

Willingness to Join Physical Activity Program among Medical Faculties in Imphal, Manipur

Bikash Debbarma¹, RK Kamala¹, Jalina Laishram², Soubam Christina³, Brogen Singh Akoijam⁴

¹(Post graduate student, Community Medicine Dept. Regional Institute of Medical Science, India)

²(Asstt. Professor, Community Medicine Dept. Regional Institute of Medical Science, India)

³(Senior Resident, Community Medicine Dept. Regional Institute of Medical Science, India)

⁴(Professor & Head, Community Medicine Dept. Regional Institute of Medical Science, India)

Abstract:

Background: Physical inactivity not only increases the risk of NCDs and health expenditure but also reduces work place productivity. There were limited studies conducted among the faculties regarding willingness to join physical activity programs. Hence, this study is conducted to assess the willingness to join physical activity program among medical faculties.

Materials and Methods: A cross-sectional study was conducted among a convenience sample of 143 faculties of a teaching hospital in Imphal, Manipur between November and December, 2019. A pretested structured self-administered questionnaire was used to collect data and analysis was done using SPSS 21.0. Data was summarised using descriptive statistics. Chi square test was applied to check association between variables and a p value of <0.05 was taken as significant.

Results: 52% of the participants were female. Only 40% of the participants were doing regular physical activity. Morning walk (35%) was the commonest activity. 55% of the participants were willing to join a physical activity program. More number of male participants were doing physical activity (p value 0.004) but female participants were more willing to join physical activity program (p value 0.04).

Conclusion: Only 2 out of 5 participants were physically active. More than half of the participants were willing to join physical activity program. Having physical activity sessions in the institute might be a good initiative.

Keywords: Physical activity, Willingness, Faculty

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I. Introduction

WHO defines physical activity as 'any bodily movement produced by skeletal muscles that require energy expenditure - including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits'¹ Regular and adequate levels of physical activity improve muscular and cardio-respiratory fitness; improve bone and functional health; reduces the risk of hypertension, coronary heart disease, stroke, diabetes, various types of cancer (including breast cancer and colon cancer), and depression; reduce the risk of falls as well as hip or vertebral fractures; and are fundamental to energy balance and weight control.¹ According to WHO recommendation,¹ adult should engage at least 150 minutes of moderate-intensity physical activity throughout the week, or at least 75 minutes of vigorous-intensity physical activity throughout the week, or an equivalent combination of moderate-and vigorous-intensity activity. For additional health benefits, adults should increase their moderate-intensity physical activity to 300 minutes per week, or equivalent. Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week. Globally, physical inactivity is one of the major risk factors for death and it is considered as fourth leading cause of mortality, which contributes to approximately 3.2 million death each year. It is estimated that globally, 1 in 4 adults is not active enough.¹ According to ICMR-2014, around 45.6 % people were found inactive in India. The data further shows that males are significantly more active than females. Less than 10% engage in recreational physical activity.² Global cost of physical inactivity is estimated to be INT\$ 54 billion per year in direct health care in 2013, with an additional INT\$ 14 billion attributable to lost productivity. Inactivity accounts for 1–3% of national health care costs, although this excludes costs associated with mental health and musculoskeletal conditions.³ Various studies had shown that approximately 21-25% breast and colon carcinomas, 27% of diabetes and 30% of ischemic heart disease burden is caused by insufficient physical activity.⁴⁻⁶ Sedentary lifestyle or physical inactivity not only leads to a high disease burden and deaths but also poses a major threat to productivity and contributes significantly to health expenditure. It is a known fact that

physical activity has many advantages on health and we, as doctors, have been advising our clients and the society in general to adopt this healthy lifestyle. A healthy behaviour among medical professionals can also encourage their patients to adopt the same. There was limited study conducted among medical faculties regarding physical activity. Hence, this study was taken up to assess the level of physical activity among medical faculties and their willingness to join physical activity program.

II. Materials & Methods

Approval was obtained from the Research Ethics Board, RIMS, Imphal before conducting the study with the reference no. A/206/REB/Prop(SP)/103/79/2019. A cross-sectional study was conducted among medical faculties in a teaching hospital in Manipur, North-East India between November and December 2019. There were 262 faculties working in this institute as per official record. Total sample size calculated was 148 (using, the formula $4PQ/L^2$, where, $P= 85\%$, (proportion of doctors engaged according to Khan et al⁷, $Q = 100-P$, $L =$ Absolute allowable error of 6% and considering non-response rate as 5%). Participants were selected conveniently. Those who were not willing to participate, dental and nursing faculties and those who could not be contacted even after three visits were excluded from the study. Regular physical activity was defined as any ‘vigorous physical activity’ done for ≥ 15 minutes/day and ≥ 5 days/week or any ‘moderate physical activity’ done for ≥ 30 minutes/day and ≥ 5 days/week. Data were collected by face-to-face interview using a pretested structured proforma which consisted of background profile and questions related to physical activity. After explaining the purpose of the study, verbal informed consent was taken from all the participants. The interview was conducted in a separate room of their respective office or department without interrupting their work. Statistical analysis was done using IBM SPSS version 21.0 (Armonk, NY: IBM Corp.). Descriptive statistics like frequency, mean, SD and percentages were used. Chi-square test was used to determine the association of physical activity and their willingness to join with age, sex and BMI. A p value of <0.05 was taken as statistically significant.

III. Result

A total of 143 faculties participated in the study. Among the participants, 74 (52%) were females. Mean age of the participants was 46 ± 9.8 years (ranging from 28 to 65 years). Among the participants, 25% were Professors, 29% were Associate Professors, 19% were Assistant Professors and 27% were Senior Residents. Only 27 (18.9%) of participants had normal BMI (Table 1). Total 86 (60%) participants were doing moderate to vigorous physical activity but only 58 (40%) participants out of all participants were doing regular physical activity (Table 1). Walking (34.9%) was the commonest form of physical activity followed by jogging (22.1%), sports (16.2%), aerobics (11.6%), gardening (8%), zumba (3.4%) and yoga (3.4%). Eighty one (56.6%) participants wanted to join physical activity program and 93 (65%) participants wanted physical activity session in their workplace (Table 2). About 49.4% of the participants wanted to join yoga, followed by gym (21.5%), and aerobic (19%) (Table 3). Lack of time (71%) was the commonest reason for not doing any physical activity. Male participants were doing more physical activity as compared to females (Table 4). Female participants were more willing to join any physical activity program than male participants which was found to be statistically significant (Table 5).

Table 1: Background characteristics and physical activity details of the participants (N=143)

Background characteristics	n (%)
Age (completed years)	
< 46	65 (45.5)
≥ 46	78 (54.5)
Sex	
Male	69 (48.0)
Female	74 (52.0)
Designation	
Professor	35 (24.5)
Associate Professor	42 (29.4)
Assistant Professor	27 (18.9)
Senior Resident	39 (27.3)
Body mass index	
18.5-22.9	27 (18.9)
23.0-24.9	48 (33.6)
>24.9	68 (47.5)

Type of physical activity	Low/No activity	57 (39.8)
	Moderate intensity	47 (32.9)
	Vigorous intensity	39 (27.3)
Regular physical activity		
Yes		58 (40.0)
No		85 (60.0)
Want to join any physical activity program		
	Yes	81 (56.6)
	No	62 (43.4)
Want to have physical activity session in the Institute		
	Yes	93 (65.0)
	No	50 (35.0)

Table 2: Forms of physical activity preferred by faculties (N=86)

Physical activity	n (%)
Walking	30 (34.9)
Jogging	19 (22.1)
Sports	14 (16.2)
Aerobic	10 (11.8)
Gardening	7 (8.2)
Zumba	3 (3.4)
Yoga	3 (3.4)

Table 3: Forms of physical activity that the participants are willing to join (N=81)

Physical activity	n (%)
Yoga	39 (49.4)
Gym	17 (21.5)
Aerobic	15 (19)
Zumba	6 (7.6)
Sports	4 (2.5)

Table 4: Association between background characteristics and physical activity (N=143)

Background characteristics	Doing physical activity		p value
	Yes n (%)	No n (%)	
Sex			
Male	50 (72.4)	19 (27.6)	0.004
Female	36 (48.6)	38 (51.4)	
Age (complete years)			
< 46	35 (53.8)	30 (46.2)	0.16
≥ 46	51 (65.4)	27 (34.6)	
Body mass index			
18.5-22.9	19 (70.4)	8 (29.6)	0.06
23.0-24.9	33 (68.8)	15 (31.2)	
> 24.9	34 (50.0)	34 (50.0)	

Table 5: Association between background characteristics and their willingness to join physical activity (N=143)

Background characteristics	Willingness to join physical activity		p value
	Yes n (%)	No n (%)	
Sex			
Male	33 (47.8)	36 (52.2)	0.04
Female	48 (64.8)	26 (35.2)	
Age (complete years)			
< 46	42 (53.8)	36 (46.2)	0.40
≥ 46	39 (60.0)	26 (40.0)	

Body mass index			
18.5-22.9	19 (70.4)	8 (29.6)	
23.0-24.9	25 (52.1)	23 (47.9)	0.27
> 24.9	37 (54.4)	31 (45.6)	

IV. Discussion:

This study assessed the physical activity level and the willingness to join physical activity program among faculties of a teaching hospital in Manipur. Only one third of the participants were engaged in moderate to vigorous intensity physical activity and more than one third faculties were doing regular exercise. More than half of the faculties were willing to join any physical activity program in the institute. A study conducted by Banday et al⁸ also showed that 31% of physically inactive physicians have strong intention to increase their physical activity. There was dearth of studies on willingness to join physical activity programs among faculties and so comparisons could not be made willingness with other studies.

In this study, only 40% of the participants were doing regular physical activity which is almost similar (37.7%) to the study conducted by Patra et al⁹ whereas the proportion was higher (60%) in the study conducted by Bolarinde et al.¹⁰ On the other hand, a study conducted in Saudi Arab in 2014 by Banday et al⁸ has shown that the prevalence of inactivity among physicians was 34.8%.

In this study, 81% faculties were obese or overweight which is similar to the study findings of Khan et al⁷ where 73% doctors were found to be obese. Current study showed that walking (35%) was the most common form of physical activity among faculties which is similar to the studies conducted by Khan et al⁷, Patra et al⁹, Bolarinde et al¹⁰, Goud et al¹¹, and Wada et al.¹² Physical activity in the form of sports and exercise (17%) were found to be lesser in this study which was similar to the study conducted by Goud et al.¹¹ Lack of time (71%) was the most common reason for being inactive which was similar to the study conducted by Khan et al⁷, Patra et al⁹, and Rao et al.¹³ In this study, male participants (72.5%) were more active as compared to females (48.6%) which was similar to the study conducted by Anjana et al², Banday et al⁸ and Wada et al.¹²

This study findings give an insight on the physical activity level among faculties from the North-East part of India, and also assessed the willingness to join physical activity program. However, this study also not free from limitation. Since body weight and height of the participants was self-reported, BMI estimation might not be true. However, participants are asked to provide recent measure of weight.

V. Conclusion:

This study found that two-third of the faculties were physically inactive. Male participants were doing more physical activity as compared to the female participants. Walking was the commonest form of physical activity. Lack of time was the commonest reason for not doing any physical activity. More than half of the participants were willing to join any physical activity program and majority preferred to do yoga. Females were more willing to join such program. Those who are physically inactive at current are wanted to join physical activity program. In order to increase the level of physical activity among the faculties, having a physical activity program in the institute might be a good initiative.

References

- [1]. World Health Organization: Global strategy on diet, physical activity and health - Diet and physical activity: a public health priority. 2012. Available at: <http://www.who.int/dietphysicalactivity/en>. Accessed on 28th November, 2019.
- [2]. Anjana RM, Pradeepa R, Das AK, Deepa M, Bhansali A, Joshi SR, et al. Physical activity and inactivity patterns in India – results from the ICMR-INDIAB study. *Int J Behav Nutr Phys Act.* 2014;11(2):26-39.
- [3]. WHO - Global Action Plan 2018-2030. Available at: <https://www.who.int/publications-detail/global-action-plan-on-physical-activity-2018/E2/80/932030>. Accessed on 24th November, 2019.
- [4]. Liu L, Shi Y, Li T, Qin Q, Yin J, Pang S, et al. Leisure time physical activity and cancer risk: evaluation of the WHO recommendation based on 126 high-quality epidemiological studies. *Br J Sports Med.* 2015;50:372-8.
- [5]. Aune D, Norat T, Leitzmann M, Tonstad S, Vatten LJ. Physical activity and the risk of type 2 diabetes: a systematic review and dose-response meta-analysis. *Eur J Epidemiol.* 2015;30:529-42.
- [6]. Sattelmair J, Pertman J, Ding EL, Kohl HW, Haskell W, Lee IM. Dose response between physical activity and risk of coronary heart disease: a meta-analysis. *Circulation.* 2011;124:789-95.
- [7]. Khan DA, Zaidi R, Danish SH, Ahmad F, Sarfraz M. Attitude towards physical activity: A comparative study among doctors and physical therapists. *J Dow Univ Health Sci.* 2013;7(2):68-72.
- [8]. Banday AH, FAW FF, Alrayes MF, Aljethae F, Alarjan AW, Al-zarea AA, et al. Physically Active Physicians: Do they make any difference in patient care. *Med Appl Sci.* 2014;4(2):47-53.
- [9]. Patra L, Mini GK, Mathews E, Thankappan KR. Doctors' self-reported physical activity, their counselling practices and their correlates in urban Trivandrum, South India: should a full-service doctor be a physically active doctor? *Br J Sports Med.* 2015;49:413-6.
- [10]. Bolarinde SO, Daniel EO, Olagbegi OM, Akinrinbola B. Knowledge, Attitude and Practice of Physical Activity Among Health Professionals in A Nigerian Tertiary Health Institution. *South American J Public Health.* 2015;3(2):1-4.
- [11]. Goud M, Pamidi N, Devi OS, Nayal B, Kamath U. A questionnaire survey of awareness of physical activity among the faculties of medical college. *J Educ Health Promot.* 2014;3(1):47-54.

- [12]. Wada K, T. Y., Goto T, Hirai A, Matsushima E, Nakashima Y, et al. Lifestyle Habits among Physicians Working at Hospitals in Japan. Japan Medical Association. 2011;54(4):318-24.
- [13]. Rao CR, Darshan BB, Das N, Rajan V, Bhogun M, Gupta A. Practice of physical activity among future doctors: A cross sectional analysis. Int J Prev Med. 2012 May;3(5):365-71.

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