

Original Article

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Level of Physical Activity Among Nurses of Tertiary Hospital RIMS, Imphal

Dr. Nalo J², Dr. Swaruprani Devi A², Dr. Niveda Y², Dr. Jalina L², Dr. Angam N³,
Dr. Romola P¹,

¹ Associate Professor, ² PGT, ³ School Teacher

Department of Community Medicine Regional Institute of Medical Sciences (RIMS), Imphal, Manipur-795004.

Corresponding author:

Dr Joti Nalo, PGT, Department of Community Medicine, Regional Institute of Medical Sciences (RIMS), Imphal, Manipur-795004.

Email: drjotinalo@gmail.com

ABSTRACT

Background: Physical activity has many health benefits to people of all ages and both sex. It lowers the risk for many diseases, such as coronary heart disease, diabetes, and cancer. Nurses who engaged in regular exercise were more likely to encourage physical activity as a treatment than less physically active nurses. The objective of this study was to determine the prevalence of physical activity level

among Nurses of RIMS, Imphal.

Methods: A cross-sectional study was conducted among all the working Nurses in RIMS, Imphal between October 2012 to September 2103, using self reported semi-structured Questionnaire. Chi- square test was used, P value of <0.05 was taken as significant.

Results: Mean age of respondents was

Address for correspondence:

The Editor/ Managing Editor,
Journal of Comprehensive Health
Dept of Community medicine
NRS Medical College,
138, AJC Bose Road, Kolkata-700014

35yrs \pm 9. 34.3% watched TV for more than 3 hours but <4 hours, 7.7% never watched TV. 41.7% did household activities at home for 6-10 hours per week, 34% and 44.7% of them did not take care for babies and handicapped/Elderly at home. 57.2% went for food and groceries shopping for 6-11 hours per week. 42.5% reported sitting-light activity, 15% standing-moderate activity and 3.1% walking-heavy activity at work place.

INRODUCTION

Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally. The WHO Global Strategy on Diet, Physical Activity and Health is an effort to address the increasing global burden of chronic diseases, including coronary heart disease, WHO Member States have endorsed the principle that, in order to address the challenges of chronic diseases, cross-sectoral policies that promote physical activity, generate sustainable access to healthy diets and promote healthy choices must be developed and implemented.

Non-communicable diseases account for nearly half of all deaths in India, among the NCDs, cardiovascular

Conclusion: 1/3rd of the participants watched TV for more than 3 hours per day. A little less than half (41.7%) of respondents reported that they did household activities for more than 6-10 hours per week. About half of the respondents had reported sitting-light activity, 15% reported standing-moderate and 3.1% reported walking-heavy activity at work place.

Key words: Physical activity, Nurse, Imphal

diseases account for 52% of mortality followed by chronic obstructive Pulmonary disease, cancer, diabetes and Injuries. Projection estimates have shown that unless interventions are made, burden due to NCDs will increase substantially and account for 43% of the DALYs. The potentially productive years of life lost (PPYLL) due to CVDs in the age group of 35-64 was 9.2 million in 2000 and is expected to rise to 17.9 million in 2030. Since the majority of deaths are premature there is a substantial loss of lives during the productive years as compared to other countries. Heart diseases, stroke and diabetes are projected to increase cumulatively, and India stands to lose 237 billion dollars during the decade 2005-2015. Considering the high

cost of medicines and longer duration of treatment NCDs constitute a greater financial burden to low income groups.

Physically active adults are at lower risk for depression and declines in cognitive function as they get older. Cognitive function includes thinking, learning, and judgment skills. Physically active children and teens may have fewer symptoms of depressions than their peers. Physical activity also lowers the risk for many diseases, such as coronary heart disease, diabetes, and cancer too. Many studies have shown the clear benefits for heart and lungs.¹

As per the study conducted in the county of Avon, UK in 1994, “Factors

that influence practice nurses to promote physical activity”. Nurses who engaged in regular exercise were more likely to encourage physical as a treatment than irregular active nurse($p < 0.05$). This study shows that the two stage measures (activity promotion and personal behavior) of the health care professional are associated with important differences in patient and practice factors for physical activity promotion.²

Hence, it was important to know the level of physical activity performed by this section of health care providers and so the study was conducted.

MATERIALS AND METHODS

A cross-sectional study was carried out from October 2012 to September 2013 among the 440 working Nurses of RIMS, Imphal, using self reported semi-structured Questionnaire, modified version of International Physical Activity Questionnaire (IPAQ). Participants, who were on leave, couldn't be contacted after three consecutive visit and those chronically ill were excluded from the

study. After taking verbal consent, questionnaires were distributed and filled in questionnaires were collected on the same day. Data collected were checked for the completeness and consistency and enter in database software SPSS version-16. Analysis was done using descriptive statistics (mean, percentage) and Chi-Square test. P-value of < 0.05 was taken as significant.

Operational definition:

Sitting-light work-desk work, maintaining patient register

Standing-light-work-giving medicine, measuring BP/temperature, bed preparing

Standing-moderate work-wound dressing/pushing injection/putting i/v line/stitching

Standing heavy work-working in OT/labour room

ETHICAL ISSUES: Approval was taken from RIMS Institutional Ethics Committee and Nursing Superintendent. Verbal

consent taken from the respondents and confidentiality was maintained.

RESULTS

21.5%, 33.3% & 34.3% of the participants used to spend less than 1 hour, 1-3 hours & 3-4 hours respectively on watching TV

daily, whereas only 7.7% did not watch TV. (Table 1).

Table 1: Distribution of Respondent according to hours of watching TV (N=376)

Hour of watching TV	Frequency	Percentage
None	29	7.7
<1 hr	81	21.5
>1 & <3 hrs	125	33.3
3 hrs & <4 hrs	129	34.3
>4hrs	12	3.2

33.1% & 14.4% of the nursing staffs climbed stair at home 6-10 times & more than 10 times per day respectively, and

24.5% of them never used stair at home (Table 2).

Table 2: Distribution of Respondent according to Stair climbing at home (N=376)

Number of Time	Frequency	Percentage
None	92	24.5
1-5 times a day	105	27.9
6-10 times a day	124	33.1
More than 10 times a day	54	14.4

Majority of respondents did household activities like cooking, washing and preparing food at home for more than 6 hours per week, 41.8% for 6-10 hours and 16.5% for 15 hours or more. More than half (57.2%), 18.6% & 3.7% of respondents went for food and groceries shopping for 6-10 hours, 11-14 hours &

15 hrs or more per week respectively. More than 90% of nursing staffs used to spend few hours per week on household cleaning activities (about 50% for 11-14 hours per week). 34% and 44.7% of the respondents did not take care for babies and handicapped/Elderly at home respectively (Table 3).

Table 3: Type and duration of activities of Respondents in and around the Houses (N=376)

Type of Activity	None	≤5hrs per wk	6-10hrs per wk	11-14 hrs per wk	≥15 hrs per wk
	No (%)	No (%)	No (%)	No (%)	No (%)
Preparing food, cooking and washing	21 (5.6)	124 (32.9)	157 (41.8)	12 (3.2)	62 (16.5)
Shopping for food and groceries	17 (4.5)	60 (16)	215 (57.2)	70 (18.6)	14(3.7)
Cleaning the house	13 (3.5)	30 (8)	109 (29)	184 (48.9)	40 (10.6)
Laundry and ironing	21 (5.6)	55 (14.6)	173 (46)	100 (26.6)	27 (7.2)
Caring for pre-school or babies at home	128 (34)	107 (28.5)	96 (25.5)	12 (3.2)	33(8.8)
Caring for handicapped/Elderly	168 (44.7)	135 (35.9)	48 (12.8)	14 (3.7)	11 (2.9)

Most of the respondents (74.7%) were engaged in light activities at work places. Only 15% did standing-moderate activity, and 10.3% did heavy activities at work

place (Standing-heavy activity-4.2%, walking heavy-3.1% & pushing heavy-3%) (Table 4).

Table 4: Respondents' type of work at work place (N=376)

Type of work	No	Percentage
Sitting-Light	160	42.5
Standing –light	110	29.2
Standing-moderate	56	15
Standing-heavy	16	4.2
Walking-light	11	3
Walking-heavy	12	3.1
Pushing-heavy	11	3

DISCUSSION

Being physically active every day is enjoyable and safe for most of the people. Health benefits of physical activity include improved fitness, strength and feeling better. Regular exercise is necessary for healthy lifestyle. Physical activity is anything that makes move your body and burn calories such as walking, running, hiking, doing household chores, climbing stairs or playing sports.

The objective of this study was to evaluate the physical activity levels among serving nurses of RIMS, Imphal. Nurses, as a part of medical profession, have all

essential knowledge about the benefits of regular physical activity and they have an ethical obligation to take care of the patient's healthy life. Further, they can motivate their patient's attitude toward physical activity and can become role models for their patient². Promotion of physical activity and counselling about a healthy lifestyle among patients is also a part of their job.

Present study showed that the 34.3% of the respondents watched TV for more than three hours per day and 7.7% never watched TV. Anuradha S et al³

found that females who watched two hours of TV per day had lower physical activity and higher TV viewing time (in females) were adversely associated with narrow retinal micro vascular caliber among Asian adults.

In the present study, 33.1% respondents had reported that they climbed stair at home for 6-10 times per day. Similar findings were observed by Gawwad Ensaf SA et al⁴ that more females used the stairs, did house work and considered them moderately active.

In the present study, it was found that 41.7% of respondents did household chores like cooking, washing and preparing food at home for more than 6-10 hours per week, and more than half (57.2%) of respondents went for food and groceries shopping for 6-11 hours per week.. Similarly, Florindo AA et al⁵ had reported that the proportions of active individuals were 14.8% for leisure time, 38.2% for occupation, 11.7% for transportation, and 48.5% for household chores.

As per work place physical activity, in the present study less than half (42.4%) of respondents had reported sitting-light activity, 29.5% standing-light activity, 15% standing-moderate activity at work place. Only 4.2% of them had reported standing-heavy activity at work

place. Similarly, Chau JY et al⁶ had reported that substantial proportions of men (42%) and women (47%) mostly sit at work. Workers with sitting jobs were significantly more likely to be sufficiently active during leisure-time than workers with mostly standing, walking or heavy labor jobs. Workers with mostly sitting jobs had significantly higher overweight/obesity risk than workers with mostly standing jobs (RR=0.88, 95% CI: 0.82-0.95) independent of physical activity and leisure-time sitting. In another study conducted by Shapo L et al⁷ reported that 19.3% of male and 28.4% of female respondents had a low level of physical activity at work place. Study carried out by Martins TG et al⁸ reported that the prevalence of leisure-time physical inactivity was 54.6% (47.3% among men, 61.4% among women). Other study done by Drygas W et al⁹ found that 35% of polish adults are not physically active in leisure time, whilst 39.5% declare sufficient level of leisure-time physical activity. A study conducted by Misigoj-Duraković M et al¹⁰ reported that 35.8% of the population is physically inactive. Physical inactivity is higher in men than in women (43.7% vs 30%). Considering spatial distribution, physical inactivity is most prominent in Zagreb, where as many as 85.6% of men and 45.2% of women are inactive. Another study by Hallal PC et al¹¹

had reported that, 31.1% of adults are physically inactive, with proportions ranging from 17.0% in south-east Asia to about 43% in the Americas and the eastern Mediterranean. Study done by Trinh OT et al¹² reported that only 56.2% aged 25-64 years in HCMC achieving the minimum recommendation of 'doing 30 minutes moderate-intensity physical activity for at least 5 days per week'. Another study carried out by Masson CR et al¹³ 59.3% reported moderate or vigorous activities less than three times a week. Another study by Khera R et al¹⁴ had reported that 58.2% had high physical activity, 27.9% had moderate while 13.8% had low activity level. A study done by Nozha MM

et al¹⁵ reported that inactive females (98.1%) were more than males (93.9%). Considering the above all studies cited, the present study had highest reported physical activity; this difference might be due to the difference in study population, research settings and taking all sorts of activities of respondents in the present study unlike the studies cited above. However, taking in mind of culture and traditions of respondents, it was to believe that women-folk were to do the whole household activity in and around the house and even outside of the home too. This might contribute more to physical activity and were clearly reflected in the present study.

Conclusion

The present study was done to determine the prevalence of physical activity level among the working nurses of RIMS, Imphal. 75% nurses have to climb stairs at home (more than 6 times a day by 47.5%). More than 60% of respondents

reported that they did household activities like cooking, washing and preparing food at home for more than 6 hours per week. They have to spend more times in shopping & household cleaning activities. 25% of them were engaged in moderate to heavy activities at work places

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