

ENVIRONMENTAL CONCERN: BETWEEN CONSUMERS' AWARENESS AND WILLINGNESS FOR ATTITUDE CHANGE

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ABSTRACT

The objective of this paper is to discuss how Malaysian consumers perceive environmental issues and whether they are willing to change attitude to help and become a part of environmental problem's solution. From a study using young Malaysian respondents, we found that Malaysians are aware about the seriousness of environmental problems faced. However, they differ in terms of willingness to change attitude for the sake of slowing down pollution. The findings indicate that female, Malay, aged 20 and below are the ones that are more serious about helping out compared to the other groups. This has serious implications in our attempt to achieve the Agenda 21 objectives.

INTRODUCTION

Agenda 21 – or the Rio Declaration on Environment and Development, and the Statement of Principles for the Sustainable Management of Forests is a comprehensive plan of action that is to be taken globally, nationally, and locally by organisations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment. When it was declared in Rio de Janeiro (3-14 June) in 1992, more than 178 governments at the United Nations Conference (UNCED) adopted it. Following this, the Commission on Sustainable Development (CSD) was created in December 1992 to ensure the effectiveness of UNCED is followed through, and to also monitor and report on the implementation of the agreements at the local, national, regional and international levels.

In line with Agenda 21 objectives, the article is written to discuss how Malaysian consumers, perceive environmental issues, and to see whether they are willing to change some of their attitude and behaviour to help achieve at least a small part of this very big agenda. In itself, this study is fundamental to discover how environmental issues affect

and relate to consumers' behaviour. In particular, as it has tremendous economic impact in terms of market opportunity, attitude change and a safer environment which are in line with what Agenda 21 (UNCED) has set out to achieve.

LITERATURE REVIEW

The condition of the environment is badly deteriorating as can be seen from the spreading of air and water pollution, global warming, and unpredictable climate changes. However, the outcome of this is the increased concern for the environment among the public. For example, eight in ten Americans considered themselves to be environmentalists and half claimed to be strong ones with most acknowledged the need to shift their life style (Gutfield 1991). It appears that consumers are concerned about the environment, and are ready to exhibit purchase behaviour reflecting this concern (Polonsky et al. 1995) to support a "green" brand (Oyewole 2001). Environmentally conscious consumers were found to be very much willing to pay premium price to purchase environmental products (Dunlap and Scarce 1991; Michael Peters Group 1991). Women has been said as those who are more concerned about the environment than others (Murphy, Kangun and Locander 1978; Australian Professional Marketing 1994). Dobscha and Ozanne (2001) found that of the women interviewed who care deeply about nature from the ecofeminist point of view, it suggest that these women are forging an ecological self that affects their view of consumption and the marketplace. Thus, they tend to lead an ecological life style which directly challenge the traditional consumption (they are practicing the "consume less" because they consider themselves "I am not a consumer" as the "buy more" consumption style currently practiced). In doing so, they become the force of change in their relationships with family, friends, the workplace, and the community. In Malaysia, it was found that consumers are concern about their environment, and that they can be separated into three groups – strong believer, believer and non-believer (Abdul Wahid, Abustan and Karwi 2000; Abdul Wahid and Abustan 2001, 2002).

METHODOLOGY

As the objective of the research is to find out perceptions of young Malaysians about environmental issues and some of the solutions that may help the current existing problems, only those aged 40 years and below were invited to participate in the study. Although more than 1250 questionnaires were given out, only 440 were returned back and used in the analysis. More than 60 questions were asked covering their background, perception towards environmental issues and lifestyle. To fit in the scope of the study, only crosstabs and chi square analysis were used in the data analysis. It is important to note that what is reported in this paper covers only a small part of the descriptive analysis of the study concerning gender, age category and ethnic background of the respondents in regards to both awareness and willingness issues examined.

FINDINGS

The profile of the repondents are as follows. Of the total respondents analysed, the respondents that were categorised in the twenty years of age or below (49.9%) are nearly equal to those that are aged twenty one and above (50.1%). However, the samples tend to skew towards female (male 43.6%, female 56.1%) and is being dominated by the Malay

race (Malay 66.5%, Chinese 17.1%, Indian/Others 16.6%). The respondents come from all walks of life and from all over Malaysia.

Consumers' Awareness

Consumers' awareness of environmental issues are measured in terms of how respondents perceive the seriousness of the issues forwarded – covering both general and specific issues as shown by a series of statements asked in the questionnaire; i.e. perception of the pollution issue in general (A4 and A19 statements), the issue of pesticides on food (A18 statement), and the smog issue (A40 statement).

Three factors from the demographic background of respondents i.e. gender, age and ethnic background are used in the analysis to get a better picture of their perceptions. The crosstab and chi-square test results for all five statements are shown in Table 1 – 5 below.

Table 1: Pollution is presently one of the most critical problems facing this nation (A4) – How the demographics fare?

Awareness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.000*
Male	60 (31.3%)	31 (16.1%)	101 (52.6%)	192 (100%)	
Female	45 (18.2%)	11 (4.5%)	191 (77.3%)	247 (100%)	
Total Gender	105 (23.9%)	42 (9.6%)	292 (66.5%)	439 (100%)	
2. Age					0.530
20 and below	42 (19.2%)	16 (7.3%)	161 (73.5%)	219 (100%)	
21 and above	64 (29.0%)	26 (11.8%)	131 (59.3%)	221 (100%)	
Total Age	106 (24.1%)	42 (9.5%)	292 (66.4%)	440 (100%)	
3. Ethnicity					0.530
Malay	65 (22.3%)	26 (8.9%)	201 (68.8%)	292 (100%)	
Chinese	20 (27.7%)	10 (13.3%)	45 (60.0%)	75 (100%)	
Indian/Others	20 (27.8%)	6 (8.3%)	46 (63.9%)	72 (100%)	
Total Ethnic	105 (23.9%)	42 (9.6%)	292 (66.5%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

Table 1 shows the results between consumers' demographics and consumers' awareness of the environment in Malaysia today. The results show that overall, the majority of all gender, age and ethnicity groups agree that pollution is one of the most critical issues in Malaysia (more than 66%). Of this, female, and those aged 20 and below seemed to be more distinct compared to the other groups (around 77% and 73% respectively). The results for ethnicity indicate that Malay, Chinese and the Indian/Other races are quite similar in their responses about the seriousness of pollution in this country (more than 60% agreeable response).

From the chi-square analysis, we can see that only gender factor seems to be significant compared to age or ethnicity (sig. 0.000). Within the gender group, we can see that the males and females display quite different opinion to this issue. For example, only 52.6% male agree compared to 77% female, and that they seem to be dominating the neutral and do not agree responses (see their percentages of 16.1% and 31.3% respectively compared to 4.5% and 18.2% for female responses).

Table 2: I feel people worry too much about pesticide on food product (A18) – How the demographics fare?

Awareness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.248
Male	77 (40.1%)	38 (19.8%)	77 (40.1%)	192 (100%)	
Female	81 (32.8%)	60 (24.3%)	106 (42.9%)	247 (100%)	
Total Gender	158 (36.0%)	98 (22.3%)	183 (41.7%)	439 (100%)	
2. Age					0.254
20 and below	76 (34.7%)	56 (25.6%)	87 (39.7%)	219 (100%)	
21 and above	83 (37.6%)	42 (19.0%)	96 (43.4%)	221 (100%)	
Total Age	157 (36.1%)	98 (22.3%)	183 (41.6%)	440 (100%)	
3. Ethnicity					0.274
Malay	98 (33.6%)	69 (23.6%)	125 (42.8%)	292 (100%)	
Chinese	32 (42.7%)	18 (24.0%)	25 (33.3%)	75 (100%)	
Indian/Others	28 (38.9%)	11 (15.3%)	33 (45.8%)	72 (100%)	
Total Ethnic	158 (36.0%)	98 (22.3%)	183 (41.7%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

Table 2 results show that overall, more than 41% of the gender, age and ethnicity factors agree that people worry too much about pesticide on food product today. And that approximately 36% of them disagree with the statement. Indian/Other and Malays seemed to be those that are more agreeable compared to Chinese. No demographic factors seemed to be significant in any way from the Chi-Square analysis.

Table 3: I rarely ever worry about the effects of smog on myself and family (A40) – How the demographics fare?

Awareness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.020*
Male	107 (55.7%)	24 (12.5%)	61 (31.8%)	192 (100%)	
Female	169 (68.7%)	22 (8.9%)	55 (22.4%)	246 (100%)	
Total Gender	276 (63.0%)	46 (10.5%)	116 (26.5%)	438 (100%)	
2. Age					0.273
20 and below	145 (66.5%)	20 (9.2%)	53 (24.3%)	218 (100%)	
21 and above	131 (59.3%)	27 (12.2%)	63 (28.5%)	221 (100%)	
Total Age	276 (62.9%)	47 (10.7%)	116 (26.4%)	439 (100%)	
3. Ethnicity					0.498
Malay	190 (65.1%)	30 (10.3%)	72 (24.7%)	292 (100%)	
Chinese	47 (63.5%)	8 (10.8%)	19 (25.7%)	74 (100%)	
Indian/Others	39 (54.2%)	8 (11.1%)	25 (34.7%)	72 (100%)	
Total Ethnic	276 (63.0%)	46 (10.5%)	116 (26.5%)	438 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

From the descriptive results, the majority of all groups – be it gender, age or ethnicity disagree that they rarely ever worry about the effects of smog to him/herself and the family (more than 62%). This indicates that they do in fact care about the issue of smog. However, as can be seen from the Chi-Square results in Table 3, only within the gender factor that shows a significant difference of opinion between male and female (sig. 0.020).

And this is supported by a big difference of percentages shown among them (55% male vs. 68% female who disagree, and 31.8% vs. 22.4% who agree).

Table 4: The whole pollution issue has never upset me too much since I feel it's somewhat overrated (A19) – How the demographics fare?

Awareness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.001*
Male	107 (55.7%)	40 (20.8%)	45 (23.4%)	192 (100%)	
Female	171 (69.2%)	23 (9.3%)	53 (21.5%)	247 (100%)	
Total Gender	278 (63.3%)	63 (14.4%)	98 (22.3%)	439 (100%)	
2. Age					0.225
20 and below	146 (66.7%)	31 (14.2%)	42 (19.2%)	219 (100%)	
21 and above	132 (59.7%)	32 (14.5%)	57 (25.8%)	221 (100%)	
Total Age	278 (63.2%)	63 (14.3%)	99 (22.5%)	440 (100%)	
3. Ethnicity					0.181
Malay	187 (64.0%)	44 (15.1%)	61 (20.9%)	292 (100%)	
Chinese	53 (70.7%)	7 (9.3%)	15 (20.0%)	75 (100%)	
Indian/Others	38 (52.8%)	12 (16.7%)	22 (30.6%)	72 (100%)	
Total Ethnic	278 (63.3%)	63 (14.4%)	98 (22.3%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

According to results in Table 4, the majority of respondents from all gender (63.3%), age (62.3%) and ethnicity (63.3%) groups disagree that pollution issue is overrated which indicates that pollution issue is considered a problem to them. Similarly, we see again that male and female differs in their opinion about the statement (see Chi-Square result – 0.001) compared to the other age and ethnicity factors. From the percentages displayed in this table, we can see that female has the tendency to disagree with the statement (69.2% female compared to 55.7% male), whereas the male is more prone to take a neutral stand on this issue (20.8% male compared to 9.3% female).

Table 5: Pollution is not personally affecting my life (A9) – How the demographics fare?

Awareness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.206
Male	108 (56.3%)	36 (18.8%)	48 (25.0%)	192 (100%)	
Female	155 (63.0%)	32 (13.0%)	59 (24.0%)	246 (100%)	
Total Gender	263 (60.0%)	68 (15.5%)	107 (24.4%)	438 (100%)	
2. Age					0.184
20 and below	134 (61.5%)	38 (17.4%)	46 (21.1%)	218 (100%)	
21 and above	129 (58.4%)	30 (13.6%)	62 (28.1%)	221 (100%)	
Total Age	263 (59.9%)	68 (15.5%)	108 (24.6%)	439 (100%)	
3. Ethnicity					0.055
Malay	179 (61.5%)	50 (17.2%)	62 (21.3%)	291 (100%)	
Chinese	48 (64.%)	9 (12.0%)	18 (24.0%)	75 (100%)	
Indian/Others	36 (50.0%)	9 (12.5%)	27 (37.5%)	72 (100%)	
Total Ethnic	263 (60.0%)	68 (15.5%)	107 (24.4%)	438 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

When asked about whether the respondents think that pollution does not affect life, the findings again show that the majority of them from all gender, age and ethnicity group disagreed (see Table 5 where 59-60% of respondents disagree with the statement asked). And the Chi-Square test results show that there is no significant difference in opinion within the gender, age or ethnicity groups.

Summing up the results measuring consumers' awareness, the findings that we see in Table 1-5 indicate that young Malaysians are aware about environmental issues in this country. And gender factor seems to be a significant one that has to be noted compared to age or ethnicity. Female respondents seemed to be more concerned compared to males about the issues.

In the next section, we will describe the findings measuring consumers' perception of their willingness to change attitude and behaviour for the sake of saving the environment.

Consumers' Willingness for Attitude Change (Action)

To measure consumers' willingness for attitude change, some items in the questionnaire were focused on things that they, as an individual can do to help out in reducing or slowing down environmental problems today. The things that consumers can do can be something that they can do themselves, e.g. to sign petition or demonstrate for an environmental cause or something that they think they can persuade other parties to be doing, e.g. to force commercial advertisers to mention any ecological disadvantages of products if any. However, please note that although there are specific questions in the survey to measure the latter, this is not covered in this paper as the scope of this paper is to find out what they, as an individual self, are willing to do. The following Table 6 – 15 will show the descriptive results for consumers' willingness to change their attitude for environmental cause.

Table 6: I would be willing to sign a petition or demonstrate for an environmental cause (A13) – How the demographics fare?

Willingness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.001*
Male	73 (38.0%)	58 (30.2%)	61 (31.8%)	192 (100%)	
Female	53 (21.5%)	91 (36.8%)	103 (41.7%)	247 (100%)	
Total Gender	126 (28.7%)	149 (33.9%)	164 (37.4%)	439 (100%)	
2. Age					0.039*
20 and below	51 (23.3%)	83 (37.9%)	85 (38.8%)	219 (100%)	
21 and above	75 (33.9%)	67 (30.3%)	79 (35.7%)	221 (100%)	
Total Age	126 (28.6%)	150 (34.1%)	164 (37.3%)	440 (100%)	
3. Ethnicity					0.648
Malay	82 (28.1%)	105 (36.0%)	105 (36.0%)	292 (100%)	
Chinese	22 (29.3%)	25 (33.3%)	28 (37.3%)	75 (100%)	
Indian/Others	22 (30.6%)	19 (26.4%)	31 (43.1%)	72 (100%)	
Total Ethnic	126 (28.7%)	149 (33.9%)	164 (37.4%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

The responses as can be seen in Table 6's findings, are quite scattered in all do not agree, neutral and agree responses. And these are similar for all gender, age or even ethnicity group. Although the majority agreed to sign petition or demonstrate for an environmental cause, but the percentages are quite low (only around 37% for all groups). Many respondents tried to play safe by being neutral (around 33-34% for all groups), whereas the rest of the group (around 28%) disagreed with the suggestion. However, looking closely, there are significant difference within the gender and age groups as reflected by the chi-square analysis (0.001 and 0.039 respectively) and the percentages from the cross tab reflect these differences. Within the gender group for example, we can see that more males tend to disagree (38.0% males vs. 21.5% females) whereas the females are more prone towards agreeing with the statement (41.7% females vs. 31.8% males). And that there are more people either disagreeing (23.3% twenty and below vs. 33.9% twenty one and above) or taking a neutral stand (37.9% vs. 30.3% respectively) within the age factor.

Table 7: I'd be willing to ride a bicycle or take a bus to work or study in order to reduce air pollution (A16) – How the demographics fare?

Willingness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.282
Male	75 (39.1%)	53 (27.6%)	64 (33.3%)	192 (100%)	
Female	81 (32.8%)	67 (27.1%)	99 (40.1%)	247 (100%)	
Total Gender	156 (35.5%)	120 (27.3%)	163 (37.1%)	439 (100%)	
2. Age					0.059
20 and below	66 (30.1%)	63 (28.8%)	90 (41.1%)	219 (100%)	
21 and above	90 (40.7%)	58 (26.2%)	73 (33.0%)	221 (100%)	
Total Age	156 (35.5%)	121 (27.5%)	163 (37.0%)	440 (100%)	
3. Ethnicity					0.057
Malay	91 (31.2%)	82 (18.7%)	119 (40.8%)	292 (100%)	
Chinese	30 (40.0%)	21 (28.0%)	24 (32.0%)	75 (100%)	
Indian/Others	35 (48.6%)	17 (23.6%)	20 (27.8%)	72 (100%)	
Total Ethnic	156 (35.5%)	120 (27.3%)	163 (37.1%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

Table 7 shows the results of Chi-Square test between age and consumers' willingness to ride a bicycle or take a bus in order to reduce air pollution in the environment. The results show that there is no significant difference between consumers' agreement level about the statement asked among the different age groups (Chi-square sig. value is 0.059). We can see that the percentages for both groups in all three categories of response are well spread. Interestingly, it seems that those who are 20 and below who are more than willing to do this act (41.1% agreeable) compared to the majority of those in the 21 and above age category who are not willing to do this act (33.0%).

For ethnicity and consumers' willingness to ride a bicycle or take a bus, the results show that there is no significant difference in the responses among Malay, Chinese or Indian/Other groups (sig. value is 0.057). We can see that the percentages for all three groups in all three categories of response are well spread. Interestingly, it seems that only the Malay ethnic group show willingness to do this act (40.8% agreeable) compared to both the Chinese (32.0%) and Indians/Others (27.8%), who seemed to be more disagreeable (Chinese 40.0% and Indians/Others 48.6% vs. Malay 31.2%).

In terms of gender, the results in Table 6 show that there is no significant difference between consumers' agreement level about the statement asked among the different gender groups (sig. level 0.282). We can see that the percentages for both groups in all three categories of response are well spread with only slight differences among them (e.g. disagree: male 39.1%, female 32.8%; agree: 33.3% vs. 40.1% respectively).

Table 8: I would be willing to have my laundry less white or bright in order to be sure that I was using a non-polluting laundry product (A 21) – How the demographics fare?

Willingness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.657
Male	62 (32.3%)	66 (34.4%)	64 (33.3%)	192 (100%)	
Female	90 (36.4%)	81 (32.8%)	76 (30.8%)	247 (100%)	
Total Gender	152 (34.6%)	147 (33.5%)	140 (31.9%)	439 (100%)	
2. Age					0.541
20 and below	74 (33.8%)	79 (36.1%)	66 (30.1%)	219 (100%)	
21 and above	78 (35.3%)	69 (31.2%)	74 (33.5%)	221 (100%)	
Total Age	152 (34.5%)	148 (33.6%)	140 (31.8%)	440 (100%)	
3. Ethnicity					0.969
Malay	99 (33.9%)	97 (33.2%)	96 (32.9%)	292 (100%)	
Chinese	26 (34.7%)	26 (34.7%)	23 (30.7%)	75 (100%)	
Indian/Others	27 (37.5%)	24 (33.3%)	21 (29.2%)	72 (100%)	
Total Ethnic	152 (34.6%)	147 (33.5%)	140 (31.9%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

From Table 8, we can see that the respondents are quite divided on their responses. For example, where we can see an approximate of 34% for all gender, age, and ethnicity groups did not agree to have their laundry less white by supporting the use of a non-polluting product, around 31-32% of them tend to agree with the statement. Similarly, quite as many of them (around 33-34% for all groups) tend to take a neutral stand. This is the reason for why the Chi-Square results are insignificant for all groups.

Table 9: I would be willing to pay one ringgit more each month for electricity if it meant cleaner air (A 31) – How the demographics fare?

Willingness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.000*
Male	68 (35.4%)	30 (15.6%)	94 (49.0%)	192 (100%)	
Female	42 (17.0%)	38 (15.4%)	167 (67.6%)	247 (100%)	
Total Gender	110 (25.1%)	68 (15.5%)	261 (59.5%)	439 (100%)	
2. Age					0.288
20 and below	49 (22.4%)	38 (17.4%)	132 (60.3%)	219 (100%)	
21 and above	62 (28.1%)	30 (13.6%)	129 (58.4%)	221 (100%)	
Total Age	111 (25.2%)	68 (15.5%)	261 (59.3%)	440 (100%)	
3. Ethnicity					0.641
Malay	69 (23.6%)	50 (17.1%)	173 (59.2%)	292 (100%)	
Chinese	21 (28.0%)	8 (10.7%)	46 (61.3%)	75 (100%)	
Indian/Others	20 (27.8%)	10 (13.9%)	42 (58.3%)	72 (100%)	
Total Ethnic	110 (25.1%)	68 (15.5%)	261 (59.5%)	439 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

In terms of monetary sacrifice, the results in Table 9 above show that the majority of respondents agree to pay an extra one ringgit for their electricity in return for cleaner air (around 59% for all gender, age and ethnicity groups). Going into specific detail, female respondents were found to be more agreeable (around 67%) to this suggestion than the male counterpart (around 59%). However, the male respondents seems to be more disagreeable than female (around 35% male compared to only 17% female). And thus, the result for Chi-Square is such that there is significant difference of opinion within the gender group (sig. 0.000).

Table 10: I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient (A 38) – How the demographics fare?

Willingness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.015*
Male	54 (28.1%)	47 (24.5%)	91 (47.4%)	192 (100%)	
Female	41 (16.7%)	66 (26.8%)	139 (56.5%)	246 (100%)	
Total Gender	95 (21.7%)	113 (25.8%)	230 (52.5%)	438 (100%)	
2. Age					0.016*
20 and below	35 (16.1%)	58 (26.6%)	125 (57.3%)	218 (100%)	
21 and above	60 (27.1%)	56 (25.3%)	105 (47.5%)	221 (100%)	
Total Age	95 (21.6%)	114 (26.0%)	230 (52.4%)	439 (100%)	
3. Ethnicity					0.017*
Malay	63 (21.6%)	62 (21.2%)	167 (57.2%)	292 (100%)	
Chinese	16 (21.6%)	23 (31.1%)	35 (47.3%)	74 (100%)	
Indian/Others	16 (22.2%)	28 (38.9%)	28 (38.9%)	72 (100%)	
Total Ethnic	95 (21.7%)	113 (25.8%)	230 (52.5%)	438 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

When asked whether the respondents are willing to stop buying from polluter producers, we can see from Table 10 that the majority of them (around 52% for all demographic groups) were willing to do so. Those who agree seem to have the following background – they are female, 20 years of age and below, and of the Malay origin. The Indians/Others show the most neutral responses of all races (around 38.9% compared to 21.2% and 31.1% for both Malay and Chinese). Thus, we can also see that the Chi-Square results for all gender, age and ethnicity groups are significant (0.015, 0.016, and 0.017 respectively).

Table 11: I'd be willing to make personal sacrifices for the sake of slowing down pollution even though the immediate results may not seem significant (A 39) – How the demographics fare?

Willingness Issue	Do not agree	Neutral	Agree	Total	Sig.#
1. Gender					0.025*
Male	56 (29.2%)	54 (28.1%)	82 (42.7%)	192 (100%)	
Female	45 (18.4%)	73 (29.8%)	127 (51.8%)	245 (100%)	
Total Gender	101 (23.1%)	127 (29.1%)	209 (47.8%)	437 (100%)	
2. Age					0.079
20 and below	43 (19.8%)	59 (27.2%)	115 (53.0%)	217 (100%)	
21 and above	58 (26.2%)	69 (31.2%)	94 (42.5%)	221 (100%)	
Total Age	101 (23.1%)	128 (29.2%)	209 (47.7%)	438 (100%)	

3. Ethnicity					0.305
Malay	63 (21.6%)	81 (27.7%)	148 (50.7%)	292 (100%)	
Chinese	21 (28.4%)	26 (35.1%)	27 (36.5%)	74 (100%)	
Indian/Others	17 (23.9%)	20 (28.2%)	34 (47.9%)	71 (100%)	
Total Ethnic	101 (23.1%)	127 (29.1%)	209 (47.8%)	437 (100%)	

Level of significance using chi-square statistical test ($p < 0.05$)

Table 11 displays the results of a statement when respondents were asked whether they are willing to make personal sacrifices in order to slow down pollution although they may not be able to see the results of that sacrifices immediately. Of these, only within the gender group that we can see the significant difference (sig. 0.025) of the Chi-Square test result. The difference can be seen in terms of the agree (male 42.7% vs. 51.8% female) and the disagree (male 29.2% vs. 18.4% female) responses.

In sum, the findings from Table 6-11 indicate that the respondents are quite reluctant to be personally involved to help out the environment. The responses to questions asked about their willingness to have their laundry less white or less bright in support of using green products, or their willingness to ride a bicycle or take a bus to reduce pollution are examples of their reluctance. In terms of willingness, we can see that gender, age, and ethnicity sometimes do play a role. But, the gender factor seems to be more significant than the others.

DISCUSSION

Agenda 21 is supposed to be comprehensive and to include all human beings despite gender, age or even ethnic background. The findings of the study have shown that some demographic factors – in particular gender do have a role in identifying whether consumers are concerned about the environment and whether they are willing to change their attitude and behaviour to help slowing down pollution. In terms of awareness, the results of this study support previous findings (e.g. Murphy, Kangun, and locander 1978; Australian Professional Marketing 1994; Abdul Wahid, Abustan and Karwi 2000; Abdul Wahid and Abustan 2002).

If we compare the results from all the tables between awareness (Table 1-5) and willingness (Table 6-11), we can see that the results are a bit disappointing. Although the respondents in general possess high awareness of environmental issues, however, when it comes to implementing something to solve the problem at hand, not quite as many are willing to take the responsibility to do it (the responses are rather lukewarm). This is despite their demographic background i.e. male-female; Malay-Chinese-Indians/Others, or even the different age groups. Thus, the results only partly supported Gutfield's study (1991) – in terms of awareness but not willingness to change attitude.

This study has managed to identify that among young Malaysians, those who are aware about the state of the environment have these characteristics – they are female, twenty years of age or below, and of Malay origin. Similarly, they are also the ones who are more willing to change attitude and behaviour in exchange of better environment. Thus, we may have to question as to what would happen to the Malaysian environment in particular, if the male, over twenty years, and of the Chinese or Indian/Other background are unwilling to help out and play their part? Something has to be done to attract these groups' attention. In fact, the low percentages (on average, only around 50%) reflected at nearly all

statements measured for actual action and sacrifice (e.g. to have laundry less white, to ride bicycle or take a bus, etc.) from all the groups indicate that high awareness does not mean that one would be willing to help out. Young Malaysians are the generation that is going to live long into the future, and if they do not care, it would be impossible to achieve Agenda 21 in the near future. Thus, if something is not done right, and fast, the result would be disastrous.

From what is revealed in the study, while continuous campaigns about the environment should be done, any dissemination of knowledge about the environment and change of attitude supporting the save the environment campaign made by the governmental authorities and NGOs should be carefully planned so that they have the ability to make an impression on the different group of consumers. A campaign using more emotional appeal may make a good impact on female groups as they are the ones who seem to be portraying a positive opinion about both awareness and willingness for change. Thus, the likelihood of success will be much higher with the female group, and if they are captured, they would be one of the best 'attitude change' agents to promote environmental awareness in this country, in particular to their family and friends. For the rest of the group who are quite reluctant and sceptical, an appeal using a fact and functional approach would be more appropriate to be used.

IMPLICATIONS OF THE STUDY

The study has provided an in-depth understanding of the matching of young Malaysian profile with aspects of environmental concern (i.e. awareness and willingness to act on the problem perceived). The findings of this study have several implications, which would undoubtedly be beneficial to the government and other parties that are involved and responsible to see that Agenda 21 is achieved.

In the context of Malaysia, we know that young Malaysians are well aware about the environmental problems in this country. However, they are quite reluctant to do something about it. They need to be pushed and motivated to help out. It is important for the government and NGOs to play their role right as the findings indicate that environmental campaigns should focus on the action part – what people can and should do rather than awareness part – what is pollution, how pollution come into being, etc.

In addition, we now know that female is the most sensitive to environment issues and most willing to participate and change their current life style into something that can help the environment better. This may be due to her nature as a woman that makes her to be more observant, caring and sensitive. This fact should be used by environmental campaigners to find the most suitable and effective campaign and marketing programs to be launched or re-launched to the public. As said earlier, an emotional appeal would suit this group better. And they should be a target for the campaign of buying green products in Malaysia. As Dobscha and Ozanne (2001) noted, "...women are often found at the forefront of environmental movements. Many different groups are protesting the environmental degradation that is endemic in their everyday lives..."

The comparison between ethnic groups in Malaysia show that the Malays are the one more prone to changes and sacrifices. The Indians/Other, seemed to be more reluctant. Therefore, to ensure that every race in Malaysia participate, government agencies and NGOs should develop different marketing strategies in their campaigns to suit the level

of motivation of the ethnic groups. For instance, different promotional theme could be developed targeted to these different groups on different environmental issue e.g. save water campaign.

The findings also imply that the government and other parties involved in the environmental awareness campaign should always track and monitor the level of environmental concern of Malaysians as a whole, not only to the young ones as has been done in this study. Depending on the outcome, they should find the most effective and efficient marketing strategies to be developed and implemented as necessary. Unless this is done, we are going to waste millions of dollars on campaigns that are not successful because they basically 'don't work' (e.g. remember the Recycle Campaign in 1997 which has to be relaunched again in year 2000), and if this happens, the chances are, we will keep on dreaming about achieving Agenda 21. Malaysians need to be educate, and re-educate from time to time.

As for the marketing of the green products to Malaysians, further research needs to be done to find out the effects of green marketing on Malaysian consumers, e.g. the young ones. What is shown from the finding of this study is not at all encouraging as young Malaysians are reluctant to adopt green products (e.g. they are reluctant to have their laundry less white).

In itself, this study has provide an opening as to how young Malaysians perceive environmental issues which is fundamental to discover how 'green' products affects and relate to (young) consumers' behaviour. If their attitude could be changed, then we are looking in particular, tremendous economic impact in terms of market opportunity and a safer environment which are in line with what Agenda 21 (UNCED) has set out to achieve.

ACKNOWLEDGEMENT:

The project was funded by USM Short Term Grant (Pengguna Malaysia dan isu Persekitaran: Satu Kajian Pilot).

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