Household Food Insecurity among Urban Welfare Recipient Households in Hulu Langat, Selangor

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ABSTRACT

Food insecurity is defined as a condition whenever people are not able to access enough food at all time for an active and healthy life, as well as the availability of adequate and safe food acquired by socially acceptable ways. This study utilized the Malaysian Coping Strategy Instrument (MCSI) to determine the percentage and the risk factors of food insecurity among the urban welfare recipient households in Hulu Langat, Selangor. A total of one hundred and three women (aged 20-55 years old) from selected welfare recipient households were involved in this study. Questionnaires were used to collect demographic and socio-economic information, as well as food security status of the participating households. The results indicated that 26.3% of the households faced food security, while 39.8% experienced moderate food insecurity, and 34.0% were subjected to severe food insecurity. The risk factors of food insecurity included the presence of children below 7 years old (F=3.690; p≤0.05), school-going children (F=2.599; p≤ 0.5), disabled members in the households (F=3.690; p<0.028), income reliance on financial assistance and per capita income (F=4.349; p≤0.05). In conclusion, food insecurity is a major public health problem among the urban welfare recipient households. Meanwhile, diverse risk factors were identified to have contributed to food insecurity in this study. Therefore, welfare recipient households with these circumstances ought to give priority to intervention programmes that address food insecurity by policy makers and programme implementers. In addition, the intervention programmes should be designed to address this issue and other risk factors influencing food acquisition.

INTRODUCTION

Food security exists when people at all time have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996). On the other hand, food insecurity occurs whenever people are not able to access enough food at all time for an active and healthy life, as well as the availability of adequate and safe food acquired by socially acceptable ways (Life Sciences Research Office, 1990).

Food insecurity has been recognized as a major public health problem in developing countries. Several studies in the developing countries have reported that the prevalence of food insecurity was 55.8% among poor urban households in Thailand (Piaseu & Mitchell, 2004), 94.2% in East Java, Indonesia (Studdert *et al*., 2001), as well as 58.0% and 44.4% among households in India, with and without children, respectively (Nnakwe & Yegamia, 2002). Conversely in Malaysia, a few studies reported that the percentages of food insecurity among the samples of low-income urban and rural households were 67.0% and 58.0%, respectively (Zalilah & Khor, 2004; Zalilah & Ang, 2001).

Meanwhile, risk factors of food insecurity include any ones that limit household resources, such as money, time, information, health or even the proportion of those resources available for food acquisition (Campbell, 1991). In addition, household food insecurity has been associated with demographic and socio-economic status, such as poverty, household size, number of school children, low income household and low income per capita (Tanumihirdjo *et al.*, 2007). Food insecurity affects dietary intake, nutritional status and physical well-being of individuals (Kirkpatrik & Tarasuk, 2008; Wolfe & Frongillo, 2001). In addition, it also has been associated with inadequate dietary intake, poor nutritional status and quality of life that are indicated as the consequences of food insecurity (Kirkpatrick & Tarasuk, 2008; Olson & Strawderman, 2008). Thus, the purpose of this study was to investigate the percentage and risk factors of food insecurity among the urban welfare recipient households in Hulu Langat, Selangor.

LITERATURE REVIEW

The main factors affecting food insecurity in developing countries include poverty, natural hazards (i.e. drought, floods), political crisis (i.e. failure of governance), war upheaval, macro-economic crisis (i.e. fluctuation in food production and price changes), health and sanitation, HIV/AIDS, gender issues (i.e. families headed by females with children, lack of income controlled by women, single mothers with children), and education inequality (Clover, 2003; Khadka, 1990). On the other hand, in developed countries such as the United States, the major risk factors of food insecurity are poverty and unemployment (Quinonez *et al*., 2003). According to

Smith *et al.* (2000), all these risk factors can be grouped into two clusters which represent either an inadequate national level of food availability or an inadequate sub-national level of food accessibility, such as households and individuals.

Poverty is one of the major factors that contributes to food insecurity and hunger. It occurs when there is a lack of basic needs, such as food, social and cultural life, primary education, health, clothing, housing, water and air. Poverty can almost inevitably lead to little power and choice or serious deficiencies in the amount and control of resources (Susilowati & Karyadi, 2002). Meanwhile, unemployment is always closely related to household food insecurity (Gundersen & Gruber, 2001; Gundersen & Oliveira, 2001). Besides, it is possible that unemployment may contribute to the lack of food choice, as well as the fear of running out of food or major changes in eating habits.

Numerous studies have reported that a large size of household, with a high number of school-going children, is related to food insecurity (Normen *et al.,* 2005; Mohd Shariff & Khor, 2005; Furness *et al.,* 2004; Zalilah & Khor, 2004; Nnakwe & Yegammia, 2002). Larger households will definitely require greater expenditure to meet the needs of food consumption and to ensure an adequate distribution of food among the household members, which may contribute to food insecurity. In addition, with more school-going children in the household, the greater the household expenditures on clothing, footwear and pocket money for school will be.

Several previous studies have also found that food insecurity is associated with families headed by females with children (Lemke *et al.*, 2003; Rose & Charlton, 2002). In particular, households with single parents could have extra expenses associated with child care, apart from other expenses, to meet the needs or demands for food consumption (Rose, 1999). Rosenhouse (1989) stated that female-headed households generally have a tendency to be poorer, own less land and have less access to land, labour and government services, including credit.

METHODOLOGY

Background

This study was conducted in Hulu Langat District, which is located about 20 km from Kuala Lumpur. It is the fifth largest district in Selangor, with a population of 915,667 people and comprises both urban and rural settlements, with the majority of the population settling in towns near Kuala Lumpur. Hulu Langat District encompasses an area of 484.32 km^2 with seven sub-districts (*mukim*), including Dusun Tua, Ampang, Cheras, Hulu Semenyih, Kajang, Beranang and Semenyih. According to the Department of Welfare, Selangor, the district had 1,181 households receiving financial assistance, which comprised 9.0% of the total welfare recipients in Selangor in 2004.

This study employed the cross-sectional and survey technique in order to obtain the quantitative data. A purposive sampling

was utilized to determine the households from the Welfare Recipient Households in Hulu Langat, Selangor. Purposive sampling is recommended when the households are selected due to some characteristics (Patton, 1990). This study defines purposive sampling as randomly selecting units without replacement from the particular part of the population which is supposed to yield samples that give the estimate of the population parameter of concern. This sample selection is called as the purposive random sampling (Guarte & Barrior, 2006).

Respondents

A list of welfare recipients was obtained from the Welfare Office of the Hulu Langat District. In total, there were six centres under the Welfare Office of the Hulu Langat District; however, only five centres (i.e. Kajang, Bangi, Hulu Langat, Ampang and Cheras) were selected. The Beranang centre was not selected because of its location, which is in the rural area. A total of 105 households were identified, comprising 66 Malays and 39 Indians. However, two Indian respondents later withdrew from participating in the study. A prevalence of 65.7% of food insecure households in Kuala Lumpur (Zalilah & Ang, 2001) was used in the sample size calculation. The sample size calculation was based on Cochran (1977), as follows:

$$N = z^2_{1-\alpha/2}\,(p)\,(1-p)\,/\,d^2$$
$$= (1.96)^2\,(65.7)\,(100-65.7)\,/\,(10^2)$$
$$= 86.6$$
$$= 87$$

α is set as 0.05 ($\alpha = 0.05$)
z is set as 1.96 (z = 1.96)
d = accuracy level that is allowed for estimating the prevalence of household food insecurity, set as $\pm$ 10% (d = $\pm$ 10%)

The minimum sample size was 87. However, a total of 103 respondents participated in this study.

Data Collection Procedures

Ethical approval was acquired from the Ethical Communities of the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. Permission was obtained from the Welfare Department of Malaysia, the Welfare Department of Selangor and the Welfare Office of Hulu Langat District. All the respondents were briefed on the study and requested to sign the informed consent forms prior to data collection. In addition, a structured questionnaire (divided into two parts) was also used to collect the data. The first part focuses on the demographic and socio-economic information of the households obtained, which includes the age of the women, household size, number of children, number of school-going children, marital status, education and occupation of the respondents as well as their spouses, total food expenditure, household income and per capita income. Meanwhile, the second part of the questionnaire addresses the food security status using the Malaysian Coping Strategy Instrument (MCSI) as a direct indicator to measure food insecurity (Norhasmah *et al.,* 2010). Norhasmah (2010)

developed and validated the Malaysian Coping Strategy Instrument (MCSI) as a direct indicator to measure household food insecurity because validated and culturally specific direct measurement in Malaysia was not available. The development and validation processes of MCSI employed both the qualitative and quantitative approaches with three phases of study. MCSI was found to be a reliable and valid measurement of household food insecurity based on internal consistency, construct validity, and criterion-related validity, particularly in terms of the demographic, socio-economic and diet diversity.

MCSI consists of 12 and 15 food- and non-food related coping strategy items in relation to household food insecurity, respectively. In this study, the food- ($\alpha = 0.505$) and non-food ($\alpha = 0.527$) related coping strategies had acceptable internal consistency for a preliminary study (Nunnally, 1967). It is important to note that this particular instrument was designed for the person responsible for food acquisition and preparation in the household. The respondent was asked the following question, "In the past month, how often did you have to use this coping strategy due to not having enough food or money to buy food?" (see Table 1). Three of the non-food related coping strategy items were dichotomous (Table 2). If the responses from the respondents were affirmative, the respondents were then asked a question related to the perceived severity of the coping strategies (items) based on the ordinal ranking (i.e. not severe=1; quite severe=2; severe=3; very severe=4). Notably, the severity of coping strategies was a matter of perception by the respondents (CARE/WFP, 2003; Maxwell et al., 1999). The severity weighting of a strategy was determined using a formula (Norhasmah et al., 2008). A discrete score for each strategy was obtained by multiplying the relative frequency (RF) and severity weighting, and adding it together to make up a cumulative food insecurity score (CARE/WFP, 2003; Maxwell, 1996) or the MCSI score. The higher the MCSI score, the greater the level of household food insecurity will be. The MCSI scores of the households were divided into three tertiles; namely, the 1st tertile, 2nd tertile and 3rd tertile. The households were classified based on their MSCI scores. The 1st tertile of MCSI was indicated as the household food security, followed by the 2nd tertile indicated as the moderate household food insecurity and the 3rd indicated as the severe household food insecurity.

Data Analysis

The Statistical Package for Social Science (SPSS) for Windows was used in the data analysis. A one-way analysis of variance (ANOVA) and Independent Sample t-test were utilized to compare the mean MCSI scores by levels of demographic and socio-economic variables (i.e. household size, number of children below 7 years old, number of school-going children, number of disabled people in the household, income reliance on financial assistance and per capita income).

TABLE 1
The Malaysian Coping Strategy Instrument (MCSI) Items

Question:

In the past month, how often did you have to use this coping strategy due to not having enough food or money to buy food? Please indicate the perceived severity of coping strategy.

Food-Related Coping Strategies	Relative Frequency (RF)*				Perceived Severity**
	Times/ day	Times/ week	Times/ month	Never	
Using less expensive food					
Using less preferred food					
Consuming whatever food is available around the house					
Receiving food assistance from agencies/ neighbours/ siblings/individuals/employer					
Borrowing money to buy food from employer/friends/ neighbours/siblings					
Purchasing food on credit					
Sending children to eat with mothers/ siblings/at neighbours' houses					
Allocating money to buy staple and less preferred food					
Reducing the number of meals eaten in a day					
Favouring certain household members over the others					
Skipping meals the whole day					
Cutting down the portion size or number of dishes for meals					
Non-Food Related Coping Strategies					
Buying less expensive clothes or buying clothes on credit					
Receiving clothes from individuals or agencies					
Buying new clothes for children but not for mothers					
Reducing children's school pocket money					
Children do not take money to school					
Requesting money from relatives or friends					
Selling or pawning of assets (jewellery)					
Being thrifty in using money					
Engaging in odd jobs					
Buying less expensive products or shopping at cheaper places					
Planning for expenditure					
Not attending or giving gifts during parties or festivals					

* Relative Frequency: Everyday = 7; 3-6 /week = 4.5; 1-2/week = 1.5; less than 1/week = 0.5; never = 0 (CARE/WFP, 2003; Maxwell *et al.,* 1999)

** Level of perceived severity: Not Severe =1; Quite Severe=2; Severe=3; Very Severe=4 (CARE/WFP, 2003; Maxwell *et al.,* 1999)

TABLE 2
Dichotomous Questions of the Malaysian Coping Strategy Instrument (MCSI) Items

Question:

In the past month, did you have to do any of these things due to not having enough money to buy food? Please indicate the perceived severity of the coping strategies used.

Non-Food Related Coping Strategies	Relative Frequency Perceived (RF)* severity**	
	Yes	Never
Delaying the payment of the house rental		
Delaying the payment of bills until a warning letter is received or supply terminated		
Delaying the payment of bills		

 * Relative Frequency: Yes =1; Never = 0
** Level of perceived severity: Not Severe =1; Quite Severe=2; Severe=3; Very Severe=4
   (CARE/WFP, 2003; Maxwell *et al.,* 1999)

RESULTS

Demographic and Socio-economic Characteristics and Percentage of Food Insecurity

Table 3 presents the demographic and socio-economic characteristics of the households. The data of the 103 respondents (i.e. 66 Malays and 37 Indians) were analyzed. More than half of the respondents (57.3%) were middle-aged (40-50 years old), followed by those in the age group of 30-39 years (27.2%). The mean age was 41.55 ± 6.57 years old, ranging from 25 to 55 years old. Of all the respondents, 51.5% were divorcees or widows, while 43.7% were married and 4.9% were single living with their sisters, brothers or parents. Approximately 34.0% had 6 to 10 family members and the average household size was 5.86 ± 3.07. Nonetheless, the mean household size in this sample was higher than the national average of 4.5 (Ninth

Malaysian Plan, 2006). The mean number of children was 4.03 ± 2.56.

About 61.2% of the respondents had 1 to 2 family members suffering from chronic diseases, such as hypertension, diabetes mellitus, cancer, as well as physical or mental disability. In addition, 29.1% of the respondents and 23.8% of their spouses had at least completed the primary school education. The mean years of schooling for the respondents and their spouses were 7.03 ± 4.03 and 8.29 ± 3.95, respectively.

Meanwhile, the mean monthly household income was RM894.31 $\pm$ 373.23. The household income was based on the income of the respondents and their spouses, other family members staying together in the household, part-time wages and monthly financial assistance. Approximately 26.2% of the households were considered as poor based on the official poverty line income of the Ninth Malaysian

TABLE 3
Demographic and Socio-economic Characteristics of the Respondents

Characteristics	Total (n=103) n (%)
Age (years)	
25 – 29	5(4.9)
30 – 39	28(27.2)
40 – 49	59(57.3)
50 – 55	11(10.7)
Mean ± SD	41.55 ± 6.57
Min-Max	25-55
Marital status	
Bachelor (lived with somebody)	5 (4.9)
Married	45 (43.7)
Divorcees/Widows	53 (51.5)
Household size	
1 – 5	60 (58.3)
6 – 10	35 (34.0)
≥11	8 (7.8)
Mean ± SD	5.86 ± 3.07
Min-Max	1-18
Number of children	
0	5 (4.9)
1 – 3	49 (47.6)
4 – 6	33 (32.0)
≥ 7	16(15.5)
Mean ± SD	4.03 ± 2.56
Min-Max	0-13
Number of school-going children	
0	17 (16.5)
1 – 2	42 (40.8)
3 – 4	33 (32.0)
≥ 5	11 (10.7)
Mean ± SD	2.40 ± 1.90
Min-Max	0-11
Disable members in the household	
No	30 (29.1)
Yes	73 (29.1)
Number of disable members in the household	
Education level (years)	
Never attended school	17 (16.5)
1-6	30 (29.1)

Table 3 (*continued*)

7-9	24 (24.3)
10-11	29 (28.2)
≥ 12	3 (2.9)
Mean ± SD	7.03 ± 4.03
Min-Max	0-14
Husband's Education Level (years) (n=42)	
Never attended school	5 (11.9)
1-6	10 (23.8)
7-9	10 (23.8)
10-11	11 (26.2)
≥ 12	6 (14.3)
Mean ± SD	8.29 ± 3.95
Min-Max	0-14
Household Income (RM)*	
< 691	27(26.2)
≥ 691	76(73.8)
Mean ± SD	894.31 ± 373.23
Min-Max	99-2040
Per capita Income (RM)**	
< 93	16 (15.5)
93 –155	33 (32.0)
≥ 155	54 (52.4)
Mean ± SD	177. 71 ± 92.50
Min-Max	12.38-533.33

* Official poverty line in Malaysia (Ninth Malaysia Plan, 2006)
** The cut-off point for the per capita income in Malaysia was RM93 (Ninth Malaysia Plan, 2006)

Plan (2006). Moreover, approximately 15.5% and 32.0% of the households were considered as hard-core poor (< RM93) and poor (RM93 – RM155), based on per capita income, respectively (Ninth Malaysian Plan, 2006). The percentage of the household food insecurity is presented in Table 4. Apparently, majority of the households (73.8%) had some kind of household food insecurity with 39.8% assigned to moderate household food insecurity and 34.0% to severe household food insecurity.

TABLE 4
Percentage of Household Food Insecurity

Food Security Status	Total n=103 n (%)
1st tertile of MCSI score (Food Security)	27 26.3)
2nd tertile (Moderate Food Insecurity)	41 (39.8)
3rd tertile of MCSI score (Severe Food Insecurity)	35 (34.0)
Mean MSCI Score ± SD	55.12 ± 19.64
Min MSCI – Max MSCI	16.50 -106.00

Demographic and Socio-economic Characteristics as the Contributing Factors of Food Insecurity

The comparisons of MCSI scores between household demographic and socio-economic characteristics are illustrated in Table 5. The higher the MCSI scores, the greater the level of household food insecurity. The mean MCSI score increased with larger numbers of children below seven years in the households. Households with 2 (62.6 ± 20.2) and ≥ 3 (59.7 ± 18.1) children below 7 years old had a significantly higher mean MCSI score than the households with 1 (51.1 ± 19.0) children below seven years old (F=3.690; p≤0.05). Similarly, the mean MCSI score increased with the increasing number of school-going children. Households with 1-3 school children (56.0 ± 22.0) and households with ≥4 (59.7 ± 15.4) had a significantly higher mean MCSI score compared to the households without any school going children (46.0 ± 10.3) (F=0.079; p≤0.5). Meanwhile, there was a significant increase in the mean MCSI score as the number of disabled members in the household increased (p≤0.05). Households with 1 (62.6 ±20.2) and ≥ 2 (63.5 ± 18.1) disabled members had a significantly higher mean MCSI score compared to the households without any disabled members.

There was a significant increase in the mean MCSI score as household income relied on financial assistance (p≤0.01). Households that received financial assistance ≥ RM250 (65.5 ± 18.0) had the highest mean MCSI score compared to the households which received financial assistance between RM100 to RM250 (52.1 ± 20.2) and < RM100 (49.2 ± 8.7). Similarly, the lower the income, the tendency of a household to receive financial assistance will also be higher. Hence, a decreasing pattern was found in the mean MCSI scores by the household income and per capita income. Households below the poverty line (56.2 ± 21.7) had a slightly higher mean MCSI score compared to those which were above the poverty line (19.26 ± 18.36); however, the difference was not significant. Meanwhile, the poor households (per capita income ≤ RM155) (59.01 ± 19.45) had significantly higher mean MCSI scores than the households with per capita income of ≥ RM155 (51.45 ± 19.28). A low standard deviation of the MCSI scores indicated less severe food insecurity because it was closer to the mean MCSI score. On the contrary, a high standard deviation of MCSI scores indicated more severe food insecurity due to the spread over a large range of mean MCSI score.

DISCUSSION

This study attempted to estimate the percentage and identify the risk factors of food insecurity among the urban welfare recipient households in Hulu Langat, Selangor. The estimation for the percentage of food insecurity in this study was higher compared to the findings identified from the prior study among the samples of low-income urban and rural households in Malaysia (Zalilah & Ang, 2001; Zalilah & Khor, 2004). The possible explanation for higher

TABLE 5
The MCSI Score According to the Household Demographic and Socio-economic Characteristics

Characteristics	CSI (Mean ± SD)	F^1 or t^2	Sig.
Number of children below 7 years old		3.690^1	0.028*
1	51.1 ± 19.0		
2	62.6 ± 20.2		
≥3	59.7 ± 18.1		
Number of school-going children		2.599^1	0.079†
0	46.0 ± 10.3		
1-3	56.0 ± 22.2		
≥ 4	59.7 ± 15.4		
Number of disabled members in the household		3.690^1	0.028*
0	51.1 ± 19.0		
1	62.6 ± 20.2		
≥ 2	63.5 ± 18.1		
Financial assistance		5.346^1	0.006**
< MYR 100 (< USD 27.4)	49.2 ± 8.7		
MYR 100- MYR 250 (USD 27.4-USD 68.6)	52.1 ± 20.3		
≥ MYR 250 (≥ USD 68.55)	65.5 ± 18.0		
Household Income³		0.325^2	0.745
< MYR 691 (< USD 189.3)	56.2 ± 21.7		
≥ MYR 691 (≥ USD 189.3)	54.7 ± 19.0		
Income per capita⁴		1.97^2	0.05*
≤ MYR 155 (USD 42.5)	59.0 ± 19.46		
≥ MYR 155 (≥ 42.5)	51.5 ± 19.28		

[1] One-way ANOVA; [2] Independent samples t-test
[3] Official poverty line in Malaysia (Ninth Malaysia Plan, 2006)
[4] The cut-off point for the income per capita in Malaysia was MYR93 (Ninth Malaysia Plan, 2006)
Significance level: ** = p≤ 0.01; * = p≤0.05; † = p ≤ 0.5
1 USD = 3.65MYR

percentage of food insecurity in this study could be related to the sample study among the welfare recipients; whereby the basic eligibility for financial assistance from the Welfare Department of Malaysia is to have a household income less than RM400.00 per month. However, the percentage of food insecurity in this present study was lower than the sample among the *Orang Asli* households (81.2%), as studied by Zalilah and Tham (2002).

This study found that the mean MCSI increased with the number of children below 7 years old, the number of school-going children and the number of disabled members in the households. Approximately 82.0% of the households in this study had at least one school-going child. As expected, the higher the number of

school-going children, the greater the household expenditures. Needless to say, having school-age children also means more expenditure needed on clothing, footwear, books and pocket money for school needs. Several studies have also reported that the number of children and school-going children increases with the status of food insecurity (Normen *et al.*, 2005; Furness *et al.*, 2004; Zalilah & Khor, 2004).

Demographic and socio-economic characteristics (i.e. number of children, number of school-going children and per capita income) that significantly contributed to household food insecurity in this study were confirmed by the factors contributing to household food insecurity reported by Norhasmah (2010). The major factors that contributed to household food insecurity reported were related to household members (i.e. big household size, many school-going children, family members with disability and illnesses) and poverty (Norhasmah, 2010). Therefore, due to various constraints on resources and large sharing among household members, the consumption of food was limited and this might contribute to the problems related to food insecurity.

There was a significantly decreasing trend in household income and per capita income with regard to severity of food insecurity. The results were supported by several studies, which found that income is an important risk factor for household food insecurity (Bhattacharya *et al.*, 2004; Zalilah & Tham, 2002). Therefore,

inadequate income among poor households could contribute to the inability to provide basic needs, such as enough food for the household members.

In this study, approximately 26.2% of the households had a monthly household income below RM691 (i.e. official poverty line income). Based on the per capita income, approximately 15.5% and 32.0% of the households were considered as hard-core poor and poor, respectively (Ninth Malaysian Plan, 2006). Poverty can indirectly contribute to food insecurity (Misselhorn, 2005) due to the inability to provide adequate basic needs for household members, such as nutritionally adequate diets and safe food, shelter, water, sanitation, clothing and education (Susilowati & Karyadi, 2002). Several studies have also reported that low income household is one of the most important factors affecting food insecurity (Bhattacharya *et al.*, 2004; Furness *et al.*, 2004).

CONCLUSION

Food insecurity is a major public health problem among urban welfare recipient households. Information on the percentage of food insecurity is important for monitoring the progress of efforts to improve food security status in Malaysia. With rapid urbanization and the increase in urban poverty in less developed nations, food insecurity should be seriously addressed by the governments. Urban welfare recipient households, with higher numbers of children below 7 years

old, school-going children, disabled members in the households, income reliance on financial assistance and lower income per capita, were possibly at risk of food insecurity. Hence, urban welfare recipient households with these or other factors contributing to food insecurity should be given priority in intervention programmes that address food insecurity. In addition, the intervention programmes should be designed to address various factors contributing to food insecurity.

IMPLICATIONS AND FUTURE RESEARCH

The analysis of poverty and food insecurity should be directed towards policy implication. The policy implication that can be derived from this study is to revise the amount of financial assistance or food baskets given to the welfare recipient households or low income households due to the high cost of living in urban areas (i.e. increased food, fuel price, rental, etc.). This policy should be addressed through various agencies, such as the Ministry of Rural and Regional Development, the Ministry of Health, as well as the Welfare Department of Malaysia. In addition, the Welfare Department of Malaysia should also revise the basic eligibility (i.e. household income less than RM400/ month for hard-core poor households) for financial assistance to ensure food security of poor households (i.e. household income of RM691) (Ninth Malaysia Plan, 2006). This study is also important because it has significantly contributed to the formulation of nutrition policy, programmes and projects in urban areas.

Most importantly, the theoretical implication of this study provides valuable insights into the demographic and socio-economic characteristics as the contributing factors to household food insecurity. The factors addressed in this study have added to our knowledge of the importance of understanding food insecurity from the perspective of urban welfare recipient households.

Conducting rigorous studies to assess the prevalence, distribution and severity of food insecurity among the welfare recipient households is highly recommended. The Ministry of Rural and Regional Development, in conjunction with the Welfare Department of Malaysia, should perform the necessary screening in order to identify at-risk households of food insecurity among welfare recipient households. This information can be utilized to develop and implement intervention programmes in order to ensure that the Malaysian population is able to obtain adequate or quantity and quality of food required. Moreover, monitoring of the intervention programmes should be performed so as to evaluate their effectiveness.

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