

(RESEARCH ARTICLE)



Healthy lifestyle behaviors among field public health workers in a selected district of Sri Lanka

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Abstract

Background: Healthy lifestyle behaviors: diet, physical activity and non-consumption of tobacco and alcohol of health workers are important as they engage in educating the community and people follow them as role models. Objective of this study was to describe the healthy lifestyle practices among field public health workers in one of the districts in Sri Lanka.

Methods: Descriptive cross-sectional study was carried out in the Galle district. 303 Public Health Midwives (PHMs) were taken to the sample and Lifestyle practices were assessed using a pre-tested self-administered questionnaire.

Results: Overweight and obesity prevalence were 24% and 3.7% respectively. None of them used tobacco or alcohol. Regular balance diet consumption was 57%. 18.2% have consumed 2 or >2 servings of fruit per day. The majority (49.2%) consumed vegetables 3 times per day and 21.8% consumed four or >4 servings per day. 43.6% consumed Sugar and sugar containing food daily. Only 12.2% preferred low-salt food. 21.8% of PHMs consumed oily foods few times a day. The majority (56.8%) of PHMs have engaged in recommended moderate physical activity but only 6.9% engaged in vigorous physical activity. The mean duration of walking time was 463 minutes per week.

Conclusions and recommendations: Most lifestyle practices (Dietary and physical activity) are not very healthy among PHMs except for their alcohol and smoking behaviors. Public health workers should be motivated to spend healthy lifestyles by increasing awareness and incorporating healthy lifestyle promotion programs into their routine field work.

Keywords: Lifestyles; Health workers; Diet; Physical Activity; Alcohol; Tobacco

1. Introduction

Regular exercise, healthy diet, keeping the body mass Index between 18.5 and 24.9, adequate sleep, regular medical screenings, smoking cessation and limitation of alcohol intake are important healthy practices in preventing most of the Non Communicable Diseases (NCD) [1]. NCDs constitutes the major cause of global mortality and morbidity. Globally 71% deaths were due to NCDs and 77% of these deaths occurred in low and middle income countries [2]. Cardiovascular diseases kill 17.9 million people annually, followed by cancers (9.3 million), respiratory diseases (4.1 million), and diabetes (1.5 million). NCDs are a major public health problem because of high morbidity, mortality and also they produce societies with more disable persons and poverty [3]. Behavioral risk factors including physical activity, unhealthy diet, tobacco use, alcohol consumption and stress are modifiable and are responsible for about 80% of NCDs [4]. Every year unhealthy practices accounts for millions of deaths (Tobacco over 7.2 M, alcohol use 1.3M, Excess

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salt/sodium intake 4.1M, and insufficient physical activity 1.6M) [5]. Behavioral risk factors are associated with four key metabolic and physiological changes: raised blood pressure, over weight and obesity, hyperglycemia and hyperlipidemia [6]. The leading metabolic risk factor globally is elevated blood pressure (to which 19% of global deaths are attributed) [6], followed by overweight and obesity and raised blood glucose [4].

Public Health workers (PHW) are more knowledgeable than others about health care choices and because they play as role models for patients, HCWs are for several reasons, considered to be a key group in healthy life style promotion programs [7]. Public Health Midwives (PHMs) are most important grassroots level field public health workers who provide primary health care in Sri Lankan health care system. This Health Care Workers (HCW) should have the necessary education and environment to adopt a healthy life style. Healthy lifestyle practices among them are important in encouraging the healthy practices in the community to prevent NCDs. In addition, it has been shown that when health workers engage in healthy behaviors they are more likely to provide preventive counseling to their patients and have higher confidence and self-efficacy in motivating patients to avoid health risk behaviors [8]. Prevention of NCDs by improving lifestyles are important in Sri Lanka as the morbidity rates due to NCDs especially cardiovascular diseases and cancers have been showing an increasing trend in last 5 years [9] and Prevalence of hypertension, diabetes mellitus, ischemic heart disease and cancer was 26.7%, 7.6%, 9% and 1.7% respectively [10,11]. According to WHO STEP survey done in Sri Lanka among 15-74 years population in 2015, 73% have not consumed recommended amount of vegetables and the fruits, 30.4% were physically inactive, 30% of males and 0.1% of females were current smokers and 35% of males and 0.55% of females were current drinkers [10]. The proportion consumes high fat containing diet was 15%-18%. Average daily intake of salt and added sugar as reported by Ministry Of Health (MOH) Sri Lanka was 10g /day and 35 - 60g/day (60 g based on food consumption data and 35 g/day based on individual dietary records) respectively and exceeded the recommended amount [11].

Though there were no researches found in Sri Lanka in assessing lifestyle behaviors of health care workers, limited researches were found from other countries. In an American study HCWs reported more desirable behaviors than non-HCWs. HCWs were more likely to have a personal physician, to have a checkup within 2 years, to have exercised within 30 days, and to deny recent heavy or binge drinking [12]. Another study done in USA showed obesity, diabetes, and hypertension were lower among health care professionals compared with the overall population and health care professionals reported better health behaviors than others in smoking and physical activity but not in moderate to heavy alcohol use [13]. In Brazilian study reasonably high proportion of physicians, nurses, and community health workers reported less healthy lifestyle behaviors [14].

It is hoped that results from this study will increase knowledge for designing interventions to improve health workers own lifestyle and health promoting behaviors. These data will further help for the planning of healthy lifestyle promotion programs in the country.

The purpose of this study is to determine healthy lifestyle practices among field public health staff working at primary care setting (Public Health Midwives) in a selected district in Sri Lanka. This study will fulfill the knowledge gap on current status of the behavioral risk factors and NCD risk among important occupational group who engage in health promotion of the country.

2. Material and methods

Descriptive cross sectional study was carried out in Galle, Regional Director of Health Services area, in the Southern part of Sri Lanka in 2015. Study population was Public Health Midwives (PHM) working in Galle district. As the limited number of public health midwives in the area, convenient sample including all 350 PHMs in the district was taken and pregnant and lactating PHMs, those who are on maternity leave and PHMs who have had surgeries or serious illness three months prior to the study were excluded from the study. Six healthy lifestyles were assessed among 303 eligible PHMs using pre tested self-administered questionnaire based on WHO step survey questionnaire and to assess the recommended serving sizes, Information sheet and the show cards in same survey were used. BMI measurement was done by trained medical officer. Variables measured were health seeking behaviors, physical activity, alcohol intake, smoking and diet. Data was analyzed using SPSS version 20. Relative frequencies and percentages of responses were calculated.

Written informed consent was obtained from all the participants prior to data collection and physical measurements. All the measurements were done assuring the privacy of the participants and an assurance was given that all information keeps confidentially. The right was being given to the respondents to discontinue participation at any time during the study without any consequence Ethical approval for the study was taken from the ethical review committee,

University of Ruhuna, Sri Lanka. Administrative approval was taken from the Provincial Director of Health Services, Southern province and the Regional Director of Health services, Galle.

3. Results

Out of 350 PHMs 303 fulfilled inclusion criteria and all 303 PHMs responded giving 100% response rate. Majority of them (99%) were Sinhalese and 1% were Muslim in ethnicity. Mean age of the sample was 39.2 years (SD 12.5). 88.4% of them were GCE AL qualified and 1% was diploma holders. Majority (88%) were in monthly family income range of more than Rs 35000 per month.

Mean weight of the PHMs was 55.68 Kg (9.6SD) and mean height was 154.63 cm (9.6SD). Mean BMI was 24.38Kg/m² and 24% of them were overweight and 3.7% of them were obese.

3.1. Health status and health seeking behaviors

Only 16% reported illnesses and among that majority were chronic non communicable diseases (figure 1): 7% had Bronchial asthma, 4%, 2% and 1% had Diabetes, Hypertension and cancers respectively. Within last 5 years at least one medical checkup has been taken by 93.4% of PHMs and 35 % of them have got these checkups done during past one year. Regular self-breast examinations are done by only 18% but 85.8% of them have done their self-breast examination at least 3 times a year. 14.2% of them had never done self-breast examination.

3.2. Lifestyle behaviors

Table 1 Fruit and vegetable consumption: Distribution of PHMs according to the frequency of consumption and number of servings consumed (n=303)

	Frequency	%		Frequency	%
Fruit consumption pattern			Vegetable consumption pattern		
Everyday	91	30	3 times per day	149	49.2
4-5 days per week	107	36.3	2 times per day	42	13.9
2-3 days per week	69	22.8	Once a day	53	17.5
Rarely	34	11.2	4 or more days /week	59	19.5
No	2	0.7			
Total	303	100	Total	303	100
Number of fruit servings per day			Number of vegetable servings per day		
0	213	70.3	0	2	0.7
1	35	11.6	1	59	19.5
2	31	10.2	2	76	25.1
3	12	4.0	3	100	33.0
4	5	1.7	4	31	10.2
5	7	2.3	5	29	9.6
			>5	6	2.0
Total	303	100	Total	303	100

None of them used tobacco (Smoked or smokeless) or alcohol. Among PHMs 57% consumed balance diet every day, 33%, 4-5 times a day, 8 %, 2-3 times a day and 1.7% has not consumed balance diet at all. Proportion of PHMs taking fruits daily was 30 % and 11.2% consumed fruits rarely while 0.7% has not included fruits in their diet. 11.6% have consumed one serving per day and 18.2% have consumed 2 or >2 servings of fruits per day. Mean fruit consumption was 0.62 servings per day (Table 1). Majority (49.2%) has consumed vegetables 3 times per day but 59% have

consumed vegetables only 4 or more days per week. Four or >4 vegetable servings per day had been consumed by 21.8% of PHMs (Table 1). Majority of them (43.6%) consumed Sugar and sugar containing food daily and 10.2% consumed sugar few times per day. 19% consumed sugar less than 3 days per week, 18.5% rarely and 2.3 % do not consume sugar (figure 2). Majority (38%) consumed oily foods once a day. 21.8% few times a day and 11.2 % of them rarely consumed oily foods (figure 3). Majority (64%) rarely consumed high salt and trans fat containing foods. But 5.3% consumed those foods daily, 2% few times a day and 3% more than 4 days a week and 2.3% have not consumed high salt foods (figure 4). Only 12.2% preferred low salt food. 80% preferred normal salt containing foods (Figure 5).

Majority (56.8%) of PHMs has engaged in recommended moderate physical activity 150 min or more per week (figure 6). Among all PHMs 93.1% engaged in less than 75 minutes vigorous physical activity per week and only 6.9% engaged in recommended amount of vigorous physical activity (figure 7). Mean duration of walking time was 463 minutes per week. Median number of days spent for walking among PHMs at work was 5 days per week. Mean duration of walking at work was 255 minutes per week.

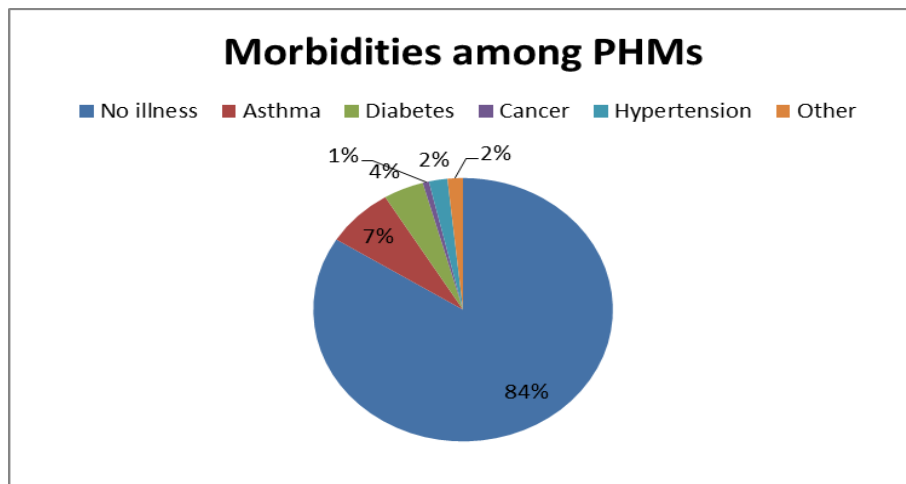


Figure 1 Morbidities among PHMs

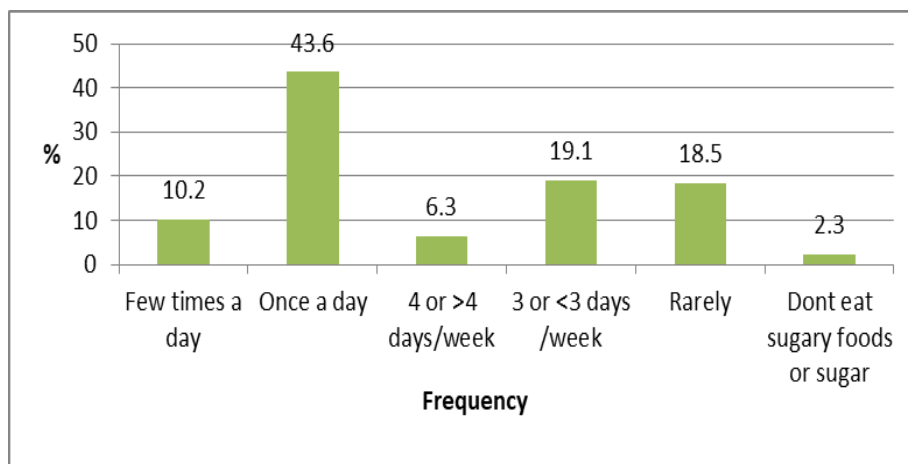


Figure 2 Distribution of PHMs according to frequency of consuming sugar containing food

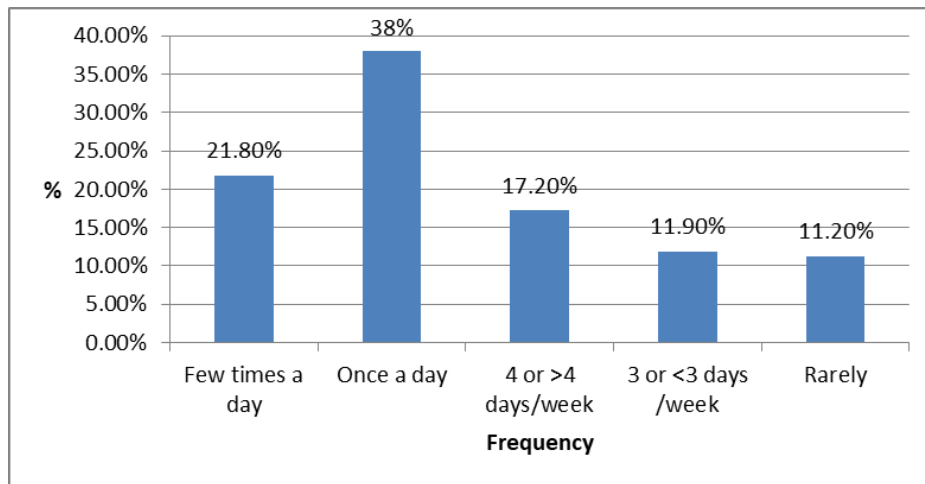


Figure 3 Distribution of PHMs according to frequency of oily food consumption

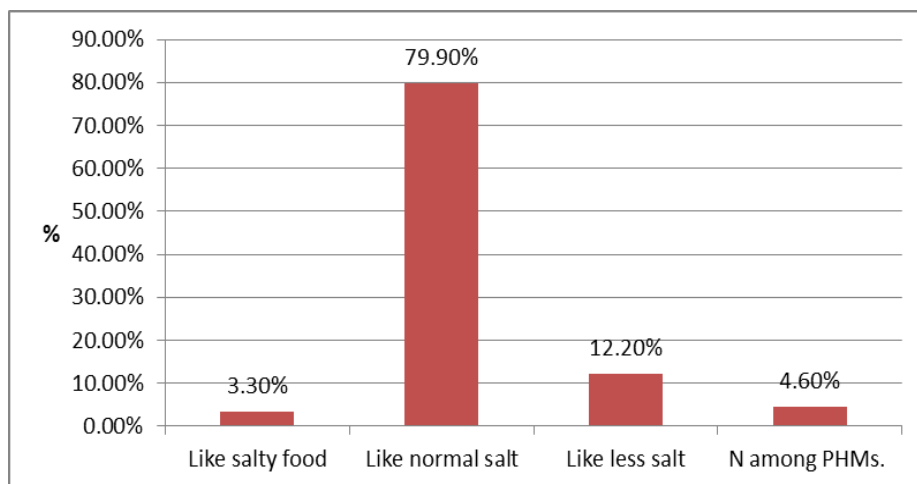


Figure 4 Distribution of PHMs according to their preference for salty and processed food

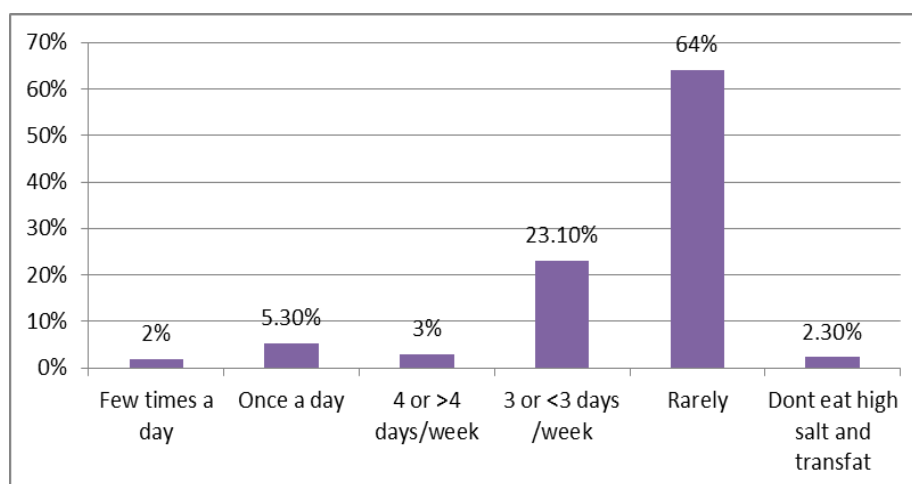


Figure 5 Distribution of PHMs according to frequency of consumption high salt and Trans fat containing food

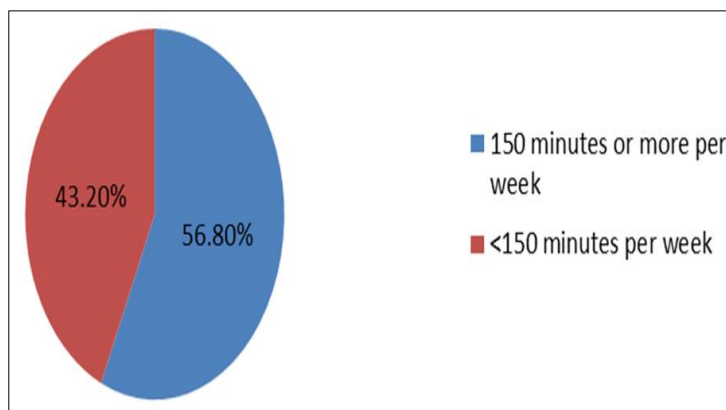


Figure 6 Distribution of PHMs according to the weekly duration of moderate exercises

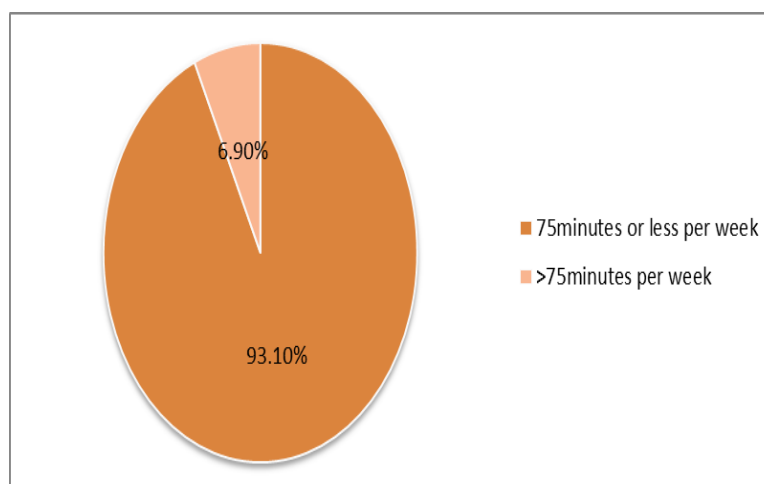


Figure 7 Distribution of PHMs according to the weekly duration of vigorous exercises

4. Discussion

As there are no much published studies on risk factors of NCD or the lifestyle behaviors other than the WHO STEP survey in Sri Lanka, the results from this study will be used as a baseline to understand healthy behaviors among primary health care workers. The study population was not representing all the health care workers in the country but they play major role in healthy life style promotion in the community. In NCD prevention program and the policy in Sri Lanka PHMs have responsibility of screening activities and health education, in healthy Lifestyle clinics established in the community. Present study provides encouraging findings pertaining to tobacco and alcohol usage as well as discouraging findings on diet and physical activity behaviors.

In comparison to the National NCD Risk Factor Survey [10] prevalence of female current smokers was 0.1% whereas no smokers found in present study which is an encouraging finding. Prevalence obtained from all the STEP survey as well as from other studies done locally and internationally reported higher rates of prevalence of tobacco use than the present study [10, 17, and 18]. Prevalence of current alcohol usage was zero among PHMs where the general population in WHO STEP survey it was 18% in both sexes and 0.5% among females. Study done in Sri Lanka among teachers in the Southern province [19], use of alcohol was 12.1% with no female drinkers. Difference in the prevalence could be due to the differences in methodology and the study population where the PHMs are females and educational level and health concerns of them are higher compared to general population and the professional environment is also friendlier for non-smoking. Studies done in some western countries USA and Brazil among health care workers reported higher Smoking and substance usage than present study [14, 15, and 16]. A Brazilian study reported the prevalence of smoking ranged from 4.9 % among nurses to 7.4 % among community health workers [16]. A study analyzed several health behaviors among health care professionals, reported better health behaviors than general US population in smoking and physical activity but not in moderate to heavy alcohol use [15]. These differences can be due to the sociocultural

differences between Sri Lanka and those countries where the prevalence of substance usage among Sri Lankan females is low.

Prevalence of Consumption of recommended amount of fruit and vegetables servings on average per day was 18.2% and 21.8% respectively in the present study in comparison to 27.5% in WHOSS [10] and 66.7% among school teachers [19]. The proportion consumed recommended servings of fruit and vegetables were lower in present study than teachers and the general population. South African study proportion of consumption of recommended amounts among nursing students was 58% and Brazilian study that was 26% , 36% and 29% among community health workers, physicians and nurses respectively [20, 16]. Present study reported lowest proportions in consuming recommended fruits and vegetable servings among PHMs than all other local and international studies done among health care workers and general population. Mean number of fruit servings consumed in present study was 0.62 per day where it was 1.99/day among school teachers in the Southern province [19] and 1.3 /day as reported in WHOSS [10] which was an discouraging finding as the PHMs are health professionals. But mean number of vegetable servings consumed per day was higher among PHMs: 2.07 compared to teachers [19] 2.2 but lesser than WHOSS, 3 servings [10]. Frequency of consumption of foods and beverages containing high sugar content frequently was higher in PHMs (60%) than the teachers (49.5%) [19]. With regard to salt consumption, in present study majority (64%) rarely consumed high salt containing foods. Only 12.2% preferred low salt food. 80% preferred normal salt containing foods. In Sri Lankan study among teachers 38.2% added salt often to the diet where as in WHOSS it was 21.8%. Proportion of teachers who have not limited consuming processed food with high salt was 23.5% and in WHOSS that proportion was 26.6% [10]. Salt consumption was similar among PHMs as well as general population giving evidence of high preference of salt containing foods among Sri Lankan population. But present study the normal and high salt was not defined and it was a limitation of the study. Sugar, oils and salt consumption among PHMs is higher compared to general population in Sri Lanka [10] which is an important finding for health planners as these health care workers are engage in healthy lifestyle promotion programs and these workers should be motivated to follow standards.

PHMs engaged in moderate physical activity 150 minutes or more per week was 56.8% and it is lower than that of teachers 59.6% [19] and among general population 69.6% according to WHOSS [10]. Only 7% engaged in 75 minutes or more vigorous physical activity per week and it is also lower amount compared to teachers which were 9.5% [19] and among general population 26.4%. WHOSS [10, 21] was a national survey and the general population is engaged in diverse occupations which are more labor intensive and therefore, physically more active than the teachers, but PHMs are more active in their profession than teachers. Though the proportions of moderate and vigorous amount of physical activity was lower among PHMs they are engage in walking for their field care spending on average 5 days per week for walking and the mean duration of walking at work was 255 minutes per week and it is nearly 37 minutes per day. Although their mean duration of walking exceeds the recommended amount of 30 minutes per day, the low proportions were reported for moderate exercise amount could be due to the usage of motor cycles by some PHMs instead of walking during field care. The study done in Brazil [16] reported physically active proportion as 48 % among community health workers and it is lower than that of present study and also USA study reported 'NO exercise' for past 30 days proportion as 35% [12]. In the present study prevalence of overweight and obesity was 24% and 3.7% respectively and it is lower than the teachers (Over weight 38.7% and obesity 9.5%) [19]. Overweight was higher than the WHOSS (23.4%) but obesity was still lower than WHOSS (5.4%).

Limitations

This study was based on self-reported and self-perceived data, thus information about socially undesirable behaviors such as smoking and alcohol use may be under reported, limiting the results from this study. Differences in study population where only females participated in present study compared to general population and the teachers study are possible reasons for observed differences in proportions of all lifestyles specially alcohol and tobacco usage and vigorous exercises, though the instrument used for assessment of life styles, study design and study setting were almost similar. Multivariate analysis was not performed in this study because the focus of this study was to be descriptive. Therefore the lifestyles were not adjusted for the age and other demographic and health parameters and it was a limitation of the study. As the study findings were on PHMs only, it was not a representative sample of all health care workers and it is difficult to generalize the findings to all health care workers.

Strengths

As there were shortages of information and scientific evidence on the lifestyle behaviors of health care workers, present study provides current information about public health workers behaviors in Sri Lanka. Study also brings information for these health workers regarding their lifestyle behaviors which help them feel more prepared and equipped to counsel their patients. Additionally, these study findings can encourage health planners and policy makers for changes

or improvements in the existing national health policies in Sri Lanka. High response rate 100% compared to other community health workers (CHW) studies (Brazil study 50%) was also strength of this study (16)

5. Conclusion and recommendations

In conclusion, reasonably high proportion of PHMs reported as not engaging in healthy lifestyle behaviors except alcohol usage and smoking, Dietary practices are not very healthy among PHMs though they educate general public specially fruit, vegetable, sugar and salt consumption were not up to the recommended level. They were not physically very active other than their walking behavior though they were expected to have highly physically active. Higher proportions of unhealthy behaviors may result higher prevalence of NCDs among PHMs though they are health workers and may need further studies to determine the NCD prevalence among PHMs.

PHMs are grass root level field health care workers and are very important in changing behaviors of the community. Therefore they will be provided proper knowledge on healthy life styles. They should be motivated to spend healthy lifestyles by increasing awareness. In-service programs should be needed to update their knowledge. Healthy lifestyle programs should be incorporated to their routine schedule. They will be given more support from the higher officials to follow healthy lifestyle encouraging health promotion programs and they should be provided screening facilities in their work settings.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest and that we all agreed that the paper be published.

Statement of ethical approval

Ethical approval for the study was obtained from the Ethical Review Committee of Faculty of Medicine, University of Ruhuna, Sri Lanka.

Statement of informed consent

Informed written consent was obtained from all individual participants included in the study.

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