



Travel Pattern and Fear of Crime among Women Commuters

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Abstract

The design of the public transport as to meet working women's travelling needs is still lacking in Malaysian urban scenarios. Having that in mind, the increasing crime rate among these vulnerable group in urban area had further increase their level of fear while commuting to work. This is especially true for many working women who have no choice but to travel using public transport to their work place on a routine basis. To further investigate the factors of women travel pattern that affect the fear level among these vulnerable group of commuters, time and age were considered in this study.

Keywords: Travelling pattern; Age of travelers; Time of travelling; Women Commuters; Fear of Crime

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1.0 Introduction

Women unique travelling characteristics in a society have given them different transportation needs as compared to men. Several progress has been made to identify the factors affecting women travelling safety because women are considered as a group of people who will face the highest risk of victimization. Therefore they are known as the vulnerable group of people just like the disabled ones who fall under same category. As a result, Hanlon (1995) contended that their access to a safe and good public transport resources is critical especially to those living in an urban area. This is due to the fact that women who live in urban area and depend on public bus to commute to work into city centre were believed to have a routine journey on every weekday. Thus they are potentially exposed for being the victim of crime. Moreover, the discussion by Seiji, Kazunori, Tatsuto, Takahito And Kenji in 2011 had revealed that the fear of crime has been growing currently. They concluded that one of the reasons for this is the changes in social structure that could attribute to the population inflow into cities as well as families are becoming more nuclear. Only a few researcher look into the perspectives of women travel pattern and their level of fear indication while travelling. A study in 2010 by Hafazah and Siti Mareenah in Malaysian context summarized that criminals are getting bolder as they commit the crime in broad daylight and do not need any firearms to rob people. According to them, the rapid increase in population also increases the numbers of bad people in the cities which affects the wellbeing of the urban residents. However, their study only looked at the physical environment of the neighbourhood and ignored the travelling aspect of the people who live in the neighbourhood which creates a gap for this study to fill.

2.0 Literature Review

In 1990's a study by Taylor had indicated that the urban environment is like a magnet pulling all types of human activities including the negative and illegal activities. Thus this has created a lot of stress on the urban community in which towards the end it has developed into a type of fear known as fear of crime.

The relationship between perceived risk and women's travel pattern has not been extensively researched because safety has not generally been thought to be a strong influence on travel pattern (Anderson & Panzio, 1986). However, Lynch and Atkins (1988) further argued that there is one aspect of travel safety that does have considerable influence on travel patterns and that is personal security. The risk and fears of physical attack, harassment and other anti-social behaviour have become a significant influence on the habits of many urban dwellers (Lynch & Atkins, 1988). They also agreed that although apprehension about personal security affects many people, certain groups are particularly vulnerable and the obvious example is women.

Among the study conducted in Malaysia by Amar (2006) had projected that the total crime index in the year 2015 would have reached the 200,000 mark. Following is the projection of year 2015 crime index base on year 2004 crime occurrence.

Table 1. Projected Index Crime

YEAR	PROJECTED INDEX CRIME
2005	160,972
2010	183,015
2015	208,076

Source: Amar (2006) Journal of the Kuala Lumpur Royal Malaysia Police College

In this study, Amar (2006) also reported that 89% of the respondents were “worried to extremely worried” about the occurrence of crime. One of the possible reasons being discussed by him was the macro economics factors which included unemployment rate. He then further examined the demographic variables and urbanization pattern that affected the crime occurrence and reported that population age 15-25 appeared to be most influence in crime.

Time

Time is considered as one of the very important factors affecting the fear level of the women commuter especially when travel at night is concern. However not all researcher agreed that time act as a factor towards the fear of crime. In this study time refers to the time of travelling either day or night. A study on bus passengers survey conducted by Lynch and Atkins (1988) in Southampton stated that the apprehension or fear affected the travelling behaviour of women. In their study of safety at bus stop, 16% of those surveyed felt unsafe by day and 35 % at night. The authors concluded that women would avoid putting themselves into what they considered to be vulnerable situations, sometimes forgoing travel all together.

In year 2005, a study on time of crime occurrence in Malaysia conducted by Criminal Department Unit recorded the same conclusion. The study revealed that time of travelling had recorded different number of crime occurrence. A statistics from Criminal Department Unit (CDU) reported the following:-

Table 2. Time of crime occurrence in Malaysia for the year 2005

Year	0301-0700	0701-1100	1101-1500	1501-1900	1901-2300	2301-0300
2005	15	113	117	77	166	34
%	2.87	21.65	22.41	14.75	31.8	6.51

Source: Royal Malaysia Police Criminal Department, 2005

Based on Table 2, most crime happened from 7.00pm-11.00pm. This was a common time for returning from work journey. The second highest time where crime occurred was at around 11 am –3.00pm where most of them went out for lunch. Another critical time where crime occurred on the streets was also during trips of going to work, which took place at 7.01am-11am. However, the statistics provided by the CDU might have been more

interesting if it considered the feeling of safety by woman commuters especially when travelling at different times of the day. Due to the lack of recent statistic of crime in Malaysia, this study attempts to fill up the gap of finding the real occurrence time for most travellers especially women in urban area who have no other choice but to travel using public transport from their residential areas to the city centre for working purposes.

Age

A recent finding from Seiji, Kazunori, Tatsuto, Takahito and Kenji (2011) who had conducted their study in Japan found that elderly people have more positive attitude towards local crime prevention activities compared to younger people. They also further indicated that people who reported a less consistent fear of crime tend to have a more aloof attitude toward community crime prevention activities.

Table 3. Proportion of women feeling safe travelling by bus during the day and night by age group

Age group	During the day	At night
16-19	83%	48%
20-54	91%	41%
55-60	86%	36%
Over 60 years	83%	21%
All women	88%	37%

Source: Women on the Move survey, 1982

Women aged 20- 54 years were among the group of people who felt safer travelling by bus during the day with 91%. However, when travelling period changed, the total percentage of feeling safe dropped by 50 % which indicated that they felt less safe when travelling by bus at night. Women aged 60 and more felt that travelling at night created less safe period of travelling for them. Only teenagers age 16-19 felt that travelling for them at night was fairly safe with the total of 48 %. Overall, all age of women agreed that they felt much safer travelling by bus during the daytime as compared to night trip.

In Malaysian environment, the statistics of crime victimization cases by age group were reported as in Table 4.

Table 4. Crime victimization for women by age groups in Malaysia

Age group	2001	2002	2003	2004	Total
Below 25	674	603	507	250	2,034
26-35	1,117	964	961	441	3,463
36-45	897	801	716	359	2,773
46 and above	419	397	371	157	1,344
Total	3,107	2,755	2,555	1,207	

Source: Royal Malaysian Police Department Report, 2004

From the statistics produced by the Royal Malaysian Police Department, the age group of 26 to 35 years old was more exposed to crime victimization rate as compared to other

groups. This was indicated by the highest number of crime occurrence to the group that was 3,463. Then, it is followed by the second age group, 36-45 years old and the first age group, below 25. The least amount of crime victimization rate occurred to the group of 46 years old and above.

Travel safety

Having agreed that safety is one of the transport quality elements that should be considered, the definition of safety should also be looked into because it varies according to authors, situation and concept. Safety as being defined by Thygerson (1990) is a relative thing and is extremely difficult to define using definite words of phrase because it varies from day to day which implies that a person is at different levels of safety everyday of his or her life. Whereas for Watkins, Sorrenson and Garrick (2002) , they have agreed with the need of safety in a way that it is vitally important to the continual success of the bus way operation.

3.0 Data Analysis

This section reports the results gathered from the questionnaires which were personally administered for the respondents in this study (working women who used bus services to commute to work). Approximately 300 respondents were included in this research with focus on three major urban areas in Penang Island namely Pulau Tikus, Jelutong and Ayer Itam. Table 5 compares the mean score obtained for level of safety indication travelling during the daytime and after dark for different types of bus service. It is apparent from the table that the mean score for travelling during day and after dark had differences especially in terms of fear level indication among women traveller. It could be clearly pointed out that the fear level for a stage bus services commuter was not so high during the daytime as compared to night time travelling. In general, the result indicates that the overall level of fear among current women bus riders is still high especially when travelling after dark. This finding has important implications for developing a safer travelling period of time by allocating some of the measures such as allocation of additional staff as far as evening bus service is concerned.

Table 5. Mean Score for Level of Fear Indication When Travelling at Different Time of the Day

Women travel time	Level of fear
Time of travelling :	
· Day time	3.291
· After dark	9.048

10-Very fear; *0-Not Fear

The average scores of fear level indication among different age group and travelling time were compared through a cross tabulation analysis in order to look at the variation of the fear level indication among the age group.

The following Table 6 indicates the summary of significant difference between level of fear and time of travelling. The comparison provides some detailed information as to find an

answer to the question of whether time of travelling affects level of fear for different location.

Table 6. Summary of one-way ANOVA result on Level of Fear Indication Travelling at Different Time of the Day According to Location

Attributes	F	Sig.
Travel Time:		
Day Time	28.356	.000*
After Dark	17.986	.000*

*significance at $p < 0.01$

With regards to the statistical evidence, there was a significant difference between 'level of fear' indication and women travelling time. To assess the level of fear indication travelling at different time of the day, both the 'daytime' and 'after dark' travelling were considered. A one-way ANOVA was used to compare on the level of safety indication using a scale from 0-10.

To further tap on the issue of level of fear towards crime from different location of the research, the following analysis was carried out. From the result in Table 7 it can be seen that there was no significant difference between the level of fear indication while travelling during the 'day time' for women living in area like Jelutong and Ayer Itam. However, there was significant difference from those living in Pulau Tikus who reported a higher level of fear. Interestingly, when the subjects were asked to rate their fear level when travelling after dark (at night), the level of fear for all locations was very high with respondents from Pulau Tikus reported highest feeling of fear. As for level of fear indication while travelling 'after dark' women living in Jelutong and Ayer Itam, reported no significant difference. Significant difference only existed on the level of fear indication by women living in Pulau Tikus.

Out of the three areas of research, women living in Pulau Tikus had always reported the highest feeling of fear be it travelling by 'day time' or 'after dark'.

Table 7. Comparing Level of Fear Indication Travelling at Different Time of the Day According to Location

Feeling of fear	Location		
Day Time	Jelutong	Ayer Itam	Pulau Tikus
	● 2.4	● 2.8	4.3
After Dark	Jelutong	Ayer Itam	Pulau Tikus
	● 8.4	● 8.7	9.6

Means that are connected by a line (● — ●) shows no differences
 0* -not fearful at all; 10*-most fearful

A comparison of the results also reveals that different age groups indicate different level of fear towards travelling either during the daytime or at night. However, the most feeling of

'fear' was reported by women in the age of 40's and 50's.

Table 8. Comparing Level of Fear Indication Travelling at Different Time of the Day According to Age

Feeling of fear	Age of respondent			
	In the 20's	In the 30's	In the 40's	In the 50's
Day Time	2.3	3.1	3.3	4.2
After Dark	7.7	8.8	9.8	9.9

Means that are connected by a line (●—●) shows no differences
 0* -not fearful at all; 10*-most fearful

As shown in Table 10, the overall responses to this question varied accordingly to the age group in which the elderly group indicated higher level of fear as compared to young travellers. Women in the 20's rated the least amount of fear level when travelling by daytime. As the age group increased, the fear indication level increased (very fear) as well. However, all age groups reported a higher feeling of fear when they were asked to rate on their level of fear travelling after dark with an average of 7.6 and above for all age. The situation was even worst for women in the 50's (9.9) who indicated the highest amount of fear while travelling after dark took place. This was followed by women in the 40's (9.80), 30's (8.8), and women in the 20's (7.6). One of the issues that emerged from these findings is that the provision of the transport supply especially the bus service should take into consideration on the attributes that make women feel confident with the system by including them into the planning process.

Table 10. Mean Score for Level of Fear Indication Travelling at Different Time of the Day Accordingly to Age of Respondent

Age group	In the 20's	In the 30's	In the 40's	In the 50's
Day time	2.3	3.3	4.2	3.1
After dark (At night)	7.6	8.8	9.8	9.9

*0-Not fear; 10-Very fear

4.0 Conclusion

The main contribution of this research is the analysis of the relationship of women personal travel pattern towards the travelling safety issues in an urban area. The result shows that most women who live in urban area who have no choice but to travel using public transport rate a higher feeling of unsafe when travelling not only during the night time but also during the day time. This research also found that age of women traveller also affect the level of safety indication where older women tend to rate a higher level of unsafe while travelling using public transport. Even though the number of crime occurrence in Malaysia has shown a declining trend, the feeling of unsafe among women traveller is still very high. Hence, all

future transport planning should consider the feeling of safe and the factor affecting the feeling of safe while travelling among this vulnerable group to reduce the feeling of fear towards crime. Future research should consider the movement of rural women commuters on the same issues.

5.0 Recommendation

A special attention is urgently needed especially in terms of the infrastructure and services during off peak hours to aid the travelling from home to work place especially among women commuters in an urban areas. Factors of age and time should be consider in the element of planning to reduce the level of fear while travelling among these group of people who are known as the vulnerable. This is especially critical in the area where the record of crime is high as most women had indicated a different level of fear in a different location being studied.

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