

**Nota Penyelidikan/Research Note**

## The Effect of Urbanisation on the Health of Urban Residents

OSMAN ALI  
ZALEHA MD. ISA  
MOHD. RIZAM ABDUL RAHMAN

### ABSTRAK

*Kajian secara rentas ini telah dilakukan di sepanjang tahun 2000 untuk menentukan persepsi penduduk bandar terhadap urbanisasi dalam sektor kesihatan dan kesannya terhadap kehidupan mereka. Seramai 627 orang responden telah ditemuduga menggunakan borang soal-selidik secara berpandu di 6 lokasi yang dipilih menurut keselesaan. Kuala Lumpur dan Johor Bahru dipilih mewakili Bandaraya, Kota Bahru dan Langkawi mewakili Majlis Perbandaran dan Bentong dan Kuala Selangor mewakili Majlis Daerah. Kajian mendapati seramai 90.7 peratus responden pernah mendengar tentang pengkorporatan sektor kesihatan. Namun, hanya 38.3 peratus bersetuju tentang kebaikan pengkorporatan itu dan 23.0 peratus bersetuju sektor kesihatan dikorporatkan masa ini. Majoriti berpendapat (75.9 peratus) pengkorporatan akan meningkatkan bayaran perkhidmatan dan hanya 1.4 peratus yang merasakan ia akan dapat memberi imbuhan kepada pekerja. Sekiranya perkhidmatan kesihatan terpaksa dikorporatkan, 35.9 peratus responden mencadangkan agar skim pembayaran ansuran diperkenalkan. Hanya 8 peratus responden telah mencadangkan skim insurans kesihatan. Penduduk bandar juga merasakan bahawa perkembangan prasarana di Bandar, yang secara tidak langsung merupakan kesan urbanisasi adalah memuaskan. Walau bagaimanapun, kecanggihan sistem perhubungan dan kemasukan warga asing dikatakan dapat mempercepatkan penularan penyakit. Sejumlah 48.3 peratus responden merasakan penggunaan perubatan alternatif perlu digalakkan. Walau bagaimanapun, kemasukan ubatan alternatif secara berleluasa tanpa sekatan perlu disekat secara tegas. Usaha bersungguh-sungguh pelbagai pihak sangat diperlukan untuk meningkatkan pengetahuan dan amalan penduduk bandar tentang urbanisasi demi menajayakan wawasan negara.*

## ABSTRACT

*This cross-sectional study was conducted throughout the year 2000 to determine the perception of urban residents towards urbanisation in health sector and its effect on their lives. A total of 627 respondents were interviewed using guided questionnaires at 6 locations selected by convenient sampling. Kuala Lumpur and Johor Bahru represented the cities, Kota Bahru and Langkawi represented the Municipal Council, and Bentong and Kuala Selangor represented the District Council. The study showed that a total of 90.7 percent respondents have heard of health sector corporatisation. However, only 38.3 percent agreed with the benefits of corporatisation, while only 23 percent agreed that the health sector should be corporatised now. Majority of the respondents (75.9 percent) were of the opinion that corporatisation will increase the service cost and only 1.4 percent felt that it would benefit the workers. If health services have to be corporatised, 35.9 percent respondents suggested that the installment payment scheme be introduced. Only eight percent respondents suggested health insurance scheme. The urban residents also felt that the development of urban facilities that is indirectly due to the effect of urbanisation are satisfactory. However, the advancement of the communication system and the entry of foreigners were perceived to have speeded up the spread of disease. A total of 48.3 percent respondents felt that the use of alternative medicine should be encouraged, while, the wide entry of alternative medicine without restrictions must be strictly prevented. Serious efforts from various parties are needed to increase the knowledge and practice of the urban residents regarding urbanisation in order to achieve the country's vision to create a knowledgeable society.*

## INTRODUCTION

Every country in the world has a responsibility to protect the rights and needs of its citizens. To do this, countries must be aware of developing threats to health, both inside and outside national borders. Examples of serious health threats are emerging with the resurgence of infectious diseases. Prominent factors associated with the resurgence of infectious diseases include increasing mobility of the world's population, inappropriate and indiscriminate use of anti-microbials, and rapid urbanisation (Table 1) (CISSET 1995). Unequal competition and the ability within and among countries, especially between the developed and developing countries will give rise to a great conflict. Displacement of people as a result of war, civil disorder, and economic need has led to an increase in the number of refugees from 38 million to 60 million in this decade alone. A growing migration to urban areas, often resulting in overcrowded living conditions, is another contributive factor. In 1900, for example, roughly five percent of the world's people lived in cities with populations exceeding 100,000. Today, an

TABLE 1. Factors contributing to disease re-emergence and examples of associated infections

Contributing factors	Associated infectious diseases
Human demographics and behaviour	Dengue/dengue haemorrhagic fever, sexually transmitted diseases, giardiasis.
Technology and industry	Toxic shock syndrome, nosocomial (hospital-acquired) infections, haemorrhagic colitis/haemolytic uraemic syndrome.
Economic development and land use	Lyme disease, malaria, plague, rabies, yellow fever, Rift Valley fever, schistosomiasis.
International travel and commerce	Malaria, cholera, pneumococcal pneumonia.
Microbial adaptation and change	Influenza, HIV-1/AIDS, malaria, <i>S. aureus</i> infections.
Breakdown of public-health measures	Rabies, tuberculosis, trench fever, diphtheria, whooping cough (pertussis), cholera.

*Source:* Adapted from Committee on International Science Engineering and Technology (CISSET) 1995.

estimated 45 percent, which is more than 2.5 billion people-live in large urban centres. The UN expects this proportion to rise to 61percent of the world's population by the year 2025 (Linden 1996). Townships will become the centre for people to find and fulfill their needs, while carving a comfortable life. It is estimated that by the year 2020, more than 30 towns all over the world will have populations above 20 million. Foreseeably in Southeast Asia, 44.4 percent of the population will dominate the urban areas. However, it is expected that majority of the residents living in urban areas of the developing countries will neither live comfortably nor live in optimum health condition. Health problems in the urban areas will multiply according to the rapid urbanisation process, exceeding the ability of the urban authorities to provide basic facilities such as housing, environmental and hygiene care, health clinics, and job opportunities.

In Malaysia, the urbanisation process has been rapid. The urban population is expected to grow from 54.7 percent in the year 1995 to approximately 73 percent in the year 2020. This rapid increment of urban population has given rise to various problems. Poverty among the urban slum residence has exposed them to various health threats. Additionally, being occupied with providing income for the family has lessened the population's priority for self health and current knowledge. Therefore, it is important to ask the question whether the urban population nowadays are prepared for or are currently preparing themselves to accept urbanisation and its impact on the economy and health issues. This study addresses four questions: (i) corporatisation and privatisation of health

services and their impact on health care, (ii) urbanisation and its impact on health, (iii) levels of people's satisfaction regarding the available facilities, and (iv) people's choice of methods in preventing diseases. These questions have been answered through surveys conducted on residents from 6 towns, namely Kuala Lumpur and Johor Bahru (cities), Kota Bahru and Langkawi (Municipal Council) and Bentong and Kuala Selangor (District Council).

## MATERIALS AND METHODS

A total of 6 towns were selected. Kuala Lumpur and Johor Bahru represented the cities, Kota Bahru and Langkawi represented the Municipal Council, and Bentong and Kuala Selangor represented the District Council. The study was conducted throughout the year 2000. In each town, a total of 100–120 respondents aged 15 years old and above were interviewed by trained interviewers using pre-tested questionnaires. The questions covered were respondents' socio-demography, their knowledge about urbanisation and its impact on urban residents, urban living problems and the preparations by the urban population in facing urbanisation. Data was managed using a personal computer and analysis was done using SPSS software version 9.0. Only descriptive analysis is reported here.

## RESULTS

### SAMPLE PROFILES

A total of 627 respondents from 6 towns were interviewed (Table 2). The respondents were 49.4 percent males and 92.3 percent Malays. The age of the respondents were 20 years old and above. From the total respondents interviewed 78.0 percent were married and 47.2 percent were still working. A total of 85.9 percent were found to be earning less than RM1,500 per month.

TABLE 2. Total of samples by location (towns)

Towns	N	Percentage (%)
Kuala Lumpur	105	16.7
Johor Bahru	102	16.3
Kota Bahru	103	16.4
Langkawi	105	16.7
Kuala Selangor	101	16.1
Bentong	111	17.7
Total	627	100.0

## CORPORATISATION AND PRIVATISATION OF HEALTH SERVICES AND THE IMPACT ON HEALTH CARE

### CORPORATISATION AND PRIVATISATION

A large portion of the respondents (90.7 percent), have heard about corporatisation and privatisation. A total of 240 respondents (38.3 percent) regard corporatisation and privatisation positively while 18.3 percent of them felt the opposite, and 29.8 percent were not sure, while 13.4 percent did not have an opinion. Significantly, majority of the respondents were aware of the effect that corporatisation and privatisation will have on hospital services. A total of 75.9 percent of the respondents were of the opinion that the hospitals will charge higher fees for their services. This is further supported by 24.2 percent of respondents who believe that the service quality will be improved, as well as advance equipment will be used (6.5 percent). Adversely, only 1.4 percent respondents felt that corporatisation and privatisation will bring benefits to workers (Table 3). Interestingly, when asked whether they agree that the health sector especially the hospitals to be corporatised now, only 23 percent of the respondents agreed.

TABLE 3. The effect of hospital corporatisation

Effect of hospital corporatisation (N = 627)	N	Percentage (%)
High service charges	476	75.9
High quality services	152	24.2
Sophisticated medical technology	41	6.5
Workers get more profit	9	1.4
Others	35	5.6
No response	19	3.0

### HEALTH FINANCING

If health sector were to be corporatised, majority (35.9 percent) of the respondents felt that payment of services by installment should be introduced (Table 4). Other types of financing they felt should be in the offing are payments through government subsidy (19.2 percent), by salary deduction (12.5 percent), from health savings (7.9 percent) and insurance coverage (8.0 percent). Thus, it is obvious that the respondents' awareness regarding the importance of insurance for their health coverage is still low. If the cost of health cannot be afforded, 34.7 percent respondents felt that people's donation is needed. Other alternative financing thought possible are payment exemption (18.2 percent) and family support (16.3 percent).

TABLE 4. Financing methods of services

Financing method (N = 624)	N	Percentage (%)
Service payment through installment	224	35.9
Service payment through government subsidy	120	19.2
Payment through salary deduction	78	12.5
Buy health insurance	50	8.0
Health savings for all people	49	7.9
Others	66	10.6

## URBANISATION AND ITS IMPACT ON HEALTH

Need to identify features/characteristics of urbanisation and its impact on several aspects related to modern day living.

### KNOWLEDGE ON URBANISATION

The study showed that a total of 151 (22.3 percent) respondents understood the meaning of urbanisation. Among this group, 33.5 percent thought that urbanisation is associated with the increase in size of urban areas, changes of the status of an urban area (26.5 percent), demand for rural area (22.5 percent), and residence migration from rural to urban areas (18.5 percent Table 5).

TABLE 5. The meaning of urbanisation

Meaning of urbanisation (N = 151)	N	Percentage (%)
Change of status of an urban area	40	26.5
Modernisation of rural area	34	22.5
Increase in town size	32	21.2
Migration of residence from rural to urban area	28	18.5
Town is becoming increasingly modern	19	12.6
Increasing public facilities in town	12	7.9
Increment / clusterisation of residence	8	5.3

### EFFECTS OF URBANISATION ON DISEASE PATTERN

Majority of the respondents (35.1 percent) felt that urbanisation process will increase the number of diseases related to lifestyle such as diabetes mellitus, hypertension and heart disease. A total of 20.3 percent and 10.7 percent respectively were also aware of the possible emergence of new diseases and the

TABLE 6. Effects of urbanisation on disease pattern

Effect of urbanisation (N = 627)	N	Percentage (%)
Increase of diseases related to lifestyle changes	220	35.1
Emergence of new diseases	127	20.3
Infectious diseases easily spread	122	19.5
No more diseases	96	15.3
Re-emergence of diseases that was once controlled	67	10.7
Do not know	57	9.1

re-emergence of old diseases that were once controlled. A small percentage of respondents (15.3 percent) also believed that urbanisation can abolish all types of diseases (Table 6).

#### EFFECTS OF URBANISATION ON HEALTH SERVICES

Majority of the respondents (93.0 percent) felt that urbanisation would have positive effects on health services (Table 7). Along with the development of the urban areas, 56.6 percent respondents felt that the number of clinics and hospital facilities will increase, the quality of health services will improve (29.2 percent), services will be easy to obtain (19.1 percent), more sophisticated equipment will be used (5.6 percent) and the number of doctors will increase (4.6 percent).

TABLE 7. Effects of urbanisation on health services

Effect of urbanisation (N = 627)	N	Percentage (%)
Increase in clinic and hospital facilities	355	56.6
Improvement in the quality of health services	183	29.2
Easy to get treatment / services	120	19.1
More modern treatment equipment	35	5.6
Increase in number of doctors and nurses	29	4.6
Do not know / No response	44	7.0

#### EFFECTS OF EFFICIENT COMMUNICATION ON HEALTH

Nowadays, the advancement in communication technology, better transportation systems, vehicles, upgrading of roads and telecommunication systems enable the residence to obtain treatment faster. As shown in Table 8 a total of 58.4 percent respondents felt that the efficient communication systems help them to get to the clinics/hospitals faster, doctors/hospitals are easier to contact, (51.5

TABLE 8. Association between efficient communication system and health

Efficiency (N = 627)	N	Percentage (%)
Arrive at the clinic / hospital faster	366	58.4
Easy to contact doctor / hospital	323	51.5
Easy to obtain information	73	11.6
Disease easily spread	14	2.2
No association	16	2.6
Do not know / No response	19	3.0

percent) and information easy to obtain (11.6 percent). Nevertheless, some of the respondents (2.2 percent) were also aware that efficient communication could spread diseases faster.

#### FACTORS IN URBANISATION PROCESS AFFECTING RESIDENTS HEALTH

Table 9 shows factors that cause health problems as identified by the respondents in urban areas. The factors are air pollution (68.6 percent), followed by water contamination (37.3 percent), noise pollution (22.2 percent), overcrowding (20.7 percent) and depression (6.4 percent).

TABLE 9. Factors in urbanisation process that affect residents health

Factors (N = 627)	N	Percentage (%)
Air pollution	430	68.6
Water contamination	234	37.3
Noise	139	22.2
Crowded living area	130	20.7
Depress	40	6.4
Others	5	0.8
Do not know / No response	48	7.7

#### WAYS TO OVERCOME EFFECTS OF URBANISATION ON HEALTH

Respondents were asked to suggest ways to overcome health problems that arise in urban areas due to urbanisation. Majority of the respondents (43.2 percent) felt that organised town planning is needed (Table 10). Among the steps stressed by the respondents are proper environmental surveillance (26.5 percent), law enforcement (15.5 percent), and increase public facilities (4.6 percent). However, 1.6 percent of the respondents felt that widening and modernization of urban areas should be prevented to overcome health problems due to urbanisation.



TABLE 10. Steps to overcome the bad effects of urbanisation on health

Suggestions (N = 627)	N	Percentage (%)
Organise town planning	271	43.2
Proper environmental surveillance	166	26.5
Law / rule enforcement	97	15.5
Increase public facilities in town	29	4.6
Prevent the widening and modernisation of town	10	1.6
Others	14	2.2
Do not know / No response	106	16.9

### LEVELS OF PEOPLE’S SATISFACTION WITH AVAILABLE FACILITIES

#### QUALITY OF HEALTH SERVICES NOW AS COMPARED PREVIOUSLY

Majority of the respondents (75.8 percent) admitted that the quality of attendance now is far better compared to 10 years ago (Table 11). However, there were also those who felt that the services now are worsening (6.2 percent) or showed no improvement (8.6 percent).

TABLE 11. Health quality now compared to 10 years ago

Quality (N = 627)	N	Percentage (%)
Improved	475	75.8
Moderate	59	9.4
No improvement	54	8.6
Worst	39	6.2

#### LEVEL OF SATISFACTION REGARDING PUBLIC FACILITIES IN URBAN AREAS

In general, respondents were satisfied with public facilities in urban areas, but more than 50.0 percent respondents were moderately satisfied with the facilities provided (Table 12). Among the facilities that the respondents showed high satisfaction with were water/electricity supplies (89.7 percent), telephones (78.6 percent), health clinics (78.0 percent) and schools (93.0 percent). However, attention must be given to the high percentage of dissatisfaction with facilities such as traffic (29.0 percent), public hygiene (36.7 percent) and recreation (31.2 percent).

TABLE 12. Level of satisfaction with public facilities

Facilities (N = 627)	TS	S	M	LS	NS	DK
Traffic condition	5.3	41.3	24.4	23.4	5.6	–
Residence density	2.7	46.6	42.7	7.0	0.8	0.2
Housing facilities	3.8	53.0	28.4	13.1	1.8	–
Public hygiene	2.6	32.2	28.4	29.5	7.2	0.2
Electricity / water facilities	14.4	75.3	6.5	3.3	0.5	–
Telephone facilities	12.9	65.7	10.2	8.1	3.0	–
School facilities	17.4	75.6	5.4	1.4	0.2	–
Health clinic facilities	10.7	67.3	15.5	5.6	0.8	0.2
Recreational facilities	2.4	36.0	30.0	25.5	5.7	0.3

\*TS=too satisfied, S=satisfied, M=moderate, LS=less satisfied, NS=not satisfied, DK=do not know / no response

#### LEVEL OF SATISFACTION WITH HEALTH SERVICES

A large portion of the respondents was satisfied with majority of the health services provided (Table 13). However, many were significantly dissatisfied with environmental conditions and disturbance, as well as facilities for handicapped children and the elderly. A total of 69.5 percent expressed less satisfaction with

TABLE 13. Level of satisfaction with health facilities

Health facilities (N = 627)	TS	S	M	LS	NS	DK
Living environment	4.8	50.2	27.6	14.0	3.0	0.3
Irrigation and management of flash flood	0.6	16.4	13.2	41.6	27.9	0.2
Food hygiene	0.8	40.8	47.0	10.0	1.1	0.2
Mother and child services	8.0	73.2	15.9	1.8	0.8	0.3
School health services	6.9	77.5	13.7	1.4	0.3	0.2
Community development and health education	5.4	43.2	32.5	16.4	2.2	0.2
Hygiene and food quality control	12.6	61.4	21.7	3.7	0.6	0.0
Infectious disease control	2.9	38.8	35.1	20.1	3.2	0.0
Water quality control	5.3	56.3	22.6	13.1	2.2	0.5
Disturbance control	0.6	22.6	28.4	38.1	9.7	0.5
Handicap children and the elderly	1.1	20.7	22.8	12.0	39.9	3.5
Basic treatment (primary)	4.8	73.0	16.4	4.9	0.6	0.2

\*TS=too satisfied, S=satisfied, M=moderate, LS=less satisfied, NS=not satisfied, DK=do not know / no response

the irrigation system and flash flood management, 47.8 percent for disturbance control and 51.9 percent for services provided for handicapped children and the elderly. Among the health services that were found to be satisfactory were family services (81.2 percent), school health (83.4 percent) and primary treatment (77.8 percent).

## METHODS OF PREVENTING DISEASES

### RESIDENTS MIGRATION

Residents migration particularly immigration of foreigners can spread various diseases. A total of 60.6 percent respondents believe that foreigners can bring in diseases such as HIV/AIDS, malaria and typhoid. A total of 59.4 percent are of the opinion that strict health regulations if adhered to prior to entering the country can prevent the spread of disease. Other methods suggested are imposing quarantine (5.3 percent), preventing entry (21.4 percent), obtaining health certificate (18.9 percent) and sending home sick individuals (4.2 percent). The same measures are suggested for Malaysians who return from overseas.

### ALTERNATIVE MEDICINE METHOD

Alternative medicine is becoming increasingly popular. A total of 48.3 percent respondents say that the use of alternative medicine such as herbs, health foods, acupuncture and aroma therapy was good and should be encouraged. However, a total of 38.4 percent suggested that it should only be used when applicable, while 11.8 percent believed that intake must be guided by doctor's advice and 7.2 percent encouraged its use to complement modern medicine. Only 2.9 percent did not agree that it should be used at all.

Nevertheless, illegal entry of these medicines is steadily increasing. A total of 72.3 percent respondents suggested that more strict enforcement should be implemented. Coherent action and heavy punishment was suggested by 26.6 percent of the respondents. Other methods suggested were development of laboratories (4.3 percent) and medicine registration.

### MAIN METHODS TO OBTAIN HEALTH INFORMATION

Respondents' preferred source for obtaining health information could be ranked as follows: health staff (40.5 percent), television (36.2 percent), newspaper (11.8 percent), magazines (3.2 percent), pamphlets (3.2 percent), radio (1.8 percent), friends (1.6 percent) and family members (0.2 percent). On sources for getting information on methods of preventing disease and health care, the main ones were television (57.6 percent), magazines/newspaper (12.4 percent), health campaign (10.8 percent), friends/neighbours (9.9 percent), pamphlets (3.3 percent),

radio (1.0 percent) and internet (0.3 percent). The role of the Internet in e-commerce was still too low.

## DISCUSSION

Human health is profoundly affected by economic, social, behavioural, political, scientific, and technological factors (Howson, Fineberg & Bloom 1998), but are the communities who are most exposed to the influence of urbanisation aware of these influences on their daily lives? If they are aware of it, have they prepared themselves to face these challenges? The perception of the urban residents towards urbanisation, particularly in health sector and its effect on their lives is discussed below.

### CORPORATISATION AND PRIVATISATION OF HEALTH SERVICES AND THE IMPACT ON HEALTH CARE

When asked about methods of health financing if the health sector were to be corporatised, many respondents put health insurance as one of their last priorities, a preference which is contradictory to what have been practiced in many industrialised countries. Globalisation and urbanisation call for the residence of Malaysia to stop relying on the government to provide subsidies for healthcare cost and to start considering more seriously other alternatives such as health insurance.

### URBANISATION AND ITS IMPACT ON HEALTH

Less than a quarter (22.3 percent) of the respondents understood the meaning of urbanisation. Many believed that urbanisation is associated with the changing status of an urban area, modernisation of rural area, as well as increase in town size. In relations to the impact of urbanisation on disease pattern, many associated it with the increment of lifestyle-related diseases and emergence of new diseases. However, most of the respondents were unaware of the re-emergence of diseases, especially those infectious diseases that was once controlled with the advent of urbanisation. The growing movement of people, goods, and services around the globe is one of the factors that contribute to the spread of infectious diseases (Howson, Fineberg & Bloom 1998); therefore, relating urbanisation with no more diseases is rather impossible. Most of the respondents believe that urbanisation will increase clinic and hospital facilities, whilst other groups feel that it will improve the quality of health services and make access to treatment easier. Many knew that efficient communication system is associated with easy access to healthcare services, but the respondents failed to realise that diseases might also be spread effectively through efficient communication system. Many respondents associated the increasing urbanisation phenomenon with the

physical aspect of residents' health such as air pollution, water contamination, noise pollution and crowded living area, but failed to notice its growing effect on the spiritual aspect of it, such as depression. The three most popular steps suggested by the respondents to overcome the negative effects of urbanisation on health are ensuring effective town planning, environmental surveillance and law enforcement, and their implementation. Many people agree that existing health quality are better when compared to 10 years ago. However, a few people still believe that some improvements need to be done in certain areas of services.

Nevertheless, the local authorities should be proud of their capabilities in providing basic facilities to their residents such as water and electricity, telephone, health clinics and schools. Stepping up on public hygiene measures, especially in congested areas, as well as increasing recreational areas are some aspects of the service that need improvement in. As in health services, although most respondents were satisfied with many of the services provided, some problems such as poor irrigation system and flash flood management, poor crowd control, as well as the lack in facilities for the handicap children and the elderly were highlighted. Therefore, several areas in public and health services still demand some attention from the local authorities.

#### METHODS OF PREVENTING DISEASES

Global migration and mobility of people have become one of the significant modes for disease spread. AIDS has taught the world that the battle against infectious diseases is far from over. The 1919 pandemic of another infectious disease, influenza, killed 20 million people worldwide, which had a higher death toll rate than that of World War I (Howson, Fineberg & Bloom 1998). Majority of the respondents in this study believed that foreigners could bring in infectious diseases such as HIV/AIDS, malaria and typhoid diseases. Therefore, in order to control and prevent the spread of these diseases, most of the respondents recommended for thorough inspection at all country's entrances to be carried out. Other regulations proposed were prevention-of-entry, health certificate requirement, quarantine of suspected sick person, and sending home sick persons. It should be noted that most of these methods are currently implemented in Malaysia. The respondents' opinions regarding the use of alternative medicine were also sought. A large portion of them believed that its use should be encouraged; however, it must be used only when applicable. Meanwhile, the study was informed that the respondents' main sources of health information were from health staffs, television and newspapers, with the television being the most popular source for information on methods of disease prevention and healthcare.

One of the main limitations of this study is that it does not represent the views of all the ethnic groups in Malaysia since 92.3 percent of the respondents were Malays. In addition, majority of them (85.9 percent) came from the lower or

moderate socio-economic group. This is indicated by their income of less than RM1,500 per month. It is suggested that future studies representing multiracial population should be conducted in Malaysia to get a fair view of other race population's perceptions on urbanisation. Studies can also be done among the elite group to have an insight into their views regarding the same topic.

## CONCLUSION

It can be concluded that knowledge about and practices in relation to urbanisation among urban residents is rather low to marginal. In other words, they are not adequately prepared to face changes brought about by the process of urbanisation. Serious efforts by various parties are needed to increase knowledge and awareness of urbanised practices among the urban residents in order for the country's vision to be achieved in the new era.

## REFERENCES

- CISSET (Committee on International Science, Engineering and Technology). 1995. Global microbial threats in the 1990s: report of the NSTC Committee on International Science, Engineering and Technology (CISSET) working group on emerging and re-emerging infectious diseases. Washington DC: National Science and Technology Council.
- Howson, C. P., Fineberg, H. V. & Bloom, B. R. 1998. The Pursuit of Global Health: The Relevance of Engagement for Developed Countries. *The Lancet* 351: 586-590.
- Linden, E. 1996. The Exploding Cities of the Developing World. *Foreign Affairs* January/February: 52-65.

Osman Ali, PhD  
Zaleha Md. Isa, PhD  
Department of Community Health  
Medical Faculty  
Hospital Universiti Kebangsaan Malaysia  
Jalan Yaacob Latif, Bandar Tun Razak  
56000 Cheras  
Kuala Lumpur  
Malaysia  
Tel: 603-91733333 ext. 2547 or 03-40405061  
Fax: 603-91737825  
e-mail: zaleha@medic.ukm.my