

Knowledge, Attitude And Practices On Physical Activities Among Health Care Providers Of A Medical College In Haryana

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Abstract

Introduction: Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally. For non-communicable diseases, physical inactivity is one of the main modifiable behavioural hazards for mortality as by the World Health Organization (WHO).

Objective : To assess the knowledge, attitude and practices regarding physical activities among healthcare providers (HCP) in Haryana.

Methods: A cross-sectional study was conducted from October 2021 to March 2022 among health care providers working in a tertiary care institute of Haryana. Data were collected using a questionnaire and analysed by using a combination of descriptive and statistical inference. P-value of less than 0.05 was considered as statistically significant.

Results: In this study, 405 health care providers answered to the questionnaire. Among them majority of the participants were female (60%) and Hindu (83.70%) and educated above graduation (73.83%). Mean age of study participants was 27.21 ± 8.182 years, mean knowledge score was 8.676, mean attitude score was 27.28, mean practice score was 16.84. The majority of the study participants (n=385;95%) displayed excellent and good knowledge of physical activity, (n=389;96%) exhibited good attitude towards physical activity, (n=327,80.74%) exhibited satisfactory practices responses towards physical activity.

Conclusion: The majority of study participants displayed excellent knowledge, good knowledge and good attitude toward physical activity, however only 50% participants engaged in practice of any type of physical activity. The practice of physical activity of employees with good knowledge and attitude can be enhanced by providing suitable environment and time.

Keywords: Attitude, Healthcare providers, Hospital staff, Knowledge, Physical activity, Practice

INTRODUCTION

Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally.^[1] For non-communicable diseases, physical inactivity is one of the main modifiable behavioural hazards for mortality as by the World Health Organization (WHO)^[2] and approximately 31% of the global healthy population does not cover the advocated physical activity requirement.^[3] Regular physical activity offers various significant health benefits, including reduced diseases and death, improvement in quality of life and intensify psychological wellbeing. Failure to take part in the minimum recommended physical activity predisposes person possibility of many lifestyle-related and chronic diseases such as cancer, obesity, cerebrovascular accidents, diabetes mellitus type II, cardiovascular diseases, hypertension, and osteoarthritis. Increased medical cost is mainly contributed by physical lethargy.^[4,5]

Health staff members serving in a healthcare sector are viewed as an indicative of health by their people and the communities they live in, irrespective of whether their roles are in hospital or related to clerical work.^[6] However, the work of hospital staff is in a healthcare environment, they are also at an increased risk of sedentary lifestyle. Determinants of physical activity are multifaceted and act as either barricade or coordinator to health. These include musculoskeletal, social, psychological and environmental components.^[7]

Hospital staff should possess merits of good knowledge of physical activity, in order to provide proper comforting to patients with regard to improving physical activity levels.^[8] Studies also support the fact that hospital staff who adopt

good self-practices of physical activity are more likely to console their patients on the significance of being physically active.^[9]

Furthermore, physical activity can promote mental well-being and may be as effective as antidepressant medications or psychotherapy for managing mild to moderate anxiety and depression.^[10]

The assumptions for the awareness and knowledge of the physical activity advice are that they would optimally be consider in physical activity etiquette. As physical activity is related to ameliorate physical fitness and body composition, it is of interest whether these variables are also related with the perception and knowledge of the recommendations.^[11] Even though physical activity has benefits, its knowledge, attitude and practices among health care providers in India have remained unexplored. Thus, the present study was conducted with the following objective among health care providers.

Aim and objective: To assess the knowledge, attitude and practices of physical activities among healthcare providers in Haryana.

MATERIALS AND METHODOLOGY

Study design and Sampling Method- It was a cross sectional study conducted from October 2021 to March 2022 in a tertiary care institute of Haryana. All health care providers who gave consent to participate in the study were included in the study.

Sample size- This study sample consist of health care providers working in a tertiary care institute of Haryana between age of 18 years to 60 years. As per the prevalence of physical inactivity in India ^[12] is 57%, so that the sample size was calculated as by using the formula as follows- $N=4PQ/L^2$. The sample size was calculated by taking prevalence of 57 and absolute error of 5%, so the sample size came as 376 which was rounded to 400 to compensate for non-response.

Inclusion and exclusion criteria

Inclusion criteria-All health care providers including doctors, nursing staff, para medical staff, administrative/clerical staff, support staff who gave consent to participate in the study.

Exclusion criteria- 1. Health care providers who didn't give consent to participate in the study.

Questionnaire framework- Pre tested self-administered questionnaires was used. The questionnaire was validated in a previous study ^[3,13] conducted to determine the Knowledge, Attitude and Practices (KAP) of healthcare workers regarding healthy lifestyles. The questionnaire was divided into four sections: (1) Sociodemographic characteristics and anthropometric measurements (2) Knowledge of physical activity, its benefits and the minimum amount of physical activity required to maintain one's health, (3) attitude towards physical activity and (4) practices of the staff member regarding physical activity.

At the time of data collection, the purpose of the study was explained to the participants by the investigator. The questionnaires were distributed among participants and collected after completion.

Statistical analysis- The knowledge score was obtained by allocating a point of 1 for each question responses correctly, and a 0 for each incorrectly responses question. Knowledge responses were collected and evaluated. Participants who scored > 80% correct answered were accessed to have excellent knowledge and those who had 50% – 80% correct answered were accessed as having good knowledge. The participants with scores of < 50% correct answered were considered as poor knowledge.

A five-level Likert scale was used to collect responses on attitudes and practices. The participants were questioned to assess their levels of attitude and practice from 1 to 5 whereas 5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree and 1 = strongly disagree. The responses were collected and evaluated. A score less than 60% was considered as a poor attitude and unsatisfactory for practice.

Qualitative variables were expressed as proportions and percentages. Quantitative variables were expressed as mean ± standard deviation (SD). Finally, Chi-square test was used to establish association (if any) among qualitative variables. Association between the various quantitative variables was established using t-test or anova as per data collected. $P < 0.05$ was considered significant at 95% confidence interval.

Ethical consideration- Approval from the Institutional Ethics Committee was taken. The study didn't impose any financial burden on the participants.

RESULTS:

Out of total 405 study participants, most of the study participants were female (n = 243; 60%) and were aged between 20 and 29 years of age (n = 261; 64.44%), mean age of Study participants was 27.21 ± 8.182 years, mean knowledge score was 8.676, mean attitude score was 27.28, mean practice score was 16.84, had Hindu religion as (n=339; 83.70%), had education graduation and above (n=299; 73.83%) and were in the Paramedical/nursing category (n = 200; 49.38%). The majority (n = 201; 49.63%) of participants who respond were engaged in physical activity.

Table 1: Association of sociodemographic variables with knowledge, attitude and practice physical activity among study participants.

Category	Participants (n=405)	Knowledge score			Score for Attitude		Score for practice	
		Excellent	Good	Poor	Good	Poor	Satisfactory	Unsatisfactory
Age category								
<20	14(3.46)	2	12	0	14	0	12	2
20-29	261(64.44)	155	90	16	251	10	217	44
30-39	88(21.73)	58	26	4	82	6	74	14
40-49	38(9.38)	28	10	0	38	0	30	8
50-59	4(0.99)	4	0	0	4	0	4	0
P value		0.002			0.377		0.842	
Gender								
Male	162(40)	98	54	10	156	6	146	16
Female	243(60)	149	84	10	233	10	191	52
P value		0.642			0.835		0.002	
Religion								
Hindu	339(83.70)	203	116	20	327	12	285	54
Muslim	18(4.44)	8	10	0	18	0	14	4
Sikh	38(9.38)	26	12	0	34	4	28	10
Christian	10(2.47)	10	0	0	10	0	10	0
P value		0.035			0.131		0.168	
Educational status								
Up to higher secondary	80(19.75)	44	34	2	76	4	72	8
Under-graduate	6(1.48)	4	2	0	6	0	2	4
Diploma	20(4.94)	16	4	0	18	2	18	2
Graduation and above	299(73.83)	183	98	18	289	10	245	54
P value		0.267			0.441		0.002	
Staff category								
Medical/Doctor	179(44.19)	105	72	2	169	10	137	42
Nursing staff/paramedical staff	200(49.38)	132	54	14	196	4	182	18
Administrative/clerical staff	6(1.48)	4	0	2	4	2	4	2
Medical student	20(4.93)	6	12	2	20	0	14	6
P value		0.001			0.001		0.001	
Type of family								
Nuclear	242(59.75)	154	78	10	232	10	196	46
Joint	151(37.28)	83	58	10	145	6	133	18
Third generation	12(2.96)	10	2	0	12	0	8	4
P value		0.193			0.773		0.056	
Residence								
Urban	263(64.9)	157	90	16	253	10	215	48
Rural	142(35)	90	48	4	136	6	122	20
P value		0.332			0.835		0.284	

❖ (Figure in parentheses indicate percentage)

Table 2: Association of habits of study participants with knowledge, attitude and practice among physical activity.

	Participants (n=405)	Knowledge score			Score for Attitude		Score for practice	
		Excellent	Good	Poor	Good	Poor	Satisfactory	Unsatisfactory
History of smoking								
Non smoker	383(94.5)	239	128	16	369	14	321	62
Past smoker	12(2.96)	4	4	4	10	2	8	4
Current smoker	10(2.47)	4	6	0	10	0	8	2
P value		0.001			0.060		0.283	
History of alcohol intake								
Non alcoholic	326(80.49)	202	112	12	314	12	272	54
Past alcoholic	49(12.10)	27	16	6	47	2	39	10
Current alcoholic	30(7.41)	18	10	2	28	2	26	4
P value		0.141			0.723		0.695	
Engagement in any type of physical activity								
Yes	201(49.63)	125	68	8	191	10	165	36
No	164(40.49)	92	60	12	158	6	138	26
Can't say	40(9.88)	30	10	0	40	0	34	6
P value		0.113			0.327		0.829	
BMI								
<18	32(7.9)	18	12	2	32	0	26	6
18-24.9	219(54.07)	128	80	10	211	8	187	32
25-29.9	114(28.15)	72	36	6	106	8	92	22
>30	40(9.8)	28	10	2	40	0	32	8
P value		0.838			0.120		0.650	

❖ (Figure in parentheses indicate percentage)

Table:3. Questions regarding participants' knowledge of physical activity.

Questions regarding participants' knowledge of physical activity	No. of participants who agreed with statement. (n=400)	
	n	Percentage
Statement		
Do you think regular physical activity can prevent heart disease?	369	91.11
Do you think regular physical activity can help improve health?	403	99.51
Do you think regular physical activity doesn't increase the risk of developing depression and anxiety?	341	84.20
Do you think regular physical activity can cause a drastic drop in blood pressure?	206	50.86
Do you think regular physical activity helps maintain one's body weight?	387	95.56
Do you think regular physical activity doesn't increase the risk of developing diabetes type 2?	325	80.25
Do you think regular physical activity decreased cholesterol and blood pressure?	373	92.10
Do you think regular physical activity doesn't increase the risk of contracting HIV/AIDS?	159	39.26
Do you think regular physical activity reduces the risk of getting osteoporosis in later ages?	269	66.42
Do you think person should engage in vigorous-intensity exercises for 20 min on 3 days per week, to maintain good health (e.g., running, soccer, aerobics exercises)?	315	77.78
Do you think one should engage in moderate-intensity exercise for 30 min on 5 days per week, to maintain good health (e.g. brisk walking, swimming, volleyball, light exercise)?	367	90.62
▪ HIV/AIDS- human immunodeficiency virus/acquired immune deficiency syndrome.		

Table:4 Participants' attitudes responses towards physical activity.

Participants' attitudes responses towards physical activity.					
Statement	Strongly agree %	Agree %	Neither agree nor disagree %	Disagree %	Strongly disagree %
Exercise provides many benefits, no matter what age we start doing it.	59.51	34.57	5.43	0.49	0.00
It is important for me to be physically healthy and fit.	63.21	34.32	1.98	0.49	0.00
My family history will determine what disease I get, so it doesn't matter if I do exercise or not	11.85	26.67	27.90	25.19	8.40
I would engage in more physical activity if I had more time after/during my work.	31.11	56.79	9.14	2.47	0.49
There are many more important things in my daily life than being physically active.	15.31	35.56	24.69	20.00	4.44
I would engage more in physical activity if my workplace had facilities, e.g., a gymnasium, wellness programme.	35.56	47.16	11.11	5.68	0.49
I would engage in more physical activity if I had more motivation from my friends/colleagues.	25.19	51.85	18.02	3.95	0.99
A reward programme at work would be an incentive for me to be more physically active.	28.15	53.09	14.81	2.96	0.99
We should not rely on our workplace to provide us with incentive to exercise.	22.47	49.14	21.48	6.42	0.49
Fatty people are healthier people.	7.90	19.75	18.52	41.48	12.35
I am happy with my current body weight.	16.79	41.73	21.98	18.52	0.99
Exercising is expensive, and only wealthy people can afford to do it.	10.37	22.22	15.06	35.56	16.79

Table:5 Participants' responses towards physical activity practices

Participants' responses towards physical activity practices					
Statement	Strongly agree %	Agree %	Neither agree nor disagree %	Disagree %	Strongly disagree %
I engage in the right amount of physical activity	17.28	51.85	20.74	8.40	0.99
I have a medical condition that prevents me from engaging in physical activity.	10.86	32.35	17.28	31.11	8.40
I engage in exercise for pleasure, not only for health benefits.	16.79	40.49	22.72	19.51	0.49
I intend to start doing more physical activity in the next 6 months.	20.25	53.33	20.00	6.42	0.00
I get all the exercise I need from just doing normal activities.	18.27	42.96	18.27	17.78	1.98
I engage in vigorous intensity sports for 20 min, 3-5 times a week (e.g. running, soccer, aerobics).	16.30	43.70	17.28	21.23	1.48
I engage in moderate-intensity sports for 30 min, more than 5 times a week (e.g., brisk walking, dancing, light exercise,).	20.25	54.07	13.33	12.35	0.00

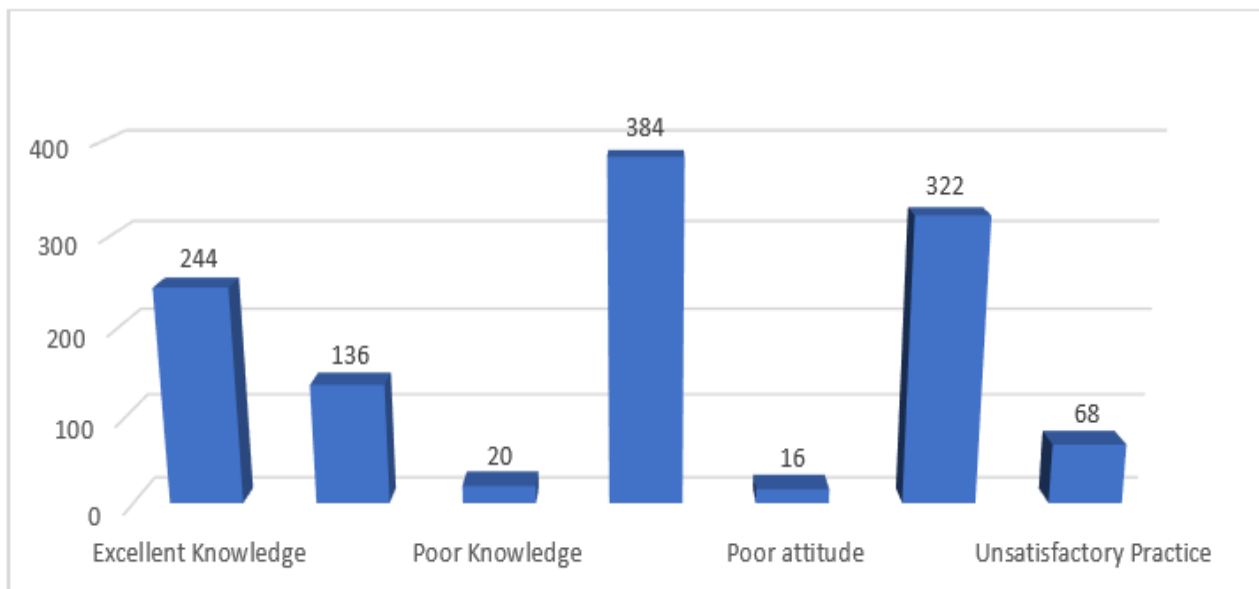


Figure :1. Knowledge, attitudes and practices of participants(n=405)

DISCUSSION:

The majority of participants (95%) displayed excellent & good knowledge of physical activity, 384 (96%) had a good attitude towards physical activity. However, 322 (80.74%) revealed only satisfactory practices (Figure 1). Similar results were observed in a previous study^[3,14] amongst health care providers in a public health service in South Africa, that the majority of health staff did not involve in any regular physical activity.^[7] This could be attributed to the lack of free time, the working hours and the environment, which is physically taxing and which could influence one's willingness to engage in physical activity. The best knowledge of physical activity was observed amongst doctors. Similar results were observed in a previous study^[3] in Pretoria, South Africa, which concluded that regarding physical activity, doctors had better knowledge than non-medical staff/paramedical/administrative staff. Our findings suggests that the study participants had greater levels of health education and literacy which may ease their behaviours towards healthy lifestyles. Although, results were statistically significant difference amongst the different levels of education in terms of practices score (P value=0.002). Study participants with the highest level of education had superior KAP scores as opposed to those with lower levels of health education and literacy. Similar results were observed in a previous study^[14] in healthcare workers in Sweden, which concluded that study participants with a higher level of education had superior knowledge regarding the benefits of physical activity.

Because of the dissimilarity in social responsibility between male and female, Sex roles affect regular exercise conduct with regard to knowledge of physical activity, female achieved slightly superior scores than male in this study, with regard to knowledge and attitude of physical activity, results were statistically insignificant. Although practices amongst female was statistically significant (P value=0.002). This might be due to that the both male and female were participating in physical activity. Similar results were seen in a previous study^[16] conducted in Iran in which all the participants were aware of the role of physical activity on overall health well-being.

Knowledge and attitude have a strong effect over personal health practices and behaviour. Study participants who were doing physical activity had significantly higher knowledge, attitude and practice scores as compared with those who did not engage in any physical activities.^[15] Dissimilar results were observed in a previous study^[8] in Brazil amongst nurses, physicians and other healthcare workers, which revealed that all three groups lacked knowledge of the recommended minimum requirements for physical activity.

Some previous studies show that further different methods to deliver health messages and health behaviour change may work.^[17,18] The fact that the effect size of e.g., mass media campaigns on health behaviour has turn out to be rather low emphasizes the need for multiple methods to raise awareness and knowledge.^[19]

CONCLUSION & RECOMMENDATIONS:

The majority of study participants displayed excellent, good knowledge and good attitude toward physical activity, however only 50% participants engaged in practice of any type of physical activity. The best knowledge of physical activity was observed amongst doctors. In our study females achieved superior scores than males in physical activity practices. The hospital's employee wellness programme with appropriate strategies that enhance the staff's physical activity practice to promote health should be conducted. The facilities such as a gym on site, yoga classes, Zumba classes or exercise classes to be built within the workplace in a pleasant environment. In addition, time should be organized to allow health personnel to engage in these physical activities.

Study limitations

This survey was based on self-reporting by study participants and therefore was subject to demand effects in which people shape their responses so that others will have positive impressions of them. The study was conducted in one private health institution.

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