of safety in school components was based on the review of previous literature that is relevant to the sense of safety in school components.

This is explained as follows:

- The probability of a student been bullied: involving the frequency of a student been bullied for the past six months. The questions were based on three types of bullying which were; physical bullying, verbal bullying and relational bullying.

- Fear in school: sense of fear that sense by student due to the negative behaviour factors that encourage fear in student life. To measure sense of fear in school there are six dimension to be asking which are; sense of unsafe in school, avoiding place, avoiding behaviour, physical environment deterioration, social environment deterioration and indirect victimisation.

- Location of bullying and fear: location of bullying was happened and feel fear when in a certain area in school.

These senses of safety in school components were measured using a 5 point Likert Scale. The measurement of probability of a student been bullied and frequency of bullying been happened in certain location of school were measured using a 5 Likert Scale of 1 – almost never, 2 – seldom, 3 – sometimes, 4 – often and 5 – almost always. Meanwhile, the measurement of others components were using 5 Likert Scale of 1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree.

RESULTS AND DISCUSSION

This pilot study involved more female respondents (50.9%) when compared to male respondents (49.1%) with most of the respondents being in Form 1 with 28 students (52.8%) compared to Form 2 with 25 students (47.2%). All respondentwas Malay. Respondents' father occupation mostly in the government sector with 47.2 %, private sector 20.8%, self-employed 24.5% and retired 7.5%.

From the aspects of validity and reliability, the items for each probability student been bullied, sense of fear in school and location of bullying and fear dimensions were measured using Cronbach alpha () analysis. The scale was considered reliable if the minimum value was 0.6 and above, based on De Vellis and Dancer (1991). The results of the analysis demonstrated that all five items in the physical bullying, verbal bullying and relational bullying were valid to be used to measure the concerned construct of probability of a student been bullied as the value = 0.706 (physical bullying), 0.784 (verbal bullying) and 0.743 (relational bullying).

The measurement of fear in school involved six dimensions namely sense of unsafe in school, avoiding place, avoiding behaviour, physical environment deterioration, social environment deterioration and indirect victimisation. For the avoiding place dimension, from all eight items listed and used, two items were omitted as they recorded a corrected item-total correlation value of below 0.3, while the total alpha value of the eight items was =0.030. Those two items were; (i) school canteen and (ii) other places in school building. After these two items were eliminated and other items were restructured, an analysis was redone analysed after the second pilot survey resulting the total alpha value of the seven items was =0.857. This illustrates that the remaining seven items are valid in measuring avoiding places dimension. Meanwhile, the other dimension that used to measure the construct of fear in school were valid to be used with the total alpha value of sense of unsafe =0.882, avoiding behaviour =0.785, physical environment deterioration =0.924, social environment deterioration =0.838 and indirect victimisation =0.902.

For the measurement of location of bullying and fear in school, there are two main dimensions, namely; (i) frequency of bullying occur in certain places and (ii) sense of fear when alone in certain places. The results of the analysis demonstrate that all 11 items for each dimension were valid to be used as the value were =0.784 (frequency of bullying occur in certain) and =0.979 (sense of fear when alone in certain places).

CONCLUSION

A pilot study that had been conducted was intend to identify the validity and reliability of sense of safety in school. It is also an approach to identify the validity and reliability of a certain instrument (questionnaire) before it is utilised in the actual fieldwork aspect of study. A pilot study also functions as a means to identify potential problems that may crop up in the actual study as well as to evaluate the suitability of the study questions. In the case of this pilot study that was conducted, several problems were identified regarding the sentence structure. In terms of the problems with the sentence structure, it was discovered that in the "Sense of Unsafe in School" measurement section, items C2a to C10h contained sentence items that were lacking in representing the actual intention of the core inquiry. Therefore, these items will be rephrased by replacing the word "fear" with "worry" as well as the repetitious use of the word "influencing" for each of the items. This is in order to give a more clear emphasis on the actual meaning of each item. Item C2d is omitted from this measurement due to incompatibility factor and change with other item. Item C2f and C2g are combined in one question. In general, it was discovered that the use of a questionnaire form to identify the behavior and reaction of the respondents towards the physical environment components is effective and sensitive.

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