

A Cross-Sectional Study on Health Behaviors of Nurses in Kathmandu, Nepal

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Abstract

Introduction: Nurses have an increased risk for non-communicable diseases (NCDs) and a high prevalence of obesity, poor eating habits and insufficient physical activity. A descriptive study in title with nurses' health behaviours in Kathmandu was conducted to assess health behaviour among nurses.

Methods: A descriptive cross-sectional study design was used. 104 nurses from Kathmandu with at least a proficiency certificate level in nursing with a minimum of one year of experience in clinical or academic areas were included. Data were collected from January to February 2020. A nonprobability, convenience sampling technique was used. A semi-structured, self-administered questionnaire was used to collect data and descriptive statistics were used to describe the findings.

Results: The study showed that 51.9% of the respondents have normal body mass index (BMI) followed by 38.5% overweight, 6.7% obese and 2.9% underweight. Almost all of the respondents' blood pressure and blood sugar levels were in the normal range (99% and 91.1% respectively). Regarding health behaviour, 84.6% were non-vegetarian, 91.3% consumed vegetables daily, and 48% consumed fruits daily. All the respondents were non-smokers but 21% consume alcohol occasionally. Around 42.3% of the respondents do walking. Non-communicable disease was prevalent among 11.5% of respondents, among them hypertension was the highest (74.2%).

Conclusion: Only half of the respondents have normal Body mass index (BMI). Almost all respondents' Blood pressure and Sugar levels were normal. Very few of the respondents mentioned the regular morning or evening walk. Most of the respondents were taking vegetables daily but only half of the participants taking fruits daily. Four-fifths of the respondents have adequate sleep hours. The majority of the respondents have a family history of non-communicable diseases.

Key Words: Health Behavior, Nurses

Introduction

Nurses have an increased risk for non-communicable diseases (NCDs), along with obesity,

poor eating habits and insufficient physical activity. Also, the worksite is internationally recognized as an appropriate setting for health promotion and

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disease prevention.¹ Employees including nurses are at increased risk of non-communicable diseases (NCDs) like diabetes, hypertension and coronary heart diseases (CHD).² The main risks of NCDs are physical inactivity, unhealthy eating, smoking and alcohol abuse.³

NCD risk factors such as physical inactivity and co-morbidities like obesity have been widely reported among nurses in countries like Australia, the United Kingdom, New Zealand and South Africa.^{2,4,5}

Physical activity can be divided into moderate and vigorous intensity levels; brisk walking is an example of moderate activity and aerobics is an example of vigorous activity.⁶ Adults are advised to exercise for at least 30 minutes a day at moderate intensity levels.⁷ Thirty minutes of regular moderate-intensity activity is beneficial as it reduces the onset of chronic health conditions and premature mortality.⁸ However, the study identified that despite these recommendations the majority of adults in the Western world do not meet the minimum requirements for physical activity to benefit their health.⁹ Alarming, over 60% of adults worldwide or two-thirds of Europeans fail to achieve the recommended levels of physical activity.^{10,11} In addition, it has been identified that physical inactivity is more prevalent among females and older adults.¹⁰ Physical inactivity is of major concern to those in the healthcare arena as it is a recognized risk factor for heart disease, stroke, depression and cancer.^{11,12} According to the World Health Organization (2002), there are 600,000 deaths in Europe or 1.9 million deaths worldwide every year resulting from physical inactivity because patient care cannot be confined to usual working hours (09hrs - 17hrs), approximately a quarter of all nurses work non-traditional hours or shifts.^{13,14} Shift work can harm the employee and could lead to increased drug use, job-related stress, poor job performance, insomnia, and disrupted social and family life.^{14,15} The high prevalence of health-related conditions and risk factors such as obesity, overweight, physical inactivity, and poor eating habits has been reported amongst shift and rotational night shift workers.¹⁶

Self-care is also a part of lifestyle behavior which helps individuals to change their way of life with a specific end goal to increase ideal health. Lifestyle contains the choices on diet selection, exercise, well-

being, and the actions that one makes to accomplish those decisions. It enables a person to control his/her particular health, to make one's full health potential and to have a healthy lifestyle.⁷

Therefore, the main aim of this study was to explore the Nurses' Health behaviours in Kathmandu. These findings will then be used to provide recommendations for a worksite wellness intervention programme by professional organizations and working institutions for nurses to reduce NCDs' risk factors such as obesity, physical inactivity and poor eating and sleeping habits.

Materials and Methods

Study Design: A descriptive cross-sectional study design was adopted to find out the Nurses' Health behaviours in Kathmandu, Nepal.

Settings /Subjects: The populations of the study were nurses who were involved in clinical or teaching services and had completed Proficiency Certificate Level (PCL) nursing with at least one year of experience. A convenient sampling method was used. All together 104 Respondents visited the nursing association's central office from January to February 2020.

Inclusion Criteria: Nurses who have at least PCL nursing level education with at least one year of working experience who were willing to participate in the study by giving consent and met the criteria were samples of the study.

Ethical Consideration: Permission to undertake the research study was granted by the Nursing Association of Nepal. The principle of human dignity and justice was maintained. and informed consent was obtained. Respondents' privacy was protected to the fullest extent possible. Participants were not obligated to participate and had the option to withdraw at any time. A brief introduction describing aims, processes, the voluntary nature of participation, and a pledge of Confidentiality and anonymity were kept on the questionnaire's cover page.

Data Collection Tool: A semi-structured self-administered questionnaire was developed based on the objectives of the study. The instrument was

developed in the English language. The research instrument was divided into two parts: Part I: Questions related to the socio-demographic variables of respondents. Part II: Questionnaire related to nurse's health behaviours. The content validity of the tool was maintained by consulting subject experts and a literature review. Pretesting of the research instrument was done in 10% of the sample size and modification of the instrument was done after pre-testing

Data Collection Procedure: Nurses were determined using the convenience method who visited the Nursing Association of Nepal (NAN) office during data collection time. The respondents were explained about the nature and objective of the study. A semi-structured research questionnaire was used to collect data.

Data Analysis Procedure: Data was checked

after collection for its completeness. Collected data were entered in Statistical Package for Social Sciences (SPSS) version 16 for analysis. The obtained data were analyzed and interpreted according to the objectives of the research using descriptive statistics and are presented in the tables to facilitate their interpretations.

Results and Discussion

Table 1 depicts the socio-demographic characteristics of the respondents. Out of 104 respondents, more than nearly half (44.2%) were between 30 to 40 years of age. Regarding marital status, nearly three-fourths (71.2%) were married, and most of all (89.4%) followed Hinduism. The majority of the respondents lived with spouses and children (62.5%).

Table 1 Socio-Demographic Characteristics of Respondents (n=104)

Characteristics	Number	Percentage
Age in Years		
20 to 30	30	28.8
30 to 40	46	42.2
40 to 50	11	10.6
50 to 60	7	6.7
60 Above	10	9.6
Marital Status		
Married	74	71.2
Unmarried	27	26.0
Widow	3	2.9
Religion		
Hindu	93	89.4
Buddhist	6	5.8
Christian	5	4.8
Ethnicity		
Brahamin/Kshitri	61	58.7
Newar	29	27.9
Rai/Limbu	10	9.6
Others	4	3.8

Continue.....

Living with		
Spouse and Children	65	62.5
With family	27	26
Son and daughter In-law	6	5.8
Alone	6	5.8
Education(in Nursing)		
PCL	13	12.5
Bachelor	56	53.8
Master	34	32.7
PHD	1	1

Table 2 showed that among 104 respondents, three-fourths (76.9%) respondents were involved in clinical services and most of all (88.5%) were working currently. Regarding designation half of the

respondents were staff nurses followed by Nursing administrators (27.9%), lecturers (10.6%) and Retired (7.7%).

Table 2 Respondents' Job-Related Characteristics (n=104)

Characteristics	Number	Percentage
Occupation		
Teaching	24	23.2
Clinical	80	76.9
Working Status		
Working	92	88.5
Not Working	12	11.6
Designation		
Staff Nurse	50	48.1
Nursing officer and administrator	29	27.9
Instructor	4	3.8
Lecturer	11	10.6
Associate Professor	1	1
Professor	1	1
Retired	8	7.7

Table 3 depicts that Half of the respondents (51.9%) Body mass index was normal followed by 38.5 overweight. while a few were underweight (2.9%) and obese (6.7%). Regarding Blood pressure

and sugar, almost all respondents are in the normal range (99% and 98.1% respectively).

Table 3 Respondents' Health Status related Information (n=104)

Variables	Number	Percentage
Body Mass Index		
Under Weight (<18.5)	3	2.9
Normal (18.5 to 25)	54	51.9
Overweight (25 to 30)	40	38.5
Obesity (over 30)	7	6.7
Blood Pressure		
Within Normal Range	103	99
High Blood pressure	1	1
Blood Glucose Level		
Normal Range (Random Blood sugar)	102	98.1
High Blood sugar	2	1.9

Table 4 reveals the respondents' behaviours regarding food intake. Out of 104 respondents, most of those (84.6%) were non-vegetarian and nearly half of them (45.2%) consume meat items 2-3 times a week. Regarding the consumption of vegetables, almost all of the (91.3%) respondents consume vegetables daily while half of the respondents (48%) consume fruits daily. More than half of the respondents (55.8%)

go for meals in restaurants, among them 48.2% take once a week followed by, occasionally and only 10.2% more than 5 times a week. Likewise, one-third of respondents (32.7%) take junk food among them 52.5% take it occasionally. None of the respondents have smoked cigarettes while one-fifth (21.2%) consume alcohol occasionally.

Table 4 Respondent's Health Behavior on food intake (n=104)

Variables	Number	Percentage
Dietary pattern		
Vegetarian	15	15.4
Non Vegetarian	89	84.6
Frequency of consumption meat (n=89)		
Daily	13	12.5
2-3 times a week	47	45.2
Weekly	24	23.1
Monthly	5	4.8
Frequency of Consume vegetable		
Daily	95	91.3
6-8 times a week	7	6.7
4-6 times a week	1	1
Occasionally	1	1

Continue.....

Frequency of consumed fruit		
Daily	50	48.1
6-8 times a week	3	1
4-5 times a week	39	37.5
Occasionally	12	11.5
Taking meals in hotels and restaurants	58	55.8
Frequency of taking meals in hotel/restaurant (n=58)		
Once a week	28	48.2
2-3 times a week	13	22.4
4-5 times a week	6	10.3
Occasionally	9	15.5
Taking junk food (n=70)		
Daily	4	5.7
Weekly	6	8.5
3-4 days a week	23	32.8
Occasionally	37	52.8
Nonsmoking	104	100
Consume Alcohol	21	20.2
Frequency of alcohol consumption (n=21)		
Occasionally	21	100

Table no. 5 depicts that none of the respondents was involved in vigorous activities and less than half of the respondents (40.4%) were involved in light-moderate intensity activities, among them nearly half of the respondents (45.2%) were involved in those activities 2 to 3 days per week. Regarding morning walking, less than half of the respondents (42.3%)

mentioned they used to go on morning walks, among them 40.9% go daily while one-fifth of the respondents (23.1%) mention they are doing yoga. Nearly half of the respondents (45.1%) took one hour of leisure time. Related to sleep duration at night, half of the respondents (49%) sleep seven hours followed by Eight hours (31.7%) and six hours (19.3%).

Table 5: Respondents' Physical Activity and sleep habits (n=104)

Variables	Number	Percentage
Not doing Vigorous- Intensity Activities	104	100
Light moderate-intensity activity (cleaning, gardening)	42	40.4
Frequency of light moderate-intensity activity(n=42)		
Daily	16	38.0
2 to 3 days per week	19	45.2
weekly	7	16.6

Continue.....

Go for a Morning walk or Evening walk	44	42.3
Frequency of morning walk or evening walk (=44)		
Daily	18	40.9
2 to 4 times a week	12	27.2
Weekly	2	4.5
Occasionally	12	27.2
Doing Meditation/ Yoga	24	23.1
Frequency of doing Meditation/ Yoga (n=24)		
Daily	9	37.5
3-4 times a week	2	8.3
Weekly	27	8.3
Occasionally	10	45.8
Take Leisure time per day (in hours) one	20	45.1
Two	16	26.0
Three		9.6
Four	7	19.2
Sleep in the daytime	7	15.4
Duration of daytime sleep(n=16)	2	
Less than 1 hour		43.7
1 to 2 hours	20	43.7
3 hours	51	12.5
Sleep duration at night	33	
Six hours		19.3
Seven Hours		49.0
Eight Hours		31.7

Table 6 presents that among 104 respondents, the majority of the respondents (67.3%) have a history of chronic non-communicable diseases in the Family and the majority of them have hypertension (74.2) followed by Diabetes mellitus (48.5%). Similarly,

some of the respondents (11.5%) responded they have NCDs; among those who had the disease, more than half had hypertension (58.3%). All of the respondents were under medication who had the disease.

Table 6: Respondents' self and Family history of Non-Communicable Diseases (n=104)

Variables	Number	Percentage
Having NCDs in Family	70	67.3
If yes, Type of Disease (n=70)		74.2
Hypertension	52	48.5
Diabetes Mellitus	34	12.8
Cardiac Problem	9	15.7
Hyperlipidemia	11	
Relationship with family members having NCDs		35.7
Father	25	27.1
Mother	19	18.5
Husband	13	11.4
Father-in-law or mother-in-law	8	7.1
siblings	5	11.5
Having NCDs in respondent	12	
if, yes type of NCDs(n=12)		58.3
Hypertension	7	25
Diabetes Mellitus	3	16.6
Cardiac Problem	2	100
Taking Medicine for NCDs (n= 12)	12	

Discussion

Out of 104 respondents, most of those (84.6%) were non-vegetarian and nearly half of them consume meat item 2-3 times a week. Regarding the consumption of vegetables, almost all of the respondents (91.3%) consume vegetables daily while half of the respondents (48%) consume fruits daily. More than half based respondents (55.8%) take meals at restaurants or hotels and among them, 48.2% had the meals once a week and only 2.9% had more than 5 times a week. Likewise, one-third of respondents (32.7%) take junk food among them 35.6% take it occasionally. None of the respondents has smoked a cigarette while one-fifth (21.2%) consume alcohol occasionally. This study's findings contradict the findings of the study in South Carolina United States where among 193 registered nurses showed that

regarding alcohol intake, 13.4% do not drink alcohol, 8.8% drink more than four times per week, with the majority of respondents report drinking a moderate amount (one to two drinks in one sitting) and of the eleven nurses who smoke cigarettes, eight admit they have never tried to stop smoking.¹⁸ Another study on in title with the lifestyle behaviours and exercise beliefs of undergraduate student nurses in Ireland showed that higher rate of consumed alcohol and smoking, among 182 students, a total of 20% of the students smoked, 95% consumed alcohol and 19% of the females reported that they exceeded the recommended weekly safe level for alcohol consumption.¹⁹

Regarding physical activity, none of the respondents were involved in vigorous activities and less than half of the respondents were involved in light moderate intensity activities, among them

nearly half of the respondents were involved in those activities for 2 to 3 days per week. Regarding morning walk, less than half of the respondents mentioned they used to go in morning walk, among them 40.9% go daily while one-fifth of the respondents (23.1%) mentions they are doing yoga. About half of the respondents (45.1%) took one hour of leisure time. Related to sleep duration at night, half of the respondents slept seven hours followed by Eight hours (31.7%) and six hours (19.3%). The present study findings contradict the Study titled Predictors of Physical Activity and The Contents to Exercise in Nursing and Medical Students in the UK, showing that many nursing and medicine students did not achieve recommended levels of physical activity (nursing: 48%; medicine: 38%). Perceived benefits of exercise were health-related, with medicine students identifying additional benefits for stress -relief. The most notable barriers to exercise were: lack of time, facilities having inconvenient schedules and exercise not fitting around study or placement schedules.²⁰ Additionally, poor physical activity levels among nurses in KwaZulu-Natal, South Africa were reported in 2007.²¹ These findings are supported by other studies in 2013 as well as in 2011 that nurses do not meet the recommended levels of physical activity required for the benefit of health (30 minutes, 5 days a week).^{4,5} Other behavioural risk factors that have been identified among nurses include smoking and alcohol abuse.^{22,23}

Among 104 respondents, the majority of the respondents (67.3%) have a history of noncommunicable diseases in the family and the majority of them have hypertension (74.2) followed by Diabetes mellitus (48.5%). Similarly, some of the respondents (11.5%) responded they had NCDs and among them who had; half had hypertension and those were under medication. These findings contradict the Study in South Africa showed that nearly one-fifth of South African healthcare workers, including doctors, dentists, nurses, radiographers, physiotherapists and occupational therapists have reported NCDs such as hypertension and diabetes. In addition, more than 70% are overweight or obese. Also, overweight participants experienced a higher prevalence of diseases and health problems than those with a normal body mass index.²

Conclusion

This research finding reveals that only half of the respondents have normal Body mass index (BMI). Almost all respondents' Blood pressure and Sugar levels were normal. Very few of the respondents mentioned the regular morning or evening walk. Most of the respondents are taking vegetables daily but only half of them taking fruits daily. Four-fifths of the respondents have adequate sleep hours. The majority of them have a family history of chronic illness.

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