

## Crime Perception Differences Based on Demographic Characteristics

<sup>1</sup>Maryam Mani, <sup>2</sup>Aldrin Abdullah, <sup>2</sup>Rahmat Azam Mustafa and <sup>3</sup>T. Ramayah

<sup>1</sup>School of Housing, Building and Planning, University of Science Malaysia

<sup>2</sup>School of Housing, Building and Planning, University of Science Malaysia, 11800 Penang, Malaysia

<sup>3</sup>School of Management, University of Science Malaysia, 11800 Penang, Malaysia

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**Abstract:** Most of the people around the world live in big cities and urban areas due to urbanization. Whereas the population growth causes loss of green and natural spaces as an environmental problem, people's needs for places to refresh and to make better their physical and psychological health and well-being increases. Just as access to neighborhood parks and recreational facilities in housing areas has a strong relationship with people's perception of safety, so the main purpose of this study is to examine the differences in perception of crime and fear of crime in the neighborhood area across three demographic characteristics: gender, age and ethnic background. It also identifies the current level of safety in a neighborhood from the view point of respondents. The analysis showed the level of worry in females in terms of occurring crime situation in their neighborhood is higher than males but for perception about problem of crime there were no differences. In addition, there is a difference among age groups when we considered their level of worry about crime. In terms of crime perception there were same significant differences. The findings also revealed that there is no significant difference between respondents with different ethnic backgrounds and their level of worry about crime situations and their perception of crime. Implications of the findings are further explored.

**Key words:** Fear of crime · Perception of crime · Demographic characteristics and Neighborhood area

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### INTRODUCTION

Rapid population growth, even if well managed, creates a number of issues and environmental problems. It also affects on the quality of residential environments by changing the housing culture in such a manner that living in the single-family homes replaced by the high density apartments to solve the shortage of housing caused by population growth. The decrease in the quality-of-life which is related to the built environments leads to inactive lifestyles. City parks and open spaces, by changing sedentary lifestyle, can improve physical and psychological health and empower our communities. These green spaces can make our living place in the cities and neighborhoods more suitable and attractive and they have potential to solve modernity's lifestyle problems such as lack of activity due to machinery and mechanized life.

Urban residential environment has become as a principal residence for people around the world, so the quality of residential environment has become a significant issue for citizens as well as designers and

urban planners and researchers [1]. Due to maintaining minimum environmental standards on large scale and fast developing residential areas, in 1993, the National Construction Department in Beijing set a national standard of 30% greenery-coverage-ratio for new residential projects [2]. In Malaysia the population has grown steadily at an average annual rate of more than 2 percent since the 1960s [3]. Approximately 65 percent of the population lives in big towns and cities, compared to 51 percent in 1991 and 20 percent in 1957 [4].

As defined in the Town and Country Planning Act 1976 (Act 172) of Malaysia, open space means any enclosed or open land that is specified or reserved to be specified wholly or in part as a public park, botanical public park, public lands for recreation and sports, pedestrian walkway or as a public area [5]. Providing adequate public open spaces is one of the measures identified in the framework of the National Urbanization Policy (NUP9.ii) (provided by the Department of Town and Country Planning of Peninsular Malaysia (JPBD)) which is done through the adoption of the standard of two acres per 1000 urban populations. This standard also

used in Malaysian Urban Network Indicators (MURNI.net) to assess a sustainable city. Rusli and Ludin [5] also pointed to the fact that regulatory agencies recognize the importance of protecting green space in urban areas. Therefore, developers should provide 10 percent of open space and recreational area for all types of residential, commercial industrial, mixed-use, tourism and organizational development with a minimum need of 0.2 acres.

Neighborhood environmental design can provide opportunities for physical activity, especially for walking and recreation. Therefore the subject of safety is essential to investigate, especially where high percentages of real or perceived criminal activity may discourage residents from walking in a neighborhood area [6]. So safety factor as the most important built environment characteristic [7] has attracted attention mainly as a barrier to physical activity [8]. For example, obesity was more common among mothers with young children who believed their neighborhoods were unsafe [9]. Rate of adults walking in neighborhood environments depends on the accessibility and safety which are the characteristics of urban design. As adult walking rates in places with a higher percentage of safety-related design elements to understand crime -like more windows facing the street, more street lights, graffiti, fewer abandoned buildings and undesirable land uses- is greater than the areas where these features do not exist [7].

Crime is a problem in post-industrial urban society. It has an effect not only on the victims of crime but also on everyone indirectly. An indirect effect of crime that impacts on everyone is going through the neighborhood quality as increasing crime is reduced quality of neighborhood [10]. According to Skogan [11], increased fear of crime may make people withdraw from social life together physically and psychologically. This undermines informal social control processes that prevent crime and disorder and provides a reduction in organizational life and mobility capacity of a neighborhood. As a result, fear of crime and personal safety should be taken into consideration as personal or neighborhood quality of life issues [12]. Although crime and fear of victimization reveals themselves in different types of harmful ways, the pervasive impact is on quality of life for city's residents [13]. The fear of crime not only impacts on freedoms and activities of a person but also affects on specific social groups in specific places [14].

In relation to urban life and urban living, the perception of crime or fear of crime and its impact is frequently more important than the reality. This

understanding can be come from various sources such as crime reports in local press and popular media; can often be responsible for the continuation of the facts wrong or half wrong in the popular imagination. For instance according to The Star news [15] (cited by [16]), "rate of crime in Malaysia have been on the rise with cases of juvenile crime increasing steadily from 2002 to 2010. Up to august 2010, the police have recorded a total of 860 violent crimes by juvenile offenders. This issue that seems to be the most worrying would be the average amount of cases caught per day, which used to be 8 in 2002 has more than doubled to 17 in 2009 and reached 12 in the end of the 3<sup>rd</sup> quarter of 2010".

People's concerns about the impact of crime on quality of life and social inequality are also measurable and significant [17]. On the other hand, poor design can create opportunities for crime that could be influential in understanding residents about crime in their neighborhood environment that reduces the tendency to use the green space around their living environment. Planning strategy efforts to encourage people to use more specific areas with the aim of reducing fear and break the vicious cycle that currently exists [18].

Whereas access to neighborhood parks has a strong relationship with people's perception of crime and fear of crime, so researchers, planners and urban designers should have a growing awareness and experience about people's place evaluation base on different demographic characteristics and they should also consider the capacity of the built environment to decrease both the fear of crime and the potential for offending and to achieve a better quality of life. Therefore the present work will focus to find the differences in crime perception and fear of crime by the neighborhood's inhabitants in terms of three factors, being gender, age and ethnic background.

**Background Literature:** In each society, there are people with various social characteristics and, as Du Plessis [19] stated, living in a safe community is everyone's right. Maslow [20] described five basic needs of all humans (Figure 1). He emphasized that before higher level needs are even perceived, lower level needs must be satisfied. Safety needs include security, stability, dependency, protection and freedom from fear, anxiety and chaos.

As Lowrance [21] noted, fear is a complex feeling that originates from a combination of factors, specifically the biological programming for survival and learned responses, many of which are culturally acquired. Fear as a catalyst for crime is well known, but seldom dealt with. In general, people stay away from places where they don't

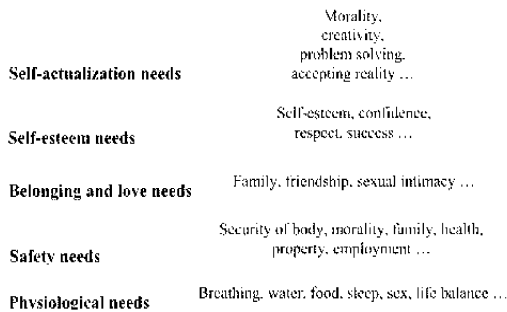


Fig. 1: Maslow's hierarchy of basic needs

feel safe. Fear of one place could be related with isolation and darkness, no escape path, tunnels, alleys, hidden niches and an empty park at night [22-25].

**Fear of Crime:** A crime is an offence against a public law. The fear of crime refers to the fear of being a victim of crime as opposed to the actual probability of being a victim of crime. Description of 'fear of crime' by Pain [14] is the reaction to crime and disorder by individuals and communities emotionally and practically. Fear of crime is a very prevalent issue today and according to Weatherburn *et al.* [26], it can seriously decrease the quality of a person's life. Furthermore 'Fear of crime' and worry about 'personal safety' had more negative effect on life satisfaction than real victimization [12]. "Crime captures the public imagination" [27], so in modern societies, anxiety and fear about crime and fear of victimization comes from many people. "The level of fear that a person holds depends on many factors, including gender, age, any past experiences with crime that a person may have, where one lives and one's ethnicity" [28]. People, who feel unable to protect themselves from crime or do not have enough physical ability to escape or confront the attacker, might be expected to fear crime more than others [29]. For instance, the elderly, ethnic minorities and low income people were the most fearful [30].

People respond to fear in different ways. According to Oc and Tiesdell [13, 18] many people react with caution in terms of fear of victimization by keeping them away from the risk or by reduction their exposure through risk management in places where away from risk and danger is not possible or not desirable. As many people, especially women, limited their activities in response to fears of victimization. Findings of the study by Riger and Gordon [30] supported the belief that fear of crime restricts women's freedom.

One of the problems that we face today is that people's fear of crime is very often much greater than the actual probability of crime. This is especially so in the case of older and more vulnerable people like children, although they are the group who are actually least likely to become a victim of crime. For instance the study by Stein [31] showed that despite a decreasing concern for crime, the public's fears remain unrelated to actual crime rates and potential for victimization, as perceptions of criminal activity and violence are not in tune with reality. This is particularly true with respect to youth crime, which continues to be perceived as a growing problem [31].

**Places of Crime:** "Place affects fear in the city at a number of scales: for example, in microscale environmental features; the avoidance of neighborhoods or city centers perceived as dangerous at certain times; and the influence of local constructions of identities such as masculinity, femininity and race" [17].

Parks are also often believed as unsafe places and this also applies to residential, regional and university or college campuses [32]. A victimization survey by Law Enforcement Assistance Administration (LEAA) [33] in twenty-six cities showed that more than half of all personal victimizations such as robbery, rape, theft and assault happened in public spaces like streets, parks, fields, playgrounds, school grounds, or parking lots. However, the proportion of these crimes that happened in parks was quite low. The fact that public spaces are relatively safe compared to homes and isolated places for women and the elderly respectively, has provoked efforts to reduce fear by changing the physical structure of urban centers and housing estates [17].

In relation to neighborhood environment the study by Weatherburn *et al.* [26] showed most people did not mention crime as a main concern in their neighborhood. In contrast, a study by Stein [31] revealed that while Canadians are concerned about crime in their country as a whole, they are more concerned specifically in their own neighborhoods. This study also showed that despite reducing the fear of walking alone at night in the neighborhood in recent years, about one third of Canadians still mentioned some fear about this situation. Moreover, Chilvers's [34] study revealed that people who live in a high or medium crime rate neighborhood have more probability to perceive a problem than those who live in a low crime rate neighborhood. Whereas personal characteristics such as gender, age and race are viewed as social identities we should take them into account to see which one is most affected by fear.

**Gender:** Gender is the strongest predictor of fear. According to the British Crime Survey [35], generally, men more than twice as likely as women (4.2% compared with 1.8%) experienced one or more violent crimes in the previous year. The differences between women and men in terms of fear levels have remained relatively constant [31] and it has shown that women have higher fear levels compared to men [30, 31] and women engaged in more precautionary behaviors than did men [30].

Just as Pain [36] indicated, women's fear of physical and sexual violence and its effects are widespread. Women's physical vulnerability to personal crime is higher than men and as a result they may exaggerate the risks that exist [26]. Females more frequently worry than males for the reasons that (a) they feel less physical ability to defend themselves, (b) they perceived lesser self-efficacy by themselves, (c) they perceived more negative effects and (d) they believe the probability of victimization to be higher for themselves and for their social group [37]. Others have mentioned that "The ideology of the family and the gender division of urban space create impact awareness that women are not safe in public space and need the protection of one man from all men within a family unit" ([38], as cited by [36]). Despite the fact that men never become as fearful as women, while men grow older the gender-fear gap becomes smaller [39]. Although in roughly all age groups men are more at risk of personal crimes compare to women, women perceived more risks in most age groups [26].

**Age:** Age, like sex is a powerful predictor of fear but, unlike gender, with age the fear differs from crime to crime [28]. BCS interviews for 2009/10 showed that adults aged 16 to 24 had the highest risk of being a victim of both personal crime and all BCS crime and risk reduced in higher age groups [35]. Similar to this statistics Pain [17] stated that older people regardless of being significantly less at risk were more fearful of crime than younger people as emerged in crime surveys. The study by Stein [31] also indicated people in the 65 and above and 18-29 age groups indicate the highest fear. People 65 years old and above have lower probability to perceive a crime problem compared to those younger than 25 years, but people between 25 and 65 years old are more likely to perceive the problem than the younger age group [34]. In this regard Jackson [37] also found that younger people more frequently worry than older people.

As the first British Crime Survey (BCS) cited by Pain [17] showed, elderly people (aged 60 years and above) and women worried about crime more than men and young people, this, while that they had lower-level chances of being victimization.

**Ethnic Background:** The results of the Parker's [40] study showed that race was a determining factor of fear. Generally Blacks were more fearful compare to Whites and this finding is related to racial differences in how exposure in terms of criminal conditions. Various factors affected the fear factor among Blacks and Whites through a significant way in such a manner that except for the age factor was both common, for Blacks sex and education and versus, for Whites, marital status, size of community and living arrangement had significant effects on fear of crime [40].

Perceptions of White women related to their vulnerability were partly built in relation to understanding about the threat of rape from men of color [17]. Another study by MacKinnon [41] showed that women of color may experience greater vulnerability to harassment and sexual violence. Many studies show that fear of crime is higher in people of color than white people and the significant impact of this fear was on use of space and quality of life ([42-46, cited by [17]). Similar conclusion, Mayhew *et al.* [47] stated based on studies in Western countries; risks of victimization for people of color were significantly higher than white people. Walker and Ahmad [48] also concluded Asian people had the most fear, followed by black people and then white people.

For improving the quality of life of residents in neighborhood area, it is important that we consider the factors such as safety perception and fear of crime by different social characteristics that restrict people from using neighborhood parks. Social crimes considered in this study involve stranger danger, kidnapping, vandalism and assault, which all affect the perception of safety. The objectives of this study are to identify the current level of safety in a neighborhood from the viewpoint of respondents and also to find the differences in crime perception among gender, age and ethnic background by the testing of hypotheses.

**Hypotheses Development:** Based on the discussion above the following hypotheses were developed.

**H<sub>1</sub>:** Level of worry of crime will vary by gender.

**H<sub>2</sub>:** Perception about the problem of crime in a neighborhood will vary by gender.

**H<sub>3</sub>:** The level of worry about crime will vary by the age of the respondent.

**H<sub>4</sub>:** The perception about the problem of crime in a neighborhood will vary by the age of the respondent.

H<sub>5</sub>: The level of worry about crime will vary by ethnicity.

H<sub>6</sub>: The perception about the problem of crime in a neighborhood will vary by ethnicity.

**Method**

**The Study Area:** This study focuses on a medium density residential environment (neighborhood) which is located in an urban area in Penang, Malaysia. The study area, Taman Sri Nibong has one of the biggest residential neighborhood parks in Pulau Pinang. As a housing area with diverse ethnic background, it is a good representative of the composition of the racial community in Penang.

The park is located at the southern part of the housing area and it is accessible from all directions. It is equipped with various recreational facilities such as jogging route, football field, multipurpose court, *Sepak Takraw* (a local Malaysian game) court, a playground and also gym equipment for exercise to make the park suitable for use by various levels of society. Three types of spaces for active, semi active and passive activities were developed so that this area can be used effectively by each level of the society.

The neighborhood on the north, east and south east sides of the park are predominantly upper middle class and ethnically mixed. On the south-west of this park there are two condominiums with lower-middle class.

**Population and Sampling:** The population of this study was drawn from park users and neighborhood residents. In this study a systematic sampling method was used based on the number of houses. A sample of 300 respondents was selected from a population of about 3750. They were asked to respond to a questionnaire that was designed in three parts. In the first part, the demographics of the respondents including gender, age, ethnic background and income and education level were measured. The second part includes questions related to respondent’s experience in crime and the level of worry about crime in the neighborhood. The most common type of crime in this neighborhood from the viewpoint of respondents and their perceptions related to the problem causes by different types of crime was also measured in the last part of the questionnaire.

The questionnaires were given to the participants to complete the survey within one week. In total, 173 questionnaires were collected from the total of 300 questionnaires delivered. The data was analyzed through the use of descriptive statistics, T-test and One-Way ANOVA using SPSS version 16.0.

**RESULTS AND DISCUSSION**

As shown in table 1, 51.2 percent of respondents were males and 48.8 percent were females. The age of the respondents varied between 21 and 60 years old.

Table 1: Profile of the respondents

Variable	Description	Frequency	Percentage (%)
Gender	Male	87	51.2
	Female	83	48.8
Age group	21-30	17	10.0
	31-40	58	34.1
	41-50	72	42.4
	51-60	23	13.5
Neighborhood resident	Yes	157	91.3
	No	15	8.7
Ethnic Background	Malay	51	29.6
	Chinese	102	59.3
	Indian and others	19	11.1
Level of Education	PMR (Lower Secondary Evaluation)	8	4.7
	SPM ('O' Level)	37	21.6
	STPM ('A' Level)	5	2.9
	Diploma	43	25.2
	Degree	65	38.0
	Master/PHD	13	7.6
Employed	Yes	145	83.8
	No (Including retired persons)	28	16.2
Family net income	Under RM 1500-\$ 479.00 (Lower class)	11	8.9
	RM 1500 – RM 6000 (Middle class)	77	62.1
	More than RM 6000= \$1916.00 ( Higher class)	36	29.0

Table 2: Respondents' Experiences in Crime

Experience	Description	Frequency	Percentage (%)
Victim of crime (Parent) N=172	Yes	21	12.2
	No	151	87.8
Place of crime N=15	This neighborhood	8	53.3
	Other places	7	46.7
Victim of crime N=171 (Children)	Yes	4	2.3
	No	167	97.7
Place of crime N=3	This neighborhood	2	66.7
	Other places	1	33.3
Observe acts of crime N=170	Yes	21	12.4
	No	125	73.5
	Not sure	24	14.1

After categorizing the responses and dividing them into four age groups, the frequency of these four groups is illustrated in table 1. 91.3 percent of the respondents live in this neighborhood park. Only 8.7 percent were users that came from other places. From the population who live in this neighborhood, the mean of duration they have lived there is 10 years. Related to the ethnic backgrounds, the majority, 59.3 percent of families, were Chinese, 29.6 percent were Malay and 11.1 percent were Indian and other. Here, we must note the fact that the region of Pulau Pinang with a population of about 726,600 people in 2009 [49] has dedicated more to the Chinese population that is higher in comparison with other cities in Malaysia where Malay ethnicity makes up the majority of them. This is consistent with the results obtained from the study area.

The research participants had moderate education levels with 38.0 percent with degrees, 25.2 percent had diplomas and 21.6 percent completed SPM or Malaysian Certificate of Education examination (its British equivalent to 'O' Level). Only 7.6 percent had a master's degree or Ph.D. 4.7 percent of respondents only completed PMR level (Lower Certificate of Education (LCE) or Lower Secondary Evaluation) and 2.9 percent only completed STPM or Malaysian Higher School Certificate examination (its British equivalent is the General Certificate of Education 'A' Levels examination or internationally, the Higher School Certificate). Most of the respondents (83.8 percent) are employed. Mean family net income in this neighborhood is approximately RM 6000.00 (1916.00 USD) monthly with a minimum of RM 500.00 (160.00 USD) and maximum of RM 80,000.00 (25551.00 USD). This study grouped the residents into three groups – higher, middle and lower class related to their income. The results show that most of the residents are in the middle class category.

**Respondent's Experience of Crime:** In relation to crime experiences of respondents and their children, this

research revealed that some of the research population (N=173) were victims of crime previously (12.2 percent of parents and 2.2 percent of children) and more than half of the crimes had occurred in this neighborhood park. Some parents (12.4 percent) observed acts of crime and had experienced crime before. These crime experiences influence respondents' perceptions because they may think the same thing will happen to them or to their children.

**Level of Worry about Crime in Respondents:** In this part the level of worry in respondents was measured. This measure involved asking the respondents how worried they were regarding being victims of several different types of crime, such as they or their children getting assaulted, children being robbed by other youth, children being attacked or beaten up, worry about children joining the gang activity. The questionnaires were based on a range from "very worried" to "not at all worried". The main reason for asking this question was to get a clear understanding of different types of crime that respondents were worried about. The frequency of respondents in terms of their level of worry in different situations is shown in table 3.

From table 3 and based on those who said they were "very worried," we can understand that respondents at the first level were "very worried" about "their children being robbed by other youth" (49.1 percent). This was followed orderly by worry about "children getting assaulted," "children being attacked or beaten up," and "children joining a gang activity."

**Comparison Between Genders of Respondents Related to Their Level of Worry about Crime:** As revealed in table 4, t-value is significant only for one item 'your child being robbed by other youth' when we consider the level of worry between genders about crime situation

Table 3: Level of worry about crime

Criminal activity	Description	Frequency	Percentage (%)
Yourself or your children getting assaulted.	Very worried	74	47.8
	Fairly worried	41	25.8
	Not very worried	30	18.9
	Not at all	12	7.5
Your child being robbed by other youths.	Very worried	79	49.1
	Fairly worried	35	21.7
	Not very worried	34	21.1
	Not at all	13	8.1
Your child being attacked or beaten up.	Very worried	73	45.9
	Fairly worried	35	22.0
	Not very worried	36	22.6
	Not at all	15	9.4
Your child joining a gang activity.	Very worried	70	44.0
	Fairly worried	20	12.6
	Not very worried	42	26.4
	Not at all	27	17.0

Table 4: The T-Tests results for gender and level of worry about crime

Crime situation	Male	Female	t- value
Yourself or your children getting assaulted.	1.96	1.76	1.312
Your child being robbed by other youth.	2.02	1.72	1.882*
Your child being attacked or beaten up.	2.06	1.84	1.330
Your child joining a gang activity.	2.19	2.17	0.063

Note: \*\*\* p<0.01; \*\* p<0.05; \* p< 0.1

Table 5: The One Way ANOVA Tests results for age and level of worry about crime

Crime situation	21-30	31-40	41-50	51-above	F-Value	p-Value
Yourself or your children getting assaulted.	1.56	1.71	1.86	2.35	2.976	0.033**
Your child being robbed by other youth.	1.62	1.71	1.93	2.26	2.073	0.106
Your child being attacked or beaten up.	1.75	1.86	1.93	2.35	1.512	0.214
Your child joining a gang activity.	2.00	2.06	2.12	2.61	1.409	0.242

Note: \*\*\* p<0.01; \*\* p<0.05; \* p< 0.1

happening in the neighborhood park. Consistent with the study of Jackson [37] the analysis shows the level of worry in females in terms of occurring crime situation is higher than males and base on this result female are more worried about the situation that their children being robbed by other youth. However, there is no significant difference between female and male relating to their level of worry and crime situation happening in the Taman Sri Nibong neighborhood for the rest items namely: themselves or their children getting assaulted, their child being attacked or beaten up or their child joining a gang activity. H<sub>1</sub> partially supported as one was significant.

**Comparison Between Different Age Groups Related to Their Level of Worry about Crime:** Based on table 5, the level of worry about crime situation happening in the neighborhood park, namely: their child being robbed by

other youth, their child being attacked or beaten up and their child joining a gang activity, is same for all age groups.

On the other hand, there is a difference among age groups when we considered their level of worry about themselves or their children getting assaulted because the P-value is significant and base on a post-hoc test, the age group between 21-30 and 31-40 have the highest level of worry in that crime situation compared to other age groups. This finding is also consistent with the study of Jackson [37] who found that younger people were more worried than older people. On the other hand this result is in contradiction with the first British Crime Survey (BCS) cited by Pain [17] that reported elderly people (aged 60 years and above) worried about crime more than young people. H<sub>3</sub> partially supported as one was significant.

Table 6: The One-Way ANOVA Tests results for ethnic background and level of worry about crime

Crime situation	Malay	Chinese	Indian and others	F-Value	p-value
Yourself or your children getting assaulted.	1.98	1.85	1.69	0.566	0.569
Your child being robbed by other youth.	1.91	1.92	1.62	0.599	0.550
Your child being attacked or beaten up	2.02	1.99	1.62	0.961	0.385
Your child joining a gang activity.	2.26	2.20	1.75	1.189	0.307

Note: \*\*\* p<0.01; \*\* p<0.05; \* p< 0.1

Table 7: Problem of criminal activity

Criminal activity	Description	Frequency	Percentage (%)
Vandalism	Very big Problem	20	14.7
	Fairly big problem	35	25.7
	Not very big problem	60	44.1
	Not a problem at all	21	15.4
Teenagers hanging around and causing trouble	Very big Problem	15	11.2
	Fairly big problem	26	19.4
	Not very big problem	65	48.5
	Not a problem at all	28	20.9
Kidnapping	Very big Problem	28	21.9
	Fairly big problem	11	8.6
	Not very big problem	48	37.5
	Not a problem at all	41	32.0
Gang activity	Very big Problem	26	19.8
	Fairly big problem	17	13.0
	Not very big problem	45	34.4
	Not a problem at all	43	32.8
Drug use	Very big Problem	28	22.2
	Fairly big problem	15	11.9
	Not very big problem	39	31.0
	Not a problem at all	44	34.9

**Comparison Between Respondents with Different Ethnic Background Related to Their Level of Worry about Crime:**

According to table 6, in terms of level of worry about crime situation happening in the neighborhood area, the p-values are insignificant and it means there are no significant differences between respondents with different ethnic background and their level of worry when they are themselves or their children getting assaulted, their child being robbed by other youth, their child being attacked or beaten up and their child joining a gang activity among Malay, Chinese, Indian and others. H<sub>0</sub> is not supported as all were not significant.

**Perception of Crime:** To find the answer to the question related to how much the problem respondents perceived about some kinds of crime in their neighborhood such as vandalism, teenagers hanging around and causing trouble, kidnapping, gang activity and drug use, respondents’ perception were measured in four categories

that consist of “very big problem,” “fairly big problem,” “not a very big problem,” and “not a problem at all” respectively as shown in table 7.

As Grogger and Weatherford [50] indicated that citizens in urban America have higher sensitivity to violent crime than to property crime by demonstrating their willingness to pay additional taxes for police protection, table 7 also shows most of the respondents (48.5 percent) thought that ‘teenagers hanging around and causing trouble’ followed by “vandalism” are not very big problems in this housing area.

Statistics of British Crime Survey [35] also showed the highest decrease in understanding people with vandalism or graffiti as a problem (from 27% in 2008/09 to 23% in 2009/10) followed by a decrease in understanding a problem with teenagers hanging around (30% in 2008/09 compared with 27% in 2009/10), people being drunk or rowdy (from 26% to 24%) and people using or dealing drugs (from 27% to 26%).



Table 8: The t-Tests results for gender and crime perception

Problem	Male	Female	t- value
Vandalism	2.65	2.54	0.696
Teenagers hanging around and causing trouble	2.89	2.69	1.249
Kidnapping	2.87	2.72	0.707
Gang activity	2.83	2.78	0.237
Drug use	2.89	2.65	1.188

Notes: \*\*\* p<0.01; \*\* p<0.05; \* p< 0.1

Table 9: The One Way ANOVA Tests results for age and crime perception

Problem	21-30	31-40	41-50	51-above	F-Value	p-Value
Vandalism	2.62	2.52	2.61	2.75	0.287	0.835
Teenagers hanging around and causing trouble	2.38	2.66	2.86	3.16	2.439	0.067*
Kidnapping	2.69	2.45	2.92	3.37	3.483	0.018**
Gang activity	2.69	2.52	2.89	3.37	2.906	0.037**
Drug use	2.54	2.62	2.88	3.17	1.300	0.278

Note: \*\*\* p<0.01; \*\* p<0.05; \* p< 0.1

Table 10: The One Way ANOVA Tests results for ethnic background and crime perception

Problem	Malay	Chinese	Indian and others	F-Value	p-value
Vandalism	2.68	2.52	2.86	1.027	0.361
Teenagers hanging around and causing trouble	2.83	2.78	2.79	0.037	0.963
Kidnapping	3.00	2.71	2.92	0.908	0.406
Gang activity	2.94	2.77	2.77	0.340	0.712
Drug use	2.91	2.73	2.91	0.352	0.352

Note: \*\*\* p<0.01; \*\* p<0.05; \* p< 0.1

**Comparison Between Genders of Respondents Related to Their Perception about Problem of Crime:** Based on table 8, whereas t-values is not significant for any types of crime situation namely vandalism, teenagers hanging around and causing trouble, kidnapping, gang activity and drug use, hence, we can conclude there is no difference between the perception of female and male about problem existence in Taman Sri Nibong neighborhood area.  $H_2$  is not supported as all were not significant.

**Comparison Between Different Age Groups Related to Their Perception about Problem of Crime:** As shown in table 9, there is same perception related to the problem of vandalism and drug use in the Taman Sri Nibong neighborhood area among different age groups. This is because the p-values are insignificant for both of them. But p-values for the rest items are significant, that means respondents' perceptions differ among age groups. Based on post-hoc test, the problem of teenager hanging around and causing trouble, respondents with the age group between 21-30 years have the highest perception of this kind of crime compare to other age groups. But for the problem of kidnapping and gang activity, respondent with

the age group between 21-30 and 31-40 have the highest perception compared to the rest of the age groups.  $H_4$  partially supported as three were significant.

**Comparison Between Respondents with Different Ethnic Background Related to Their Perception about Problem of Crime:** Table 10 indicates existence problems related to crime that respondents perceived in this area. The results reveal that all p-values are insignificant, so there are no significant differences between respondents' perception with different ethnic background about existence of vandalism, teenagers hanging around and causing trouble, kidnapping, gang activity or drug use among Malay, Chinese, Indian and others ethnic backgrounds.  $H_5$  is not supported as all were not significant.

## CONCLUSION

For the purpose of this study, data and findings were presented according to the level of worry about crime (fear of crime) in respondents and their perceptions about different kinds of crime situations to see the relevance between age, gender and ethnic background among the residents and neighborhood park users. This study also

measured the current level of safety in a neighborhood from view point of respondents. From the analysis and above results, this study found that among research sample, the number of males and females varied, but were approximately equal to provide a good sample to measure both males' and females' preferences. In terms of ethnic background, the majority of the respondents were Chinese, followed by Malay and the age of the respondents varied between 21 to 60 years old. The analysis showed the level of worry in females in terms of occurring crime situation in their neighborhood is higher than males and female are more worried about their children being robbed by other youth.

Focusing on gender differences on anxiety and fear of crime the vast majority of studies found that women were experiencing higher anxiety and fear than men. This study has also found similar pattern. In addition, the findings of this study revealed that there is no significant difference between respondents with different ethnic backgrounds and their level of worry about crime situations. On the other hand, there is a difference among age groups when we considered their level of worry about crime. This study concludes that the age group between 21-30 years of age has the highest level of worry compare to other age groups and the respondents with the age of 50 years and above have the least level of worry about crime situations. The result, show that younger people have a higher level of concern and fear of crime than those with higher ages and the elderly, consistent with many previous results of researches conducted on age.

Related to the existing problem of some kinds of crime such as vandalism, teenagers hanging around and causing trouble, kidnapping, gang activity and drug use, most of the respondents (48.5 percent) thought that "teenagers hanging around and causing trouble" followed by "vandalism" are not very big problems in this housing area. Moreover, there is no difference between the perception of female and male and also between respondents' perceptions with different ethnic background about the problem existence of these kinds of crime in their neighborhood area. Our study also reveals that there is some perception related to the problem of vandalism and drug use in the Sri Nibong neighborhood area. In addition, the problem of teenager hanging around and causing trouble, respondents with the age group between 21-30 years have the highest perception of this kind of crime and respondents with age group 31-40 years have the highest perception related to the problem of kidnapping and gang activity.

The current study is restricted in its scope because of the requirement to complete the study within a limited time and budget. Only one of the neighborhood areas was evaluated in Pulau Penang and a more comprehensive study must be conducted before generalization can be made. Future studies need to explore how safety of housing areas and green spaces can support the well-being of the urban neighborhood population. Therefore individuals with responsibility for housing development should consider measures that can be applied to reduce fear and make people feel more secure. Designers should explore environmental design elements that can increase safety in order to make green spaces in neighborhood areas more attractive and suitable. This is vital help to solve the problem of modern lifestyle by encouraging adults and children to conduct physical activities in these places.

#### **ACKNOWLEDGEMENT**

The authors wish to thank University of Science Malaysia (USM) and School of Housing, Building and Planning for funding which supported field and desk research under the Institute of Post Graduate Studies (IPS) Fellowship.

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