

Self-Reported Healthy Lifestyle Behaviors among Physicians Working in Tertiary Care Hospitals in the Twin Cities: A Descriptive Cross-Sectional Study



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Abstract

Background: The objective of the study was to examine whether physicians working in tertiary care hospitals adopt disease-preventing and health-promoting behaviors.

Methodology: A descriptive cross-sectional study was conducted in twin cities at 10 randomly chosen tertiary healthcare facilities. Medical professionals were given the Health-Promoting Lifestyle Profile II (HPLP II) questionnaire, which included sociodemographic data, diet intake, spiritual growth, health responsibility, interpersonal interactions, physical exercise, and stress management. Participants responded on a four-point Likert scale from "never" to "routinely." Responses were categorized as "poor," "moderate," "good," or "excellent." Data were analyzed using SPSS 23.

Results: The average age of participants was 31.6 years, with a standard deviation of 10.1 years. The sample had a moderate health promotion lifestyle profile, with an HPLP-II mean score of 126.68 and a standard deviation of 19.69. Among health promotion aspects, 'Spiritual Growth' had the highest mean score (25.30±4.731), and 'Physical Activity' had the lowest (17.48±4.392). Physicians affiliated with Rawal Institute of Medical Sciences had the highest aggregate scores in promoting a healthy lifestyle, while those affiliated with Pakistan Institute had lower scores. Female doctors exhibited better health responsibility practices than male physicians, while male physicians had better nutritional habits.

Conclusion: Healthcare staff in the twin cities generally followed healthy behaviors. These results emphasize the need to focus on doctors' well-being and to develop and implement policies to enhance their efforts in promoting healthy lifestyles.

Keywords: Healthy lifestyle; health promotion; HPLP II; doctors

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Introduction

The World Health Organization (WHO) defines health as more than just the absence of disease; as it encompasses complete physical, mental, and social well-being (1). According to WHO, lifestyle plays a significant role in one's health-related quality of life, accounting for 60% of its impact (2). A health-promoting lifestyle is described as a multi-dimensional pattern of beliefs and behaviors that encourage individuals to maintain good health and prevent diseases (3).

This Health-Promoting Lifestyle, abbreviated as HPL, focuses on six key dimensions: "Physical Activity," "Nutrition," "Health Responsibility," "Spiritual Growth," "Interpersonal Relations," and "Stress Management." To assess the adoption of health-promoting behaviors in individuals, the Health Promoting Lifestyle Profile was developed. This study's questionnaire was carefully constructed to capture physicians'

disease-preventing and health-promoting activities. The Health-Promoting Lifestyle Profile II (HPLP II) questionnaire has 52 questions on diet, spiritual growth, health responsibility, interpersonal relationships, physical activity, and stress management based on validated frameworks. This thorough approach permitted a comprehensive study of twin cities' tertiary care professionals' lifestyles and health-promoting practices (4).

Physicians hold a crucial role in society, particularly in countries like Pakistan, where the doctor-to-population ratio is as low as one doctor for every 6325 individuals (5). It's imperative to assess and scrutinize the health of these healthcare professionals (6). Traditionally, there has been a belief that doctors often neglect their own well-being due to the demands of their profession and personal obligations. A 2004 survey conducted by the Royal College of Physicians in the UK revealed that junior doctors their experience fatigue, thirst, stress, and

deteriorating mental health. Furthermore, there is a growing body of research addressing the health status and practices of physicians. One study in America concluded that doctors should pay more attention to their own health (7). An individual's health promotion is greatly influenced by their positive behaviors, and as stated in "Health Care Law" by Jonathan Montgomery, 53% of all mortalities are associated with an individual's lifestyle. Additionally, research has shown a connection between night shifts and an increased risk of type 2 diabetes mellitus (8).

This shift in perspective has led to a greater emphasis on the health of physicians. As a result, The Royal College of Physicians Canada integrated self-care as a core concept in their 2005 physician competency framework (9,10). The 2007 Physician Health Survey, undertaken by the Canadian Medical Association, along with other scholarly investigations, have brought into focus various dimensions of physician well-being that warrant heightened scrutiny. Notably, these dimensions encompass nutrition, physical activity, sleep patterns, and self-care practices. These are salient concerns that exert a significant influence on the routine existence of each medical practitioner. As there is increasing recognition of the importance of physician health, there have been a few large-scale programs that target lifestyle behaviors in physicians. However, the majority of these programs primarily target acute crisis situations, such as substance abuse or mental health disorders, while neglecting the promotion of daily healthy living practices. The recognition of the significance of preventive medicine within the broader population is on the rise, and the well-being of physicians should not be an exception to this trend. Similar challenges are evident in Pakistan, where there is a notable lack of awareness concerning the health of physicians. There is a widely held belief that doctors are impervious to disease (11,12)

Because of this limited awareness, doctors in Pakistan often neglect the crucial element of maintaining their own well-being. Consequently, they often experience chronic illnesses that could have been prevented if they had paid sufficient attention to disease prevention and health promotion practices. To date, no studies have been conducted in Pakistan to investigate the adoption of healthy lifestyle promotion strategies by physicians. Therefore, this study seeks to investigate the health-promoting behaviours that doctors incorporate into their daily routines and ascertain whether healthcare professionals, such as doctors, prioritize their own health and adhere to the same practices they recommend to their patients.

Methodology

This study entailed a descriptive cross-sectional investigation conducted within the twin cities of Rawalpindi and Islamabad, Pakistan. These are large urban areas with a population of several millions and a varied socio-cultural population that will provide a deeper look into the health-promoting habits of doctors. The data was obtained from medical practitioners practicing in various tertiary healthcare establishments that were duly registered with

the Pakistan Medical and Dental Council (PMDC) and located within the aforementioned twin city region. The tertiary care facilities located in Rawalpindi that were included in this study comprised Holy Family Hospital, Benazir Bhutto Hospital, CMH (Combined Military Hospital), AFIC (Armed Forces Institute of Cardiology), and Fauji Foundation Hospital. In Islamabad, the selected hospitals were PIMS (Pakistan Institute of Medical Sciences) (PIMS), Shifa International Hospital, Punjab Employees' Social Security Hospital, and Rawal Institute of Health Sciences. Some of these hospitals are private while others are public.

Our sampling strategy involved the selection of 20 medical doctors from each of the aforementioned tertiary care facilities. This selection process was executed with a 95% confidence level, assuming an anticipated population proportion of 15%, and allowing for a margin of error of 5%. The inclusion criteria for this study encompassed medical doctors, of both genders, employed within the tertiary healthcare institutions situated in the twin cities area, and their age ranged from 23 to 64 years. This wide age range will guarantee a thorough examination of various career phases of doctors. This will enable us to promote health across the professional doctors of all ages. Excluded from participation in the study were those medical practitioners who either declined consent for involvement or did not fall within the specified age range. Also, pregnant and lactating females or doctors with chronic diseases are not discussed in this study to make it more focused over homogenous group. Future research may explore these subgroups to get understanding about these unique health challenges.

We obtained a roster of all the tertiary care hospitals in Islamabad and Rawalpindi from the PMDC. Using a random number allocation and drawing method, we selected 10 hospitals. For the selection of 20 doctors from each of these hospitals to whom the questionnaire was administered, we employed a convenience sampling technique. In total, we recruited a sample of 200 doctors for the study.

Data was gathered through the distribution of a self-administered questionnaire to doctors employed in tertiary care facilities within the twin city region. This questionnaire consisted of two parts: the first part collected socio-demographic information such as name, age, gender, specialty field, and employing institution. The second part assessed health-promoting lifestyle habits using questions based on the validated Health-Promoting Lifestyle Profile (HPLP-II). The HPLP was originally developed by Walker et al. in 1987 and was subsequently revised as HPLP-II in 1995 (13). It comprises six subscales: Spiritual Growth (9 items), Health Responsibility (9 items), Physical Activity (8 items), Nutrition (9 items), Interpersonal Relations (9 items), and Stress Management (8 items). Each subscale can be evaluated independently. All items in the profile were positively worded, with no reverse questions. Respondents provided answers on a four-point Likert-type scale, with "never," "sometimes," "often," and "routinely"

corresponding to scores of 1, 2, 3, and 4 points, respectively. The total HPLP-II score ranges from 52 to 208, with higher scores indicating a healthier lifestyle.

Consent was taken from all the participants prior to the filling of the questionnaires, and they were free to withdraw from the study at any time. Strict confidentiality was maintained throughout the process of data collection and analysis.

The survey took place between December 12, 2018, and March 1, 2019, during which questionnaires were distributed to doctors within their respective hospitals. It typically took doctors approximately 20 to 25 minutes to complete the questionnaires. Following the administration, the valid sample size amounted to 199, as one response had to be excluded.

Statistical analysis

Statistical analyses were carried out utilizing Statistical Package for the Social Sciences (SPSS (Statistical Package for the Social Sciences) version 23). The scores were aggregated for each category as well as for the overall HPLP-II score. To describe continuous variables, mean and standard deviation were used, while categorical variables were described using frequency distributions and percentages. The disparity in the mean total scores of the six subscales, including the overall HPLP-II, between the two genders was assessed using an independent t-test. A p-value of less than 0.05 was considered statistically significant.

Results

The study's participants had an average age of 31.6 years, with a standard deviation of 10.1 years, ranging from 23 to 64. In terms of gender distribution, 34.9% were male, while 65.1% were female. Among the participants in the valid sample, house officers comprised the largest group at 29.1%, followed by in Medicine, Dermatology, Ophthalmology, Anaesthesia, Accident and Emergency, Surgery, Radiology, Urology, Orthopaedics, Cardiology, Neurology, Administration, ENT (Ear, Nose, Throat), Nephrology, and paediatrics professionals. The results are displayed in table 1.

Table 1. Sociodemographic data of the study participants

Participant's Characteristics	%	Demographics	%
Male	34.9	Physiotherapy	2
Female	65.1	Plastic surgery	2
HOs	29.1	Cardiology	1.5
Medicine	9.5	Neurology	1.5
Dermatology	5.5	Admin	1.5
Ophthalmology	3.5	Dentistry	1.5
Anaesthesia	3	ENT	1
Accident & Emergency	3	Nephrology	1
Surgery	2.5	Peads	1
Radiology	2	ICU	1.5
Urology	2	Orthopaedics	2

The mean total score on the Health Promotion Lifestyle Profile II (HPLP II) for doctors was 126.68, with a standard deviation of 19.69 (Table II). There was no significant

difference in the total HPLP II scores between males and females. However, there was a significant difference in the HPLP II scores for the subclasses of Nutrition and Health Responsibility, with males scoring higher than females. The doctors from Rawal Institute of Health Sciences had the highest mean HPLP II score of 140.35, while the doctors from Pakistan Institute of Medical Sciences had the lowest mean HPLP II score of 109.60.

Table 2. Health promoting lifestyle profile-II and subscale scores (n=199)

	Interpersonal Relations	Nutrition	Health Responsibility	Physical Activity	Stress Management	Spiritual Growth	HPLP Total
Mean	25.15	19.94	19.35	17.48	19.45	25.30	126.68
SD	3.80	4.06	4.34	4.39	4.30	4.73	19.68

Table 2 displays the Health-Promoting Lifestyle Profile-II (HPLP-II) subscale rankings, providing valuable insights into various dimensions of doctors' self-reported fitness behaviours. The rankings shed light on the prevalence and strength of those behaviours, contributing to a complete knowledge of doctors' basic wholesome life-style profile.

The outcomes show significant characteristics in doctors' health-promoting actions. Notably, Interpersonal Relations, assessed via nine questionnaire objects, ended in an average rating of 25.15 ± 3.804 , categorized as good for 72.2%, high-quality for 16.16%, slight for 11.11%, and bad for 0.51% of docs. This underscores the importance doctors place on fostering effective social connections, doubtlessly contributing to their typical nicely-being. Additionally, Nutrition assessment, decided through 9 items, yielded an average score of $19.94 \pm 4.1/2$, categorised as slight for 54.04%, good for 32.83%, terrible for 11.11%, and exceptional for 0.02%. The imply rankings for health responsibility (19.35), stress management (19.45), and spiritual growth (25.30) collectively imply a fine inclination toward ailment prevention and health promotion in those respective domains. The overall results are displayed in figure I.

The variability in rankings, as indicated by means of the standard deviations, highlights the variety of practices within the doctor cohort, showcasing each strength and areas for improvement. These findings align carefully with the study's objective of evaluating physicians' adoption of ailment-stopping and health-promoting behaviors in their everyday lives. The HPLP Total rating (126.68) gives a combination degree of doctors' general adherence to health-promoting habits, highlighting the holistic approach to personal well-being.

Physical activity levels were assessed using an 8-item questionnaire, categorizing subjects as poor, moderate, good, or excellent. The sample's mean score on the HPLP II scale indicated moderate physical activity at 17.48 ± 4.392 , with 59.60% of physicians falling into this category, followed by 20.20% with poor activity, 19.19% with good activity, and only 1.01% with excellent activity. Males had a higher mean score (18.4) than females (16.7).

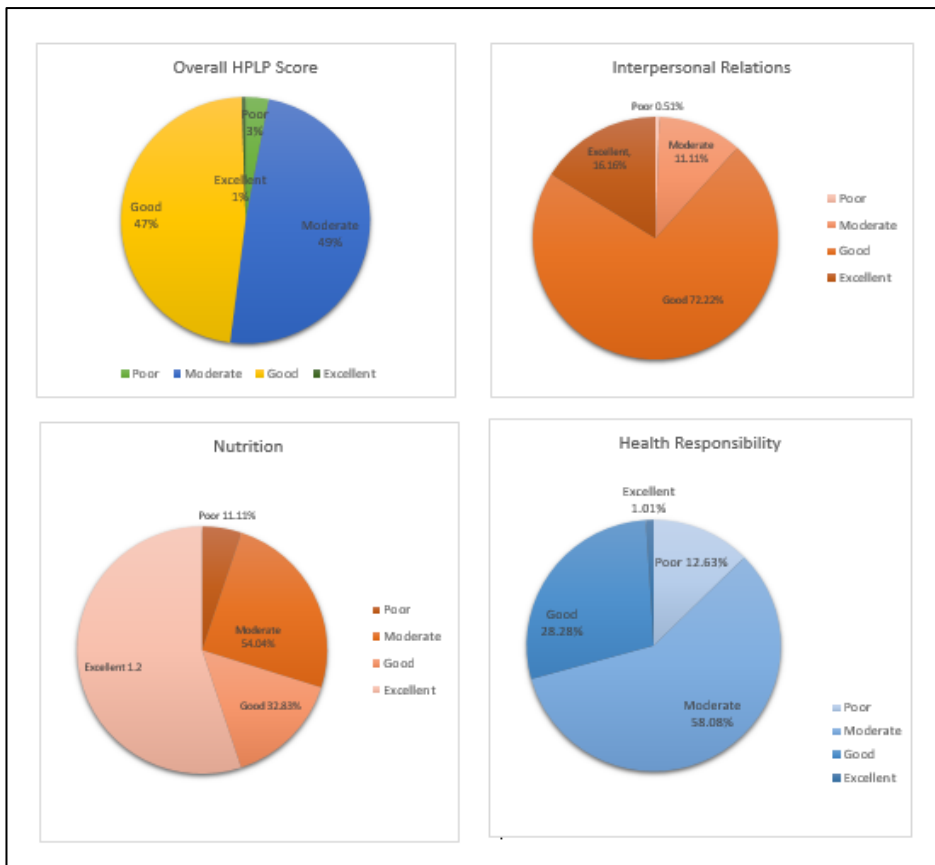


Figure 1. Status of the study participants regarding overall HPLP score, interpersonal relations, nutrition and health responsibility



Figure 2. Status of the study participants regarding physical activity, stress management and spiritual habits

Stress management was evaluated using 8 questionnaire items, yielding a moderate mean score of 19.45 ± 4.300 . Moderate stress management was exhibited by 46.46% of doctors, 37.37% had good skills, and 16.16% had poor skills, while none displayed excellent stress management. Males had a higher mean stress management score (20.3) compared to females (19.5).

Spiritual growth, assessed with 9 questionnaire items, resulted in a good mean score of 25.30 ± 4.731 , with 59.09% scoring good, 24.75% excellent, 2.02% poor, and 14.14% moderate. Males had a higher mean score for spiritual growth (26.4) than females (24.5). Figure II provides an overview of these results.

Discussion

This research study focused on doctors working in tertiary care hospitals in the Islamabad and Rawalpindi regions. Its primary aim was to assess the different levels of HPLP II scores and scores within the specific categories of Health Responsibility, Physical Activity, Nutrition, Spiritual Growth, Interpersonal Relations, and Stress Management. The study aimed to provide insights into the lifestyles of doctors in this area, recognizing the significance of healthcare professionals in a developing country like Pakistan, where their health and lifestyle should be a top concern.

Our data indicated that doctors in this region generally maintained a moderate level of health-promoting lifestyle behaviors. This finding aligns with similar studies conducted among university in Iran (14). On average, the doctors' scores were higher than those found in research among nurses (15) at a university hospital in Turkey, but notably lower than the scores of final-year medical students at a university hospital in Turkey (16). Given this moderate HPLP II score, it is evident that there is a need for interventions to promote healthier lifestyle habits among doctors in the twin city area.

Data from institutions like the Rawal Institute of Health Sciences (RIHS), a private teaching tertiary care hospital in Islamabad, showed that their employees exhibited better health-promoting practices compared to other institutes. This suggests that the workplace environment at RIHS may contribute to a healthier lifestyle, and other institutions may benefit from adopting similar models to enhance the health-promoting lifestyle of their doctors.

Generally, male doctors in the twin city area demonstrated better health-promoting practices, with a statistically significant difference between genders observed in the Health Responsibility and Nutrition subclasses (17,18). Female doctors, on the other hand, had significantly higher scores in the Health Responsibility subclass. Surprisingly, data also revealed that females had lower scores in terms of awareness about the benefits of a nutritious diet, maintaining a nutritious diet, and understanding medication and its side effects. This contrasts with a previous study conducted on African Americans doctors, which showed that females outperformed males in the Interpersonal Relations, Health Responsibility, and Nutrition subclasses (19,20). These differences may be attributed to various factors, such as race, social, geographical, or cultural influences within the region.

When examining the individual subclasses of the health-promoting lifestyle profile, it was observed that all categories received moderate scores except for Interpersonal Relations and Spiritual Growth, which had good scores. Spiritual Growth garnered the highest mean score among doctors, possibly due to the prevalence of religious beliefs in the region. Conversely, the Physical Activity subclass received the lowest score, indicating that doctors in the area tend to lead sedentary lifestyles. This underscores the need for a shift towards maintaining regular and appropriate exercise routines, along with potential improvements in facilities to facilitate such activities.

Strengths

Strengths of this research encompass the sturdy methodology employed, presenting a consultant sample of two hundred medical doctors from ten randomly selected tertiary care hospitals in Rawalpindi/Islamabad. The use of the Health-Promoting Lifestyle Profile II (HPLP II) questionnaire ensures a complete evaluation of physicians' fitness-promoting behaviors. The statistical analysis the use of SPSS model 23 enhances the credibility of the study's findings. The identity of inter-institutional disparities among physicians adds depth to the studies, offering insights into versions in fitness advertising practices throughout special clinical establishments. Additionally, the gender-specific evaluation sheds mild on nuanced differences, revealing girl physicians' superior fitness responsibility practices and male physicians' extraordinary dietary conduct. Overall, those strengths contribute to the reliability and relevance of the outcomes.

Limitations

This cross-sectional study lacks the capacity to establish causation or track changes in doctors' health-promoting lifestyle practices over time. It employed convenience sampling as the sampling technique, necessitating careful consideration when attempting to apply the findings broadly. Additionally, since all data in this study relied on self-reported information, there is a potential for response bias in the provided answers.

Conclusion

The moderate Health-Promoting Lifestyle Profile (HPLP) scores observed among physicians underscore the significance of advocating for healthy lifestyle behaviors, with a particular emphasis on physical activity. This bears importance as physicians themselves are deeply committed to promoting overall well-being.

In light of the absence of prior research concerning the health promotion practices of doctors in Pakistan, our findings emphasize the imperative need for further exploration within this domain. Subsequent studies that establish causal relationships, monitor longitudinal changes, and assess the distribution of HPLP scores throughout the nation can significantly contribute to the development and implementation of policies and guidelines aimed at fostering a healthier way of life. Such endeavors have the potential to enhance the profiles of individuals, encompassing Health Responsibility, Physical Activity, Nutrition, Spiritual Growth,

Interpersonal Relations, and Stress Management, both among physicians and the general population.

Ethical Approval:

This study was approved by Institutional Ethics Review (IER) Committee of The Punjab Employees Social Security Hospital, Islamabad

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Authors' Contribution:

NM: Conception of study/ Designing /Planning, Critical review

MAM, SBA & TS: Manuscript writing

RN & UK: Analysis/Interpretation/Discussion

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