

Association between Health Literacy and Demographic Factors among Adolescents in Malaysia

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Introduction

Health literacy can be regarded as a measure of the extent an individual is able to obtain and understand health information that could be used in making decisions related to healthcare. Information on health-related issues is acquired through a learning process, often from reading health education materials. The ability to read and apply the acquired information helps to develop one's knowledge on health. People with poor literacy may have low awareness of health education, little knowledge about health services, and do not know how to deal with chronic diseases (Nutbeam, 2009). With adolescents aged 10-19 making up 21.0% of the total population in Malaysia, adolescent health issues are very important to the country (Department of Statistics Malaysia, 2014). These matters are accordingly addressed by various ministries, government bodies, private sectors and NGOs, as well as the major agencies, namely the Ministry of Health, Ministry of Education, Ministry of Youth and Sports and Ministry of Women, Family and Community Development. Various programs and activities of these agencies are designed to cater specifically to the needs of adolescents. To date, there is little information regarding the level of health literacy among adolescents in Malaysia.

The present study was aimed at determining the extent of the association between health literacy and demographic factors among adolescents in the Malaysian context. Demographic characteristics and socio-structural characteristics such as educational level, race, ethnicity, and family size are categorized as predisposing factors. They represent the biological imperatives that determine the likelihood of an individual's needs regarding health services, and how they can cope with health problems. In this study, demographic factors such as age, gender, ethnicity, place of residence, and household income were identified as factors that could affect the level of adolescents' health literacy.

Methods

Participant recruitment and characteristics

A survey was carried out via questionnaires. The targeted respondents were secondary school students aged between 15 to 17 years (M age=16.1, SD = .467). The survey period was from May to July 2016. A total of 506 students from eight schools in the Klang Valley and state of Selangor in Malaysia participated in this study. The research instrument used was adapted from Nutbeam (2000) and Osborne, Batterham, Elsworth, Hawkins, Buchbinder (2013).

Results

The demographic factors covered age, gender, ethnicity, place of residence, and household income, as shown in Table 1. There were 385 respondents aged 16 (76.1%), followed by 102 respondents aged 17 (20.2%), and 19 respondents (3.8%) aged 15. There were 285 female respondents (56.3%), while 221 respondents were male (43.7%). The ethnicity of the respondents was as follows: Malay (68.2%), Chinese (13%), Indian (18.2%) and others (0.6%). With regard to the place of residence, 253 (50.0%) of the respondents were from the city and 247 (48.8 %) of the respondents from towns, with the remainder from rural areas (1.2%). For the household income category, the biggest group (39.6%) were from households earning below RM 3000 per month, followed by those with incomes from RM 3001– RM 5000 (30.2%), RM 5001–RM7000 (9.9%), and more than RM 7000 (20.3%).

Table 1: Profile of the respondents

Demography	Frequency	Percent (%)
Age		
15	19	3.8
16	385	76.1
17	102	20.2
Gender		
Male	221	43.7
Female	285	56.3
Ethnicity		
Malay	345	68.2
Chinese	66	13
Indian	92	18.2
Others	3	0.6
Residence		
City	253	50
Town	247	48.8
Rural	6	1.2

Household income		
Less RM 3000	200	39.6
RM 3001 – RM 5000	153	30.2
RM 5001 – RM 7000	50	9.9
More than RM 9000	103	20.3

Table 2 shows the level of health literacy among adolescents, with the scoring as follows: low (1.00 - 2.33), moderate (2.34 - 3.66) and high (3.67 – 5.00). The results showed more than half of the respondent had a moderate level of health literacy (56.3%), followed by a high level (42.1%) and a low level (1.6%). The mean score for health literacy level among adolescents in this study was ($M=3.56$, $SD=0.54$).

Table 2: Level of health literacy among adolescents

Level	<i>F</i>	%	Mean	SD
Health Literacy Level			3.56	.54
Low	8	1.6		
Moderate	285	56.3		
High	213	42.1		

Table 3 shows a cross-tabulation of demographics factors and health literacy level. Gender was cross-tabulated with health literacy level. This table shows the distribution by gender with more than half of the respondents (56.5%) being female and male (43.5%). Female respondents showed a higher level of health literacy (44.7%) compared to male respondents (38.6%). Table 3 also shows a cross-tabulation of ethnicity and the level of health literacy. According to the responses in the questionnaire, the Malay group (51.9%) had a moderate level of health literacy while 46.4% of them had a high level. The Chinese respondents had moderate (75.8%), high (22.7%) and low (1.5%) levels of health literacy. For the Indian group, more than half of the respondents had a moderate level (59.8%), while 39.1% had a high level and 1.1% had a low level of health literacy. The results of this cross tabulations table were also examined to see if there was an association between place of residence and level of health literacy among adolescents. More than half of the adolescents who lived in the city showed a moderate level of health literacy (51.4%), as did the respondents who lived in town (60.6%). The results also indicated that the respondents who lived in the city had a slightly higher level of literacy (47.1%) compared to the respondents from town (37.8%). The last cross tabulation was household income with health literacy level. With regard to the respondents from households with incomes below RM3000 per month, 56.2% of them had a moderate level of health literacy, and only 23.8% had a high level. The results also indicated that

in the group with household incomes of above RM5000, 53.4% of the respondents showed a high level of health literacy.

Table 3: Cross-tabulation of gender, ethnicity, residential and household income with the level of health literacy among adolescents

		Health Literacy Level			Total
		Low	Moderate	High	
Gender	Male	6 2.73%	129 58.64%	85 38.64%	220 43.5%
	Female	2 0.70%	156 54.55%	128 44.76%	286 56.5%
Ethnicity	Malay	6 1.74%	179 51.88%	160 46.38%	345 68.2%
	Chinese	1 1.52%	50 75.76%	15 22.73%	66 13.0%
	India	1 1.09%	55 59.78%	36 39.13%	92 18.2%
	Others	0 0.0%	1 33.33%	2 66.67%	3 0.6%
Residential	City	4 1.59%	129 51.40%	118 47.1%	251 50.5%
	Town	4 1.63%	149 60.6%	93 37.8%	246 49.5%
Household income	Less RM 3000	2 1%	120 60.30%	77 38.70%	199 39.4%
	RM 3001 - RM 5000	3 1.96%	86 56.21%	64 41.83%	153 30.3%
	RM 5001 - RM 7000	0 0.0%	23 46%	27 54%	50 9.9%
	RM 7001 - RM 9000	0 0.0%	18 47.37%	20 52.63%	38 7.5%

Discussion

This study identified the gap in the research, practice and policies related to health literacy among adolescents in Malaysia. The findings from the present study on health literacy revealed a moderate health literacy level among adolescents, which may be attributed to, or compounded by, inadequate health care and health promotion. This finding also supported the effort made by the Ministry of Education Malaysia to introduce health education as a school subject in 2001. The socio-demographic factors impacting health literacy were age, gender, ethnicity, place of residence, and household income. In this study, the female respondents showed a higher level of health literacy compared to the male respondents. Gender differences are often mutually associated

with socioeconomic circumstances. Those who are exposed to health risks often have limited access to health information and services, with the attendant economic consequences of ill-health. The differences in gender or sex have different control over resources and decision-making power in the family and community as well as the role that society has assigned to them (Ostlin, Eckermann, Mishra, Nkowane & Wallstam, 2006).

Results of this study also showed a slight ethnic-based difference in the higher level of health literacy. This was consistent with previous studies showing that ‘ethnicity or race can be included as a demographic characteristic to allow for the responsibility or cultural, taste, diet or religious differences’ in relation to possible exposure to health risk behavior (Amarasinghe, D’Souza, Brown, Oh, Borisova, 2009) The results also showed that the place of residence influenced health literacy level, thus suggesting that the physical environment might play a role in adolescents’ health literacy. Past research also found seeking and obtaining health information among the rural communities was very much driven and shaped by factors such as socio-demographic background (Ruggiero, Gros, McCauley, de Arellano, & Danielson, 2011). In this study, not surprisingly, respondents who lived in the city had relatively higher levels of health literacy. One of the predictors of the level of health literacy in this study was household income. The results showed that respondents from lower income households had comparatively lower health literacy levels. Individuals might be at risk due to insufficient access to healthcare services when they fall into the group of low family income (Inkelas, Newacheck, Olson, Zuckerman, Schuster, 2008). This finding was also in line with DeWalt, Berkman, Sheridan, Lohr, & Pignone, (2004) who observes that a low level of health literacy was often due to low socio-economic status.

Conclusion and Recommendations

In conclusion, this study shows that there are associations between health literacy and demographic factors among adolescents in Malaysia. To enhance the level of health literacy among adolescents, the government and other agencies related to health care should ensure that demographic factors are taken into account when dealing with health literacy. Nevertheless, a more comprehensive study is needed to identify other socio-demographics factors that should be taken into consideration so that the young people can benefit fully from programs and activities which are designed by government and other agencies to cater specifically to raise the level of health literacy

of adolescents. There are limitations in this study. As rigorous statistical analyses were not performed on the data obtained, it was only possible to discern general trends regarding how demographic variable might impact health literacy. Nevertheless, the results from this study would provide a guide to focus on specific demographic aspects in a follow-up study.

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