Factors Affecting Health-Promoting Lifestyles Among Community Residents at East Gyogone Ward, Insein Township

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Abstract

Background: Non-communicable diseases (NCDs) are becoming major challenges for health professionals. Health-promoting lifestyles (HPL) are one of the main criteria for determining health and recognized as the main factor affecting the development of chronic NCDs. This study aimed to determine factors affecting HPL practices among community residents.
Methods: A cross-sectional descriptive study was conducted in Insein Township, Yangon, Myanmar. A total of 194 participants were recruited by using systematic sampling method, and self-administered questionnaires for sociodemographic characteristics and Health-Promoting Lifestyle Profile II were used for data collection. Independent sample *t*-test and one-way analysis of variance were employed in the data analysis.
Results: The overall mean score for HPL was 126.67 ± 21.29. The participants performed best in the spiritual growth subscale (25.1 ± 5.08) but worst in the physical activity subscale (14.23 ± 4.46). More than half (56.70%) of them had moderate HPL level. Participants' HPL showed significant associations with education level, occupation, total family income per month, perception of health status, smoking, and drinking alcohol status ($p < 0.05$).
Conclusions: This study highlights the needs for redesigning health promotion programs to increase awareness of community residents on HPL, to empower them in developing HPL, and to apply them in their everyday lives.

Keywords: community residents, health-promoting lifestyles, health promotion programs

INTRODUCTION

Health promotion is an important determinant of individual health status, which held the individual responsible for his own health.[1] Health-promoting lifestyles (HPL) are considered essential for humans, and their HPL practices are the most important factors in promoting health and in preventing disease and mortality.[2] At present, improving HPL is a basic requirement in the society.[3] HPL are activities motivated by the desire to protect or promote health and one of the main criteria for determining health, which is recognized as the main factor in the development of diseases. Observing such behaviors by the community prevents development of various diseases and has potential effect on promoting health and increasing quality of life (QoL).[4] HPL include personal habits, behaviors, or practices of an individual to promote one's own health in the domains of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management.

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Non-communicable diseases (NCDs), being a silent pandemic, is systemically replacing CDs as the leading cause of morbidity and mortality.[5] At present, NCDs are responsible for more than 75% of deaths worldwide.[6] In the South East Asia Region (SEAR), 8.5 millions of people die from NCDs every year and is likely to increase to 12.5 millions by 2030.[7] The relative death rate from NCDs grew substantially in most SEAR countries, but it grew most quickly in Myanmar.[8]

In Myanmar, NCDs are responsible for 40% of total deaths in 2008 and 59% of those in 2012, which exceeds those of CDs and maternal, perinatal, and nutrition conditions.[8] All NCD-related mortality occur in 737.4 per 100,000 men and 570.5 per 100,000 women.[9] The prevalence of behavioral risk factors in men and women was as follows: current tobacco smoking, 38% and 7%; total alcohol consumption in liters, 1.4% and 0.0%; increased blood pressure, 31.1% and 26.7%; obesity, 1.9% and 6.0%, respectively.[10] The NCD burden in Myanmar, a developing country, is huge.[11] By 2030 developing countries will have eight times more lifestyle-related deaths.[12] Myanmar is also facing double burden of diseases owing to demographic and socioeconomic transition, lifestyle changes, increasing health risk

behaviors, increasing incidence of NCDs, and high mortalities.[13]

Prevention of NCDs is feasible by empowering individuals, families, and communities to adopt HPL, such as avoiding tobacco smoking and alcohol intake, eating a healthy diet including plenty of vegetables and fruits, engaging in regular physical activity to maintain body weight, and managing mental stress.[14] The community that can assimilate HPL in daily living can protect its residents from the occurrence of NCDs, subsequently reduce the burden of NCDs, and thus have a high-quality and contented life.[4] Health professionals who have focused on treating diseases are now concerned with preventive activities, provision of health care through lifestyle promotion, and elimination of factors that negatively affect human health promotion in any way.[15] However, the prevalence of NCDs gradually increased, which may be due to sociodemographic transitions and changing HPL patterns of populations associated with urbanization. Thus, it is interesting to determine the level and HPL practices of community residents. In addition, only a few studies have focused on HPL of communities in Myanmar. Therefore, this study aimed to provide information about the current personal practice of HPL among community residents. The findings of this study can guide health professionals in identifying the strength and weakness of HPL practices by community residents and will be helpful in developing health education programs regarding HPL and primary prevention activities among the population.

METHODS

A cross-sectional descriptive study was carried out to describe factors that affect HPL among the community residents in East Gyogone Ward, Insein Township, Yangon Region, Myanmar, from May 2017 to September 2017. This study was approved by the Ethics and Research Committee of University of Nursing, Yangon. Informed consent was obtained from each participant before data collection.

Participants aged 18–40 years who actually lived in the East Gyogone Ward, who had good cognitive functioning (which means absence of mental problems), who were willing to participate in the study, and who had the ability to understand written or spoken Myanmar language were recruited. Individuals with illness and pregnant women were excluded. The formula of Lwanga and Lemeshow (1991)[16] was applied to calculate the sample size. For attrition rate, additional participants (10%) were added for possible loss of participants.[17] Therefore, the sample should include 194 participants. Participants were recruited using a systematic sampling method. First, the researcher listed the household numbers of each part of the Gyogone Ward. The sampling interval was then determined, and the interval was 9. The number of the first participant to be included in the sample was chosen randomly by blindly picking one out of the nine pieces of paper, numbered 1 to 9. Number 3 was picked for this study, so every 9th household was included in the sample, starting with household number 3 until required sample size was met.

Structured questionnaires were used in this study and consisted of two parts: 10 items of sociodemographic characteristics, which were developed by the researcher, and 50 items of Health-Promoting Lifestyle Profile II (HPLP II) developed by Walker *et al.*[18] It contained 52 items originally, and HPL are measured in six subscales: i.e., health responsibility (9 items), physical activity (8 items), nutrition (9 items), spiritual growth (9 items), interpersonal relations (9 items), and stress management (8 items). In this study, two questions were omitted ("Reach my target heart rate when exercising" from the physical activity subscale and "Feel connected with some forces greater than myself" from the spiritual growth subscale) by the permission of the correspondent instrument developer, and only 50 questionnaires were used because only relevant instrumental items were chosen. All items of the scale were stated positively; there was no negative question. These items were scored based on a 4-point Likert scale with four possible responses: 1 (never), 2 (sometimes), 3 (often), and 4 (routinely). The original English version was translated in Myanmar. The item-level content validity index ranged from 0.8 to 1, while the scale-level content validity index of the questionnaires ranged from 0.95 to 1. The research instrument demonstrated Cronbach's alpha coefficient of 0.93 for the overall scale and 0.67–0.84 for the six subscales.

Collected data were analyzed using Statistical Package for the Social Sciences version 22 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to analyze sociodemographic characteristics of the participants. For inferential statistics, independent sample t-test and one-way analysis of variance were used to determine the association of the participants' characteristics with HPL. In this study, assumption was assessed by Pearson's second skewness coefficient formula to evaluate the normality testing of variables. In the testing of normality, the skewness value was –0.109. When data were normally distributed, skewness and kurtosis values were 0, the value between +2 and –2 were considered acceptable to prove normal distribution.[19] Thus, it can be assumed that the data were normally distributed. A $p < 0.05$ was considered to indicate significance. According to Al-Khawalde (2014),[20] the total scores of HPL were divided into three levels: <60% of the given score (50–119) as low level, 60%–75% of the given score (120–150) as moderate level, and >75% of the given score (151–200) as high level.

RESULTS

The sociodemographic characteristics of the 194 community residents participating in the study are shown in Table 1. The mean age of the participants was 28.08 ± 6.6 years, and nearly half (43.8%) were 26–35 years old. The participants were predominantly female (58.8%) and married (58.2%). Among the participants, 9.3% were students and 3.6% could read and write. The mean number of family members was 4.39 ± 2.02, and more than half (62.9%) of the participants had <5 family members. In addition, family income per month ranged

TABLE 1. Sociodemographic characteristics of the participants (N = 194)

Variables	Number of participants	Percentage (%)
Age (Years old)		
18–25	78	40.2
26–35	85	43.8
>35	31	16.0
Gender		
Male	80	41.2
Female	114	58.8
Educational status		
Can read and write	7	3.6
Primary school passed	24	12.4
Middle school passed	61	31.4
High school passed	48	24.7
Graduate and above	54	27.8
Occupation		
Dependent	52	26.8
Daily wager	28	14.4
Company Staff	42	21.6
Own business	31	16.0
Government servant	23	11.9
Student	18	9.3
Marital status		
Single	74	38.1
Married	113	58.2
Divorced/Widowhood	7	3.7
Number of family members		
<5	122	62.9
≥5	72	37.1
Total family income per month (Kyats)		
<200,000	31	16.0
200,000-400,000	123	63.4
>400,000	40	20.6
Perception of health situation		
Very good	31	16.0
Good	104	53.6
Moderate	57	29.4
Bad	2	1.0
Smoking status		
Yes	35	18.0
No	159	82.0
Drinking alcohol		
Yes	21	10.8
No	173	89.2

TABLE 2. Scores of health-promoting lifestyles and subscales among the participants (N = 194)

Scales	Possible Range	Obtained Range	Mean	SD
Overall HPL	50–200	50–177	126.67	21.29
Health responsibility	9–36	9–31	17.27	4.49
Physical activity	7–28	7–27	14.23	4.46
Nutrition	9–36	9–35	23.48	5.17
Spiritual growth	8–32	8–32	25.11	5.08
Interpersonal relations	9–36	9–35	24.89	4.65
Stress management	8–32	8–32	21.67	4.30

TABLE 3. Levels of health-promoting lifestyles of the participants (N = 194)

Scales	Levels of HPL (N, %)		
	Low	Moderate	High
Overall HPL	59 (30.4)	110 (56.7)	25 (12.9)
Health responsibility	148 (76.3)	42 (21.6)	4 (2.1)
Physical activity	138 (71.1)	41 (21.2)	15 (7.7)
Nutrition	57 (29.4)	92 (47.4)	45 (23.2)
Spiritual growth	26 (13.4)	46 (23.7)	122 (62.9)
Interpersonal relations	34 (17.5)	95 (49.0)	65 (33.5)
Stress management	49 (25.3)	92 (47.4)	53 (27.3)

from 100,000 Kyats to 1,200,000 Kyats, with the mean of 331,298.97 ± 200,369.95, and majority (63.4%) earned 200,000–400,000 Kyats per month. Moreover, 89.2% were not drinking alcohol, 82.0% were not smoking, and 53.6% had high perception of health situation.

The HPLP II scores for HPL among the community residents are listed in Table 2. It illustrates the range, mean, and SD of the participants' scores on overall the HPL II and its subscales. The mean HPLP II score of the participants was 126.67 ± 21.29, which ranged from 50 to 177. With respect to the subscales, the spiritual growth subscale showed the highest mean score (25.11 ±.08), whereas the physical activity subscale showed the lowest mean score (14.23 ± 4.46). The levels of HPL among the participants are described in Table 3. In this study, over half (62.9%) of the participants had a high level of spiritual growth, and half of them were perceived to have moderate levels of nutrition (47.4%) and interpersonal relations (49.0%). However, majority of the participants had low level of health responsibility (76.3%) and physical activity (71.1%). As regards the overall HPL, more than half (56.70%) of the participants were at a moderate level.

Table 4 presents the association of the sociodemographic characteristics of the participants with overall HPL practice. Participants who had graduate and higher level of education and who perceived their health as very good had the highest mean score. A strong significant association of the participants' education level

($p < 0.001$) and perception of health status ($p < 0.001$) with HPL was found. In addition, being a student ($p = 0.012$), total family income per month with >400,000 kyats ($p = 0.029$), non-smoking status ($p = 0.035$), non-alcoholic status ($p = 0.005$) were significantly associated with HPL. However, no differences were found between age, gender, marital status, and number of family members and HPL.

TABLE 4. Association of sociodemographic characteristics of the participants with health-promoting lifestyles (N = 194)

Variables	N (%)	Mean	SD	*P*
Age (Years old)				0.588[a]
18–25	78 (40.2)	124.79	19.45	
26–35	85 (43.8)	128.22	21.33	
>35	31 (16.0)	127.13	25.60	
Gender				0.714[b]
Male	80 (41.2)	126.00	23.55	
Female	114 (58.8)	127.14	19.65	
Educational status				0.000[a*]
Can read and write	7 (3.6)	90.43	24.49	
Primary school passed	24 (12.4)	113.96	24.71	
Middle school passed	61 (31.4)	124.70	18.84	
High school passed	48 (24.7)	130.00	19.59	
Graduate and above	54 (27.8)	136.28	14.87	
Occupation				0.012[a*]
Dependent	52 (26.8)	124.81	19.67	
Daily wager	28 (14.4)	116.93	23.82	
Company Staff	42 (21.6)	125.52	19.07	
Own business	31 (16.0)	133.29	23.05	
Government servant	23 (11.9)	127.09	25.02	
Student	18 (9.3)	137.94	8.71	
Marital status				0.623[a]
Single	74 (38.1)	128.42	19.53	
Married	113 (58.2)	125.41	20.85	
Divorced/Widowhood	7 (3.7)	128.57	41.92	
Number of family members				0.777[b]
<5	122 (62.9)	126.34	21.29	
≥5	72 (37.1)	127.24	21.44	
Total family income per month (Kyats)				0.029[a*]
<200,000	31 (16)	118.19	21.01	
200,000-400,000	123 (63.4)	127.24	21.07	
>400,000	40 (20.6)	131.50	20.81	
Perception of health situation				0.000[a*]
Very good	31 (16.0)	131.84	17.79	
Good	104 (53.6)	127.95	19.66	
Moderate	57 (29.4)	123.82	22.31	
Bad	2 (1.0)	61.00	15.56	
Smoking status				0.035[b*]
Yes	35 (18.0)	119.80	25.51	
No	159 (82.0)	128.18	20.03	
Drinking alcohol				0.005[b*]
Yes	21 (10.8)	114.38	30.28	
No	173 (89.2)	128.16	19.53	

*Significant at $p < 0.05$; [a]ANOVA test; [b]t-test.

DISCUSSION

Community residents are recommended to adopt HPL as part of their daily routine to prevent diseases and promote health.[21] This is not only important for their own health but will also influence the health of their community.[22] This study analyzed HPL among community residents. In this study, the overall mean score of HPL II was 126.67 ± 21.29. This finding is consistent with that of a study conducted in Turkey.[23] Although this result was lower than those of other studies,[24,25] it was higher in others.[20,26,27] These differences can be due to inconsistencies in the sociocultural background and home countries of the participants.

As regards the subscales, spiritual growth had the highest mean score and physical activity had the lowest. Similar finding was reported in many studies.[2,20,24,28,29] With these same findings, it may be assumed that the culture and belief system of each society can help maintain the spiritual growth of its people. The lowest score on physical activity may be related to the participants' perception, as they are not taking into consideration physical activity as a part of their daily routine. In other studies,[23,30–32] the interpersonal relations subscale had the highest score and health responsibility had the lowest mean score.[33,34] This difference in findings may depend on the individual's knowledge, attitude, and practice of HPL.

In this study, more than half (56.70%) of the participants had HPL at a moderate level. This finding was in line with those of previous studies performed on nursing students,[30] Turkish women,[23,27] university students,[35] and high school girls.[2] Unlike these findings, HPL of most nursing students in Iran was found to be at a high level.[28] The differences between findings may lie in the heterogeneities of the study population and their culture. Overall, the results revealed that the participants are not adopting HPL on a regular basis, and their level of HPL is far from optimal and is a cause of concern among health professionals.

In this study, the age group of participants was not associated with HPL. This finding was similar with those in previous studies.[23,36] However, this result was inconsistent to those of other studies.[25,27,34,37,38] The reason of these differences is the dissimilarities of the situations the study participants were in; thus, more studies are needed to understand the effects of age on HPL. Helping the community resident at any age to adopt HPL can improve the health and QoL.

In this study, results reflected that women are more conscious about their health and HPL practices, but no significant association was found between gender and HPL. This result supported that of a previous study in

Turkey.[24] Unlike this result, studies from Jordan[25] and Iran[34] found that men adopted HPL more than women. The differences among findings may be due to dissimilarities in the situation and culture of the participants. Thus, gender is not always a determinant of HPL.

In this study, the participants who had a graduate level of education significantly adopted HPL. This finding supported those of previous studies.[29,31,36,38] The probable reason is that individuals with high level of education have more knowledge about health and thus pay more attention to their HPL. This may reflect that the higher the education status of the participants, the more positive that they will adopt HPL. In addition, occupations of the participants were significantly associated with HPL. Students had the highest score on the overall HPL among other occupations. This finding was in concordance with the result of a study in Turkey.[27] However, this result was not supported by a study in Iran.[36] In the present study, students scored the highest on HPL, because most of them do not need to earn for a living, so they have more time to adopt HPL than other groups.

Moreover, marital status was not associated with HPL. This result concurred with those of previous studies.[23,36] The number of family members was also not associated with HPL, and the same result was found in Iran.[36] This implies that HPL practices depend on the desire or responsibility of the individual, but not on marital status and family size.

A significant association was found between the family's monthly income and HPL. This finding was in concordance with those of previous studies from Turkey,[24,26] Jordon,[25] Taiwan,[31] and Iran.[36] This result suggests that the participant with higher family income had better HPL and that better economic status had a positive effect on HPL. Moreover, a strong association was found between the participants' perception on health situation and HPL. This finding agrees with those of previous studies.[24,27,30,31] Thus, individual's good and better perception of health will result in a high level of HPL.

In this study, an association was found between smoking status and HPL, as reported by other studies.[24,27] In the present study, participants who did not smoke had better HPL. As expected, smokers had lower HPL scores. Awareness of its harm but still continuing smoking indicates neglect of one's health and shows that the individual does not take responsibility of his/her own health. Furthermore, alcohol drinking status was associated with HPL. However, a previous study on medical students revealed contradictory result.[24] The reason for this difference may be attributed to the

different amounts of alcohol consumed by the participants.

Overall, HPL practice was affected by factors such as education status, occupation, total family income per month, perception of health status, and smoking status of the participants. These findings point that sociodemographic data are important factors that influence HPL. This study focused on the description of the participants' HPL practices and the association of sociodemographic data with HPL. The limitation of this study may be related to the cross-sectional design that may hinder the ability to infer a cause–effect relationship. For further research, it is necessary to replicate this study with large and more representative samples in different settings for more generalization of findings about HPL practice among people in Myanmar. Further research should also investigate the effect of intervention and education programs on HPL. Qualitative research methods can provide deep understanding about HPL among populations. Therefore, further studies using qualitative method or mixed methods research design can elucidate deeply the community's HPL practices.

CONCLUSIONS

Based on the findings of this study, more than half of the participants had HPL at a moderate level. Moreover, community residents have low score on the physical activity domain. This study showed that HPL were affected by certain sociodemographic data. These findings addressed that personal features are important factors that influence HPL practices. The goal of health policy is to improve community's knowledge level of HPL. Knowledge automatically creates desired changes in lifestyles. In addition, more attention should be paid to the physical activity of the community. Facilities should be provided and supported to create healthy campus and to assist community residents in developing HPL. Therefore, appropriate programs, strategies, and policies must be implemented to improve HPL of the community.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

FUNDING

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