CHAPTER THREE

KNOWLEDGE & ATTITUDE TOWARDS PRESERVATION OF THE ENVIRONMENT

3.1 INTRODUCTION

Knowledge is defined as fact, information, understanding and skills a person has acquired through experience and education (Oxford, 1995). On the other hand, attitude is defined as a way of thinking or behaviour towards something (Oxford, 1995). Knowledge and attitude of a person towards preservation of the environment will to a certain extent determine his willingness to comply with laws, regulations and practices.

This chapter starts by looking at responses measuring respondents' knowledge on environmental issues and how they view their own roles in this matter. The attitudes of respondents towards environmental preservation are equally important in finally determining behaviour. This chapter also explores their sources of information on environmental issues.

3.2 KNOWLEDGE ABOUT ENVIRONMENT ISSUES

The survey covered some questions to gauge the level of knowledge respondents have on environmental pollution and household waste. It is important to understand this

aspect because failure to comply to certain practices and regulations may be attributed to ignorance.

3.2.1 Knowledge on the Effects on Environmental Pollution

Respondents were asked an open-ended question about the effect of environmental pollution (Q2.20, Appendix 2.1). The responses are mostly concentrated on those related to health such as respiratory and other diseases (Figure 3.1). Some 35 per cent of the responses are related to environment impact such as acid rain. ozone layer, weather, ecology system and others. It is interesting that while environmental pollution causes health problems only in the medium and long term, a higher proportion give this response rather than the immediate environment effect. Some 7 per cent of them do not know the effects of environmental pollution.

Male and female respondents reported about the same percentage saying that environmental pollution would affect their health (Table 3.1). However, slightly more female respondents are aware that environmental pollution would affect their environment compared to male respondents. Nevertheless, these difference is not significant at the 5 per cent level (Table 3.1).

Environmental studies have been introduced as part of the school curriculum since 1995. The younger age group therefore tends to know more about the effects of environmental pollution compared to the older age group. For example, about 39 per cent of respondents below 31 years compared to about 30 per cent of those above 50

years old know about environmental effects. The difference in responses across age group in not significant at the 5 per cent level.

Table 3.1: Percentage of Respondents by Responses of the Effects of Environment Pollution By Selected Socio-Economic Variables

Characteristics		Health	Environment	Don't know	n
Gender	Male	76	33	6	308
	Female	75	36	7	401
Age group	≤30	72	39	6	300
	31-40	75	30	10	152
	41-50	78	32	8	114
	51+	80	30	6	142
Education level*	None & Primary	78	18	12	92
	Secondary	75	30	10	268
	Tertiary	74	44	4	347
Ethnic group*	Malay	82	37	7	112
	Chinese	75	34	6	521
	Indians & Others	64	37	12	76
Type of living quarters	High cost	71	42	5	153
	Medium cost	75	32	8	374
	Low cost & Squatter houses	78	33	8	182
TOTAL		75	35	7	709

* Significant difference at $\alpha = 0.05$
n number of cases

Education plays an important role in increasing the knowledge of respondents about environmental pollution. As such respondents with tertiary education are two and half times more likely to know that environmental pollution not only affects their health but also the environment as a whole compared to those with none or primary education (Table 3.1). The difference in responses across educational categories is significant at the 5 per cent level.

Malay respondents are more concerned about the effects of environmental pollution on their health compared to other ethnic groups. On the other hand, Chinese respondents are least likely to know that environmental pollution affects their environment compared to other groups (Table 3.1). The difference in responses across ethnic group is significant at 5 per cent level.

Respondents from high cost houses are more likely to know that environmental pollution would affect the environment compared to respondents from other types of living quarters (Table 3.1). However the difference in responses across type of living quarter is not significant at the 5 per cent level.

3.2.2 Knowledge on Household Waste Disposal

Household waste usually ends up in landfills or garbage dump and is usually buried to ensure good health sanitation (DOE, 1996). This means that whatever is thrown away is likely to end up buried for a long time. Therefore, most household wastes end up as pollutant as only a small proportion end up being recycled.

Respondents were asked an open-ended question on what they think happen to the garbage that they throw away (Q.2.8, Appendix 2.1). About one out five respondents do not know what is the outcome of their household wastes (Table 3.2). Some 58 per cent of them believe that their household wastes would end up at garbage dump. Only some 22 per cent of respondents believe that their household wastes may end up being recycled. Only a small percentage of them recognise that their household wastes may actually end up as pollutant.

Male and female respondents have a different view on what happens to their household wastes. More female than male respondents believe that their household wastes ended up at waste centre which more male respondents think they would be recycled or become pollutant (Table3.2). The difference in response across the two groups is not significant at the 5 per cent level.

Table 3.2: Percentage of Respondents by the Responses of the Outcome Of Household Wastes by Selected Socio-Economic Variables

Characteristics		Waste-centre	Recycled	Pollution	Don't know	n
Gender	Male	55	24	6	22	308
	Female	62	21	2	23	401
Age Group	≤30	62	27	8	18	300
	31-40	60	24	3	23	152
	41-50	54	26	2	25	114
	51+	56	13	5	30	142
Education Level*	None & Primary	56	12	3	34	92
	Secondary	58	20	2	26	268
	Tertiary	61	18	5	16	347
Ethnic Group	Malay	60	30	4	17	112
	Chinese	58	20	4	24	521
	Indians & Others	62	26	4	21	76
Type of living quarters*	High cost	60	19	5	26	153
	Medium cost	57	24	2	23	374
	Low cost & Squatter Houses	62	22	7	20	182
Total		58	22	4	23	709

* Significant difference at $\alpha = 0.05$.
n number of cases

Regardless of age group, more than half of the respondents believe that their garbage would end up in the garbage dump. However, more respondents from the older

age group express ignorance of the outcome their garbage compared to respondents from the younger age group. For example, respondents from the age group of over 50 years are about twice as likely not to know what happens to their garbage compared to respondents from the age group 30 years and below (Table 3.2). Hence, respondents from age group below 31 years are more likely to know their household waste will be recycled compared to the older age groups. The difference in response across the age group is not significance at the 5 per cent level.

Education helps to improve the knowledge of respondents on the end result of their garbage. Respondents with none or primary education level are two times more likely not to know the end result of their garbage compared to respondents with tertiary education (Table 3.2). Nevertheless, regardless of education level, more than half of them believes that their garbage would end up in the garbage dump. The difference in response across educational levels is significant at the 5 per cent level.

Regardless of ethnic group, only 4 per cent of total respondents know that their garbage may actually end up as pollutant (Table 3.2). Malays are more likely to know that their garbage may end up being recycled compared to other ethnic groups. The difference in response across ethnic group is, however, not significant at the 5 per cent level.

It is interesting to highlight that respondents from squatter houses are most likely to acknowledge that their garbage may actually end up as pollutants compared to respondents from other types of living quarters (Table 3.2). One fourth of respondents from flats and medium cost houses respectively believe that their garbage would end up

being recycled. The difference in responses across different types of living quarters is significant at 5 per cent level.

Hence, it would appear that very few of the respondents are aware that what they throw away will end up as pollutants in the environment. Less than a quarter know that unwanted items can be recycled. It is therefore imperative that such information be provided to the public so that each of us begin to see the need to take responsibility for the state of the environment.

3.3 SOURCES OF ENVIRONMENTAL INFORMATION

It is important to know the sources of environmental information. This will enable improvement in the sources of information and identify the channels for necessary information.

3.3.1 Initiative in Obtaining Environmental Information

It is reported that some 75 per cent of respondents take the initiative to know more about the environmental information. More male than female respondents take the initiative to know more about environmental issues (Table 3.3). However, the difference is not significant at the 5 per cent level.

Younger respondents report a higher percentage taking the initiative to know more about environmental issues compared to older respondents. For example, some 84

per cent of respondents 30 years and below would find out more about environmental issues compared to some 65 per cent of respondents above 50 years (Table 3.3). The difference is significant at the 5 per cent level.

Education seems to increase the initiative of a person to know more about environmental issues. Respondents with none or only primary education level are 3 times less likely to find out more about environmental issues compared to those with tertiary education (Table 3.3). The difference across educational level is significant at the 5 per cent level.

Table 3.3: Percentage of Respondents who Take the Initiative to Know Environmental Issues by Selected Socio-Economic Variables

Characteristics		Percentage	n
Gender	Male	80	308
	Female	73	401
Age Group*	≤30	84	300
	31-40	77	152
	41-50	70	114
	51+	65	142
Education Level *	None & Primary	47	92
	Secondary	75	268
	Tertiary	85	347
Ethnic Group	Malay	82	112
	Chinese	75	521
	Indians & others	76	76
Type of living quarters	High cost	80	153
	Medium cost	76	374
	Low cost & Squatter houses	73	182
Total		76	709

*Significant difference at $\alpha = 0.05$
n number of cases

There is no significance difference in the percentage of respondents taking the initiative to know more about environmental issues among the various ethnic groups and type of living quarters. Some three quarters of or more of them would take the initiative to learn about environment issues. Hence, this willingness may easily be converted into participation if the public are informed about the consequences of excessive waste disposal.

3.3.2 Key Sources of Information

Respondents were asked to name all their sources of their environment information. Other than newspapers, magazines, television, radio and specific campaigns, information is also obtained from the Internet, friends, teachers, school and others.

Two major channel of environmental information are the newspapers and television. About every four out of five respondents get their information through the television and the newspapers. Some 48 per cent of respondents also obtained environmental information through magazines and radio. Only one fifth of them find out about environmental issues through environmental campaigns (Table 3.4).

Male and female respondents do not significantly differ in ways of getting environmental information. However, it is interesting to note that more female than male respondents obtain environmental information through radio and specific environmental campaigns (Table 3.4).

Younger persons are more likely to obtain environmental information through specific environmental campaigns compared to older cohorts (Table 3.4). They are also more likely to obtain information from newspapers and magazines compared to the older cohorts. Sources of environmental information is significantly different across age groups at the 5 per cent level.

Table 3.4: Percentage of Respondents who Obtained Information from Selected Sources by Selected Socio-Economic Variables

Characteristics		Newspapers	Magazines	TV	Radio	Campaign	Others	n
Gender	Male	85	46	80	45	18	9	308
	Female	83	49	82	51	26	10	401
Age Group*	≤30	86	58	80	54	33	12	300
	31-40	86	50	85	49	22	11	152
	41-50	83	44	79	48	13	9	114
	50+	80	30	80	36	9	3	142
Education Level*	None & Primary	65	16	73	39	8	6	92
	Secondary	86	44	83	48	18	9	268
	Tertiary	88	60	82	50	30	11	347
Ethnic Group	Malay	86	49	88	59	34	10	112
	Chinese	84	48	80	46	21	9	521
	Indians & Others	82	45	78	43	20	13	76
Type of living quarters	High cost	81	45	78	38	21	7	153
	Medium cost	85	50	80	50	21	12	374
	Low cost & Squatter houses	85	45	86	53	27	8	182
Total		84	48	81	48	23	10	709

* significant difference at $\alpha = 0.05$
n number of cases
Others include internet, books, teacher, school, friends, pamphlets, posters etc

Education enables a person to obtain information through the newspapers and magazines; those with higher education tend to use these sources compared to those with lower education (Table 3.4). For example, respondents with tertiary education are four times more likely to obtain environmental information through magazines compared to respondents with primary education. Sources of environmental information is significantly different at the 5 per cent level across educational groups.

Malays are more sensitive to specific environmental campaigns compared to other ethnic groups (Table 3.4). The difference is however not significant at the 5 per cent level.

Respondents who are from poor background are more likely to rely on the radio main as source of environmental information compared to residents from high and medium cost houses (Table 3.4). They are also more aware of the specific environmental campaigns compared to others. The difference however is not significant at the 5 per cent level.

3.4 ATITUDE TOWARDS PRESERVATION OF THE ENVIRONMENT

3.4.1 Self Perception

It is very important to know how a person view of his/her own role in the preservation of the environment as this would eventually affect behaviour and action. In response to a close-ended question whether they each play an important role in

Education seems to be positively related to how respondents view their own role in protecting the environment, those with none or primary education are two times more likely to perceive themselves as not important in preserving the environment compared to those with secondary or tertiary education (Table 3.5). However, it is interesting to note that about one out of every five respondents with tertiary education perceive that they have little to do with preservation of the environment. The difference in opinion about the importance of their roles is significant at the 5 per cent level.

Some 79 per cent of those living in low cost and squatter houses perceive themselves as playing an important role in preserving the environment compared to some 82 per cent of those staying in high cost houses (Table 3.5). However, the difference in opinion about the importance of their roles is not significant at 5 per cent level.

3.4.2 Attitude Towards Public Places

Public places such as fields, community centre, recreation centre, roads or even drains are normally considered under the care of the respective municipal or local town councils. In response to an open-ended question on who should be responsible for the care of public areas such as playgrounds, community hall, field and others (Q2.6, Appendix 2.1), some 56 per cent of them thought that the government should be responsible (Table 3.7). Some 39 per cent of the respondents think that the responsibility should fall on the community and some 5 per cent of them do not know who should be responsible for public places.

More male than female respondents think that the government should take care of public places (Table 3.4). However, the difference across gender is not significantly different at the 5 per cent level.

Older people are more likely to say that the government should be responsible for public places compared to younger people: 62 per cent of those above 50 years compared to 49 per cent of those 30 years and below (Table 3.6). On the contrary, younger people think that the responsibility should be borne by the community. The difference in opinion is significant across age groups at the 5 per cent level.

Table 3.6: Percentage of Respondents by Party Who Should be Responsible for Care of Public Place by Selected Socio-Economics Variables

Characteristics		Government	Community	Others	Don't know	n
Gender	Male	58	43	4	4	308
	Female	45	40	4	5	401
Age Group*	≤30	49	56	4	5	300
	31-40	49	40	2	3	152
	41-50	59	29	4	4	114
	51+	62	36	6	6	142
Education level*	None & Primary	50	46	6	11	92
	Secondary	48	42	5	5	268
	Tertiary	49	37	3	3	347
Ethnic Group	Malay	47	39	7	3	112
	Chinese	50	40	3	5	521
	Indians & Others	47	40	7	6	76
Type of Living Quarters*	High cost	70	40	2	4	153
	Medium cost	56	46	4	5	374
	Low cost & Squatter Houses	44	54	7	4	182
	TOTAL	56	39	4	5	709

* Significant difference at $\alpha = 0.05$.
Others include house developer, house owner etc
n number of cases

It is interesting to note that the lower the education level the more likely he/she believes that the community should take care of the public places (Table 3.6). The difference in opinion across educational levels is significantly different at the 5 per cent level.

There is no significant difference in opinion about who should be responsible in caring for public places among the ethnic group. However, there is a significant different in opinion among respondents of different type of living quarters. Those from richer background believe that the government should responsible in caring for public places. On the contrary, some 54 per cent of the respondents from low cost and squatter houses believe that the responsibility to care for public places should be borne by the community (Table 3.6). The difference in opinion is significant at the 5 per cent level.

3.5 CONCLUSION

It is found that most respondents link the effects of environmental pollution to health problems. They are more concern that environmental pollution would harm their health rather than the environment as a whole. Few respondents are aware that their garbage may actually end up as pollutants. The majority of them only know that their garbage will end in the garbage dump. They however, do not know what happens to their garbage after they reach the garbage dump.

Some 75 per cent of them would take the initiative to learn about environment issues especially through the television and the newspapers. Some 76 per cent of them

believe that they play an important role in preserving the environment. Yet, only some 39 per cent of respondents think that they should be responsible for the care of the public places. Therefore, knowledge and awareness of environmental issues may not necessarily increase participation in environmental preservation programmes.