

Dimensions of Wellness: A Multidimensional Concept

Nadia Zohair¹, Mehvish Javed², Manahil Rahat³, Hassan Mumtaz⁴, Aisha Sher⁵, Zohaib Raza⁶, Shazia Qayyum⁷, Shahzaib Ahmad⁸

¹Assistant Professor Community Medicine, Riphah International University

²Lecturer Pathology, IMDC

³Lecturer Pharmacology, IMDC

⁴Clinical Research Associate: Maroof International Hospital, Public Health Scholar: Health Services Academy

⁵Head of Medical Education Dept, MIHS

⁶Resident Paediatrician, Holy Family Hospital Rawalpindi

⁷Professor of Pathology, Riphah International University

⁸King Edward Medical University Lahore/Mayo Hospital Lahore, Pakistan

Correspondence: Hassan Mumtaz

Hassanmumtaz.dr@gmail.com

Abstract

Objective: To assess how medical students adhere to various aspects of well-being in the context of physical, emotional, and Spiritual Wellness.

Materials & Methods: The cross-sectional questionnaire-based survey was conducted from January to December 2010, comprising randomly selected 300 male/female medical students in Riphah International University. The responses - 'no,' 'sometimes,' 'mostly' and 'yes/always' (numbered 0-4) - were analyzed in terms of frequency, proportion, and percentages by Predictive Analysis Software (PASW).

Results: Of the 300 questionnaires, 287 (95.7%) fully-completed questionnaires comprised the study universe. According to the survey, 103(35.89%) respondents were male, and 184 (64.11%) respondents were Female. Sickness and sports affect physical Wellness concerning Gender having p values 0.0159 and 0.0240. Family friends and mood swings affect emotional Wellness having p values 0.0059 and 0.00. Prayer and Spiritual Fasting involves Spiritual Wellness having p values 0.0024 and 0.0116. Tukey simultaneous comparison t-values are (df. = 858), also showing that Spiritual Wellness significantly differs from emotional Wellness and physical Wellness of respondents.

Conclusion: Medical students should be taught stress and time management techniques as part of their core curriculum to help them cope with the stress and pressures of practicing medicine. Research into gender bias in Health and Wellness needs to be expanded and improved by colleges and universities.

Keywords: Wellness wheel, Physical Wellness, Emotional Wellness, Spiritual Wellness.

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Introduction

The purpose of the Creator's teachings of Wellness, serenity, and happiness is to assist humanity reach a sense of balance and harmony in their life. A person's body, mind, and spirit work harmoniously in a dynamic equilibrium. Family relationships, socioeconomic situations, neighborhood, cultural pressures, and access to healthcare can either support or break this dynamic equilibrium.¹

Many people believe that a healthy person does not suffer from any illness. There is no single definition for the term

"health." Given that poor Health limits a person's or a society's potential, some people believe that "health is riches." "It is health that is real wealth and not pieces of gold and silver," remarked Mahatma Gandhi in 1948.²

It has been shown that good Health directly impacts people's mental, emotional, physical, and financial well-being. There are several definitions of Wellness, but one of the most common is that it refers to a state of optimal Health, especially as an actively pursued goal.³

Mental Health is defined by the World Health Organization (WHO) as "a condition of well-being in which the individual

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recognizes his or her abilities, can cope with the usual stresses of life, can work successfully and fruitfully, and is capable of contributing to the community".⁴

An individual's pursuit of optimal Health and well-being is a lifelong learning and decision-making process that stems from the wellness wheel. Health indicator that seeks to achieve the perfect body, heart, mind, and soul are functioning for the benefit of society.⁵

There are six spokes (dimensions) on the wheel representing each of the six dimensions of well-being. To maintain a healthy state of mind and body, it is essential to pay attention to the various aspects of one's well-being (i.e., the spokes of one's Wellness). For this reason, it is critical to pinpoint the sources of any imbalances and devise solutions for restoring them. Taking care of one's body (Physical Wellness), mind (Emotional Wellness), and values and beliefs (all three aspects of well-being) can help one make better life decisions and deal with Health and societal issues (Spiritual Wellness).⁶

When it comes to physical wellness, being aware of the necessity of eating correctly, exercising consistently, and making healthy lifestyle choices is essential Health and well-being are greatly influenced by individuals' health and behavioural decisions and changes. Individual well-being is also impacted by this burden, which extends beyond the health care system. There are many strategies to improve your mental and emotional well-being, including relaxation, meditation, yoga, and relationship-building techniques. To be spiritually healthy, one must believe that all people are worthy of being treated with dignity and respect.⁷

According to the National Institutes of Health (NIH), there is little doubt that 80 percent of all diseases are caused by cumulative and uncontrolled stress, which is increasing at an alarming rate, according to the National Institutes of Health (NIH). Many people don't realize how detrimental stress can be to their Health and well-being. It can cause headaches, hypertension, anxiety, insomnia, and mood changes, all of which can lead to a complete breakdown of the mind and body. As a result, medical schools teach students how to treat patients, but they fail to teach them how to take care of themselves and keep track of their Health. According to the National Institutes of Mental Health, people's basic needs can be addressed to ease their psychiatric symptoms by assisting others, according to the National Institutes of Mental Health.⁸

We aim to determine how medical students adhere to various aspects of well-being, primarily physical, emotional, and Spiritual Wellness.

Materials and Methods

This cross-sectional questionnaire-based survey was conducted from December 2020 to November 2021, comprising randomly selected 300 male/female medical students in Riphah International University.

Rao Soft calculator calculated the sample size. The type of sampling used in this study is a simple random sampling technique. The margin of error was kept at 4.99%, with a confidence level of 95.

Inclusion & Exclusion Criteria: Medical students of Riphah International University were included in this study. Students of other disciplines were excluded from our research.

Data was collected after the ethical approval from Islamic International Medical College wide letter no "Riphah/IIMC/IRC/130". The research instrument used for this study is the "Questionnaire." The Questionnaire involves various questions, including Likert scale questions that range from 1 to 4 with four as yes and one as no: 1= no, 2= sometimes, 3= mostly, 4= yes/always. The demographic questions included in this survey were about Gender, age, height, and weight first. Likert scale questions for assessing physical, emotional, and spiritual Wellness were used.

The close-ended questions used in this study, such as demographic questions, are close-ended and Likert scale questions.

The sampling frame is the list of individuals. A sample of 300 respondents was selected through simple random sampling, whereas 287 responded to the survey, and non-response from 13 respondents was observed. So, the non-response rate kept in this survey is 4.3%.

The responses - 'no,' 'sometimes,' 'mostly' and 'yes/always' (numbered 0-4) - were analyzed in terms of frequency, proportion, and percentages by Predictive Analysis Software (PASW) version 18.

ANOVA on assessing the equality of physical, emotional, and Spiritual Wellness factors. Post hoc analysis of ANOVA was carried out using Tukey t-test.

Results

The results section is divided into four parts. The first part is around the Demographic Characteristics. The second part discussed the factor associated with physical Wellness involved Likert points ranging from 1 to 4: 1= no, 2= sometimes, 3= mostly, 4= yes/always. The third part is about the factor associated with the emotional Wellness involved in Likert points, ranging from 1 to 4: 1= no, 2= sometimes, 3=

mostly, 4= yes/always. The fourth part is about the factor associated with the spiritual Wellness involved Likert points, ranging from 1 to 4: 1= no, 2= sometimes, 3= mostly, 4= yes/always. It is described in Tables I-IV.

Table I explains that sickness, sports, check-ups, Control Diet, Fast food, and Proactive Steps have meant less than 2.5 shows that sometimes respondents get sick, go for check-ups, follow control diet and take proactive steps. Water glass, soft drinks, Fruit vegetables have a mean greater than 2.5 and less than three so, respondents mostly drink 6-8 glasses of water, mostly drink fewer than five soft drinks per week, and mostly prefer eating fruits and vegetables. Sleep and Addiction have a mean greater than three but less than 3.5, so we conclude that most respondents take an adequate amount of sleep, and most respondents abstain from Addiction. From the above results, we can say that most respondents are physically well.

	N	Min	Max	Mean	Std. Deviation
Sickness	287	1	4	2.43	1.06
Sports	287	1	4	2.1	1.03
Check-ups	287	1	4	1.79	1.01
Control Diet	287	1	4	2.43	1.07
Fruit Vegetables	287	1	4	2.69	0.96
Fast Food	287	1	4	2.13	1.07
Water Glass	287	1	4	2.53	1.04
Soft Drinks	287	1	4	2.70	1.23
Addiction	287	1	4	3.41	1.00
Sleep	287	1	4	3.09	1.46
Proactive Steps	287	1	4	2.25	1.08
Valid N (listwise)	287				

Table I: Demographic Characteristics

	Frequency(N)	Percent(%)
Gender		
1(Male)	103	35.89
2(Female)	184	64.11
Total	287	100.0
BMI		
0	1	0.35
1	32	11.15
2	143	49.83
3	44	15.33
4	13	4.52
5	1	0.35
blank	53	18.47
Total	287	100.0

Table II depicts that that Mood Swings, Anxiety Attacks, help from friends, Mentor advice, and Psychiatrist have meant less than 2.5 shows that sometimes respondents got mood swings and anxiety attacks, sometimes respondents get help from friends, get mentor advice, and sometimes respondents need a psychiatrist to take them out from emotional spells. More than two-thirds of those polled said they were able to describe themselves as "cheerful," "stress-coping," "anxiety-overcoming," "consulting with family," and "helping others" during emotional outbursts, all of which were rated as "greater than 2.5" or "less than three.". Self-exploration and Family Friends have a mean greater than three but less than 3.5, so we conclude that most respondents value self-exploration and mostly respondents loved by their family and friends. From the above results, we can say that most of the respondents are emotionally well.

Table II: Factors associated with Physical Wellness.

Economics has a mean greater than 2.5 and less than three so, respondents mostly use economic resources for charity. It concludes that most people lead meaningful lives, are honest, understand beliefs, participate in religious activities, value their spiritual beliefs, and are consistent in their values and behaviors. From the above results, we can say that most of the respondents are spiritually well, as shown in Table III.

Testing of equality of means concerning Gender for each factor of Physical Wellness

Testing each aspect of physical Wellness concerning Gender is carried out using the z test. As the sample size is large enough to carry out z test using the following z statistic

$$z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

Null and alternative hypotheses considered in this scenario is

H0: $\mu_1 = \mu_2$ (factors of Physical Wellness are equal for males and differ)

H1: $\mu_1 \neq \mu_2$ (characteristics of Physical Wellness differs for male and female)

Note: Our population 1 is the Male group, and population 2 is the female group, so \bar{X}_1 is the mean for the male group and \bar{X}_2 is the standard for the female group. If the difference is negative, this leads to a negative statistic value, which means that the female group's mean is higher than the male group. If the difference is positive, this led to a positive

statistic value which means that the standard for the male group is higher than the female group.

Table III: Factors associated with Emotional & Spiritual Wellness.

	N	Min	Max	Mean	Std. Deviation
Emotional Wellness					
Cheerful	287	1	4	2.74	0.75
Self Exploration	287	1	4	3.20	0.83
Family Friends	287	1	4	3.10	0.85
Cope with Stress	287	1	4	2.78	0.86
Mood Swings	287	1	4	2.37	1.03
Anxiety Attacks	287	1	4	2.46	1.00
Overcome Anxiety	287	1	4	2.69	0.97
Help from friends	287	1	4	2.29	0.93
Mentor advice	287	1	4	2.23	1.04
Consult help	287	1	4	2.59	1.10
Psychiatrist	287	1	4	1.49	0.88
Emotional Outbursts	287	1	4	2.84	0.97
Valid N (listwise)	287				
Spiritual Wellness.					
	N	Min	Max	Mean	Std. Deviation
Meaning Purpose	287	1	4	3.33	0.90
Honest	287	1	4	3.39	0.70
Value belief	287	1	4	3.44	0.72
Learn Values	287	1	4	3.27	0.83
Prayer Fasting	287	1	4	3.19	0.84
Spiritual Fasting	287	1	4	3.37	0.81
Economics	287	1	4	2.91	0.80
Belief and Values	287	1	4	3.14	0.76
Valid N (listwise)	287				

Table IV below shows that sickness, sports, and water glass are significant at a 5% significance level. It indicated that illness, sports, and drinking an adequate glass of water differ for males and females at a 5% significance level.

Testing of equality of means concerning Gender for each factor of emotional Wellness

Testing of each factor of emotional Wellness concerning Gender is carried out using the z test.

Table V below shows that family friends and mood swings are significant at a 1% significance level. It indicated that

value by family/friends and mood swings differs for males and females at a 5% level of significance.

Table IV: Testing of equality of means concerning Gender for each factor of Physical Wellness

	Z statistic	P-value	95% confidence interval lower	95% confidence interval upper	margin of error
Sickness	2.41	0.0159	0.059	0.573	0.257
Sports	2.26	0.0240	0.038	0.2.3	0.249
Check-ups	0.55	0.5826	-0.176	0.313	0.245
Control Diet	-0.09	0.9292	-0.274	0.25	0.262
Fruit Vegetables	0.74	0.4573	-0.147	0.327	0.237
Fast Food	1.10	0.2731	-0.112	0.395	0.254
Water Glass	2.55	0.0107	0.075	0.574	0.249
Soft Drinks	-1.84	0.0652	-0.560	0.017	0.289
Addiction	-0.33	0.7421	-0.285	0.203	0.244
Sleep	0.82	0.4102	-0.244	0.597	0.421
Proactive Steps	1.04	0.2976	-0.122	0.400	0.261

Table V: Testing of equality of means concerning Gender for each factor of emotional Wellness

	Z statistic	P-value	95% confidence interval lower	95% confidence interval upper	margin of error
Cheerful	-0.69	0.4908	-0.259	0.124	0.191
Self Exploration	-1.34	0.1792	-0.339	0.063	0.201
Family Friends	-2.75	0.0059	-0.503	-0.085	0.209
Cope with Stress	1.52	0.1297	-0.046	0.356	0.201
Mood Swings	-4.29	0.0000	-7.707	-0.264	0.222
Anxiety Attacks	1.07	0.2848	-0.113	0.383	0.248
Overcome Anxiety	-0.58	0.5626	-0.312	0.170	0.241
Help from friends	-0.43	0.6640	-0.286	0.182	0.234
Mentor advice	0.35	0.7229	-.203	0.292	0.247
Consult help	-0.23	0.8204	-0.293	0.232	0.263
Psychiatrist	0.96	0.3387	-0.107	0.312	0.210
Emotional Outbursts	-1.02	0.3099	-0.361	0.115	0.238

Testing of equality of means concerning Gender for each factor of Spiritual Wellness

Testing each spiritual wellness factor concerning Gender is carried out using the z test.

Table VI below shows that Spiritual Fasting is significant at a 5% significance level, and Prayer Fasting is substantial at a 1% energy level. It indicated that spiritual fasting differs for males and females at a 5% significance level, and prayer

fasting differs for males and females at a 1% significance level.

Table VI: Testing of equality of means concerning Gender for each factor of Spiritual Wellness.					
	Z statistic	P-value	95% confidence interval lower	95% confidence interval upper	margin of error
Meaning Purpose	-1.37	0.1714	-0.372	0.066	0.219
Honest	-0.03	0.9722	-0.169	0.163	0.166
Value belief	0.07	0.9437	-0.171	0.184	0.177
Learn Values	-0.28	0.7790	-0.241	0.181	0.211
Prayer Fasting	-3.03	0.0024	-0.533	-0.114	0.209
Spiritual Fasting	-2.53	0.0116	-0.458	-0.058	0.2
Economics	-0.45	0.6550	-0.237	0.149	0.193
Belief and Values	-0.62	0.5368	-0.235	0.122	0.178

Using ANOVA on assessing the equality of factors of physical Wellness

To check whether the aspect of physical Wellness are equal for all respondents, the ANOVA technique is applied to physical wellness factors, as shown in Figure-1

The calculated p-value is 0.000, which is less than any significance level, i.e., 1%,5%, etc. So, we reject the null hypothesis and conclude that factors of physical Wellness are not equal and they differ.

Using ANOVA on assessing the equality of factors of emotional Wellness

To check whether the element of physical Wellness are equal for all respondents, the ANOVA technique is applied to emotional wellness factors, as shown in Figure-2

The calculated p-value is 0.000, which is less than any significance level, i.e., 1%,5%, etc. So, we reject the null hypothesis and conclude that factors of emotional Wellness are not equal and differ.

Using ANOVA on assessing the equality of factors of spiritual Wellness

To check whether the aspect of spiritual Wellness are equal for all respondents, the Anova technique is applied to spiritual wellness factors, as shown in Figure-3

The calculated p-value is 0.000, which is less than any significance level, i.e., 1%,5%, etc. So, we reject the null hypothesis and conclude that factors of emotional Wellness are not equal and differ from each other.

The ANOVA technique is used for assessing the equality of different dimensions of Wellness.

To check whether the physical Wellness, Emotional Wellness, and spiritual Wellness are equal for all respondents, the Anova technique is applied on average of Physical Wellness, Emotional Wellness, and spiritual Wellness for each respondent, as shown in Figure-4.

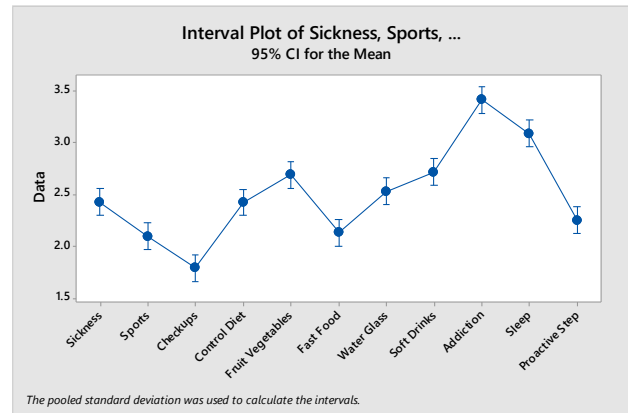


Figure-1 shows the equality of factors affecting physical Wellness.

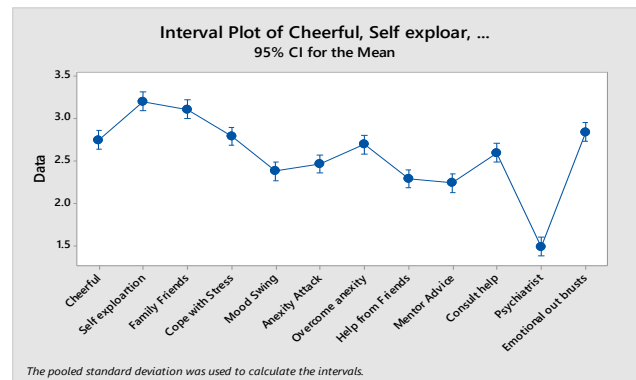


Figure-2. showing the equality of factors affecting emotional Wellness.

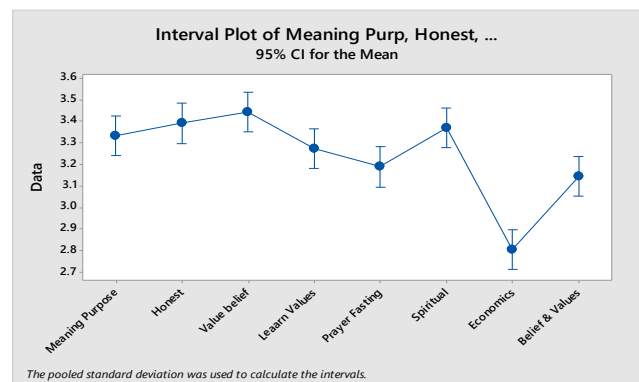


Figure-3 shows the equality of factors affecting spiritual Wellness.

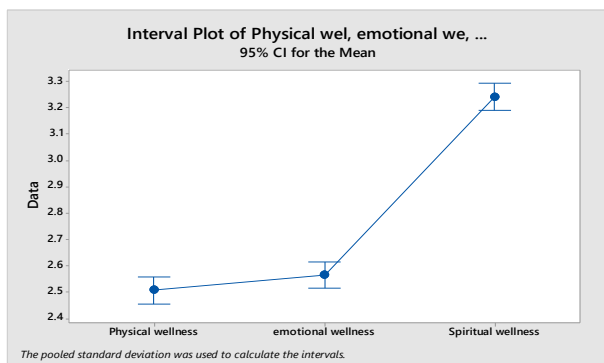


Figure-4 shows the equality of factors affecting spiritual Wellness.

The calculated p-value is 0.000, which is less than any significance level, i.e., 1%,5%, etc. So, we reject the null hypothesis and conclude that physical Wellness, Emotional Wellness, and spiritual Wellness are not equal for all respondents, and they differ from each other.

Post Hoc Analysis: For investigating which Wellness is significantly different from the others, Post hoc analysis of Anova is carried out using Tukey t-test

Mega stat Output: Tukey's t-test shows that Spiritual Wellness significantly differs from emotional Wellness and physical Wellness of respondents.

Post hoc analysis				
p-values for pairwise t-tests				
		Physical Wellness	emotional Wellness	Spiritual Wellness
		2.50618	2.56475	3.24260
Physical Wellness	2.50618			
emotional Wellness	2.56475	.1128		
Spiritual Wellness	3.24260	4.53E-73	8.47E-64	
Tukey simultaneous comparison t-values (d.f. = 858)				
		Physical Wellness	emotional Wellness	Spiritual Wellness
		2.50618	2.56475	3.24260
Physical Wellness	2.50618			
emotional Wellness	2.56475	1.59		
Spiritual Wellness	3.24260	19.95	18.37	
critical values for experiment wise error rate:				
		0.05	2.38	
		0.01	2.97	

Discussion

Medical students are subjected to a variety of stressors and a variety of unhealthy habits. Self-care practices for medical

students have historically received little attention in the medical curriculum. The strategies to curb stress among medical students combine biomedical sciences, therapeutic skills, and assessment with mindfulness and lifestyle programs. The program's impact on psychological distress and quality of life among medical students was studied in this study.⁹

Study after study shows that medical students' overall happiness improves in the time leading up to their exams, indicating that the typical decline in satisfaction can be prevented. The findings of this study show that it is possible to improve student well-being while achieving important educational goals. Many people's quality of life and empathy have been negatively affected by mental health difficulties and emotional agony. There is a negative correlation between suicidal thoughts, unprofessional behaviour, and burnout. The impact of mental health difficulties on a student's life can be enormous, affecting their ability to study, socialise, and achieve in school. Students in the health professions may be less empathetic and professional as a result of this.¹⁰

The self-care activities identified by students serve as a beginning point for better understanding and, eventually, enhancing self-care among medical students. Students' attitudes form a fundamental framework of varying levels of social engagement and physical-psychological Health that encompassed a variety of solitary, social, physical, and mental health behaviors. Medical educators may benefit from consulting self-care guidelines as they plan new approaches to student self-care and individual counsel students seeking more effective ways to ease the burdens of medical school, as students' best self-care practices did not often include programmatic activities¹¹

As part of having a healthy life, it's important to take care of one's spiritual requirements. Compassion and wisdom are two important aspects of spirituality. The fourth component of health, according to the WHO, is spiritual health. The spiritual dimension is one of the four quadruple holistic characteristics that are extremely important. It covers biological, mental, and social dimensions. Some of the strategies included here are those that promote relaxation, mindfulness, and creative expression. Various studies have shown that spiritual health can enhance people's health by increasing optimism and positive attitude. To sum up, spiritual health helps people appreciate life and develop constructive coping mechanisms.¹²

During the medical journey, yoga can help you modulate your stress response. According to studies, yoga has also been shown to improve exam performance and lessen

anxiety. Given the current body of evidence demonstrating that yoga benefits medical students' physical, psychological, emotional, spiritual, and overall well-being, it may be prudent to incorporate yoga into medical curricula for the health benefits of doctors-in-training, the medical fraternity, and the community at large. Such a program may include simple asana, pranayama, meditation, and relaxation techniques based on mindfulness.¹³

The recommendations are to care for the medical students and provide compassionate care. Compassionate care involves practicing human presence—being fully present and attentive to the medical students and supporting them in their suffering: physical, emotional, and spiritual. Student support systems can step up to listening to students' fears, hopes, pain, and dreams. It also involves obtaining a spiritual history by paying attention to all aspects of patients and their families: body, mind, and spirit, and also including a clinical psychiatrist as part of an interdisciplinary student support team.¹⁴

Spirituality and cultural beliefs and practices will be critical components of many students' Health and well-being. Medical educators should understand the need to incorporate spiritual awareness and cultural beliefs and practices into patient treatment in a range of clinical settings. They'll realize that their spirituality, as well as their cultural beliefs and traditions, may influence how they interact with patients and deliver care.¹⁵

Limitations: The study's design constraints and limitations, the short duration of follow-up, and the lack of a control group mean that the results should be treated with caution. Future studies should focus on establishing the role of particular program components, long-term effects, and implications for future attitudes and clinical practice.

Future implications: Medical students must understand the significance of Wellness for their well-being and the well-being of the community they serve. To enhance students' awareness of Health and happiness, we recommend that "The Student Wellness Program" be incorporated into the medical school curricula." Students need to learn about the health benefits of an active and healthy lifestyle to avoid illnesses linked to a sedentary lifestyle. According to our research, students in developing countries like Pakistan will benefit from the development of wellness programs as well as health policies and sports activities.

Conclusion

Medical students were found to lack a holistic approach to physical Wellness.

Health and Wellness research needs to be improved and expanded. When it comes to ensuring the Health and well-being of students, colleges and universities should have student counseling departments and the necessary medical education training. Teaching medical students how to cope with the stress and pressure that comes with practicing medicine should be a part of their core curriculum, as well as the importance of promoting healthy lifestyles for both boys and girls.

References

1. Ghaderi A, Tabatabaei SM, Nedjat S, Javadi M, Larijani B. Explanatory definition of the concept of spiritual HealthHealth: a qualitative study in Iran. *J Med Ethics Hist Med*. 2018 Apr 9;11:3. PMID: 30258553; PMCID: PMC6150917.
2. Oleribe OO, Ukwedeh O, Burstow NJ, Gomaa AI, Sonderup MW, Cook N, Waked I, Spearman W, Taylor-Robinson SD. Health: redefined. *Pan Afr Med J*. 2018 Aug 24;30:292. DOI: 10.11604/pamj.2018.30.292.15436. PMID: 30637076; PMCID: PMC6320447.
3. Ruggeri, K., Garcia-Garzon, E., Maguire, Á. *et al*. Well-being is more than happiness and life satisfaction: a multidimensional analysis of 21 countries. *Health Qual Life Outcomes* **18**, 192 (2020). <https://doi.org/10.1186/s12955-020-01423-y>
4. World Health Organization. The world health report 2001: mental HealthHealth: new understanding, new hope. Geneva: World Health Organization; 2001.
5. Pak, J & Rehman, Rehana & Syed, Sadiqa & Hussain, Mehwish & Shaikh, Saifullah. (2013). Health and spirituality 'walk along' in wellness journey of medical students. *boundary 2*. 63: (4) 2013. 495-500.
6. Rehman R, Syed S, Hussain M, et al. HealthHealth and spirituality ' walk along' in wellness journey of medical students. *JPMA* April 2013, Volume 63, Issue 4. <https://www.jpma.org.pk/article-details/4121>
7. Janet R. Bezner, Promoting Health and Wellness: Implications for Physical Therapist Practice, *Physical Therapy*, Volume 95, Issue 10, 1 October 2015, Pages 1433–1444, <https://doi.org/10.2522/ptj.20140271>
8. <https://www.nimh.nih.gov/about/director/messages/2021/one-year-in-covid-19-and-mental-health>
9. Hundertmark J, Alvarez S, Loukanova S, Schultz JH. Stress and stressors of medical student near-peer tutors during courses: a psychophysiological mixed methods study. *BMC Med Educ*. 2019 Apr 2;19(1):95. DOI: 10.1186/s12909-019-1521-2. PMID: 30940106; PMCID: PMC6444608.
10. Bergmann C, Muth T, Loerbroks A. Medical students' perceptions of stress due to academic studies and its interrelationships with other domains of life: a qualitative study. *Med Educ Online*. 2019 Dec;24(1):1603526. DOI: 10.1080/10872981.2019.1603526. PMID: 31007152; PMCID: PMC6493308.
11. Ayala EE, Omorodion AM, Nmecha D, Wiseman JS, Mason HRC. What Do Medical Students Do for Self-Care? A Student-Centered Approach to Well-Being. *Teach Learn Med*. 2017 Jul-Sep;29(3):237-246. DOI: 10.1080/10401334.2016.1271334. Epub 2017 Feb 16. PMID: 28632007.
12. Rafat F, Rezaie-Chamani S, Rahnvardi M, Khalesi ZB. The relationship between spiritual HealthHealth and health-promoting lifestyle among students. *Int J Adolesc Med Health*. 2019 Jan 12;33(4). DOI: 10.1515/ijamh-2018-0158. PMID: 30645195.
13. Saoji AA. Yoga: A Strategy to Cope up Stress and Enhance Wellbeing Among Medical Students. *N Am J Med Sci*. 2016 Apr;8(4):200-2. DOI: 10.4103/1947-2714.179962. PMID: 27213147; PMCID: PMC4866479.

14. Pacheco JP, Giacomini HT, Tam WW, Ribeiro TB, Arab C, Bezerra IM, Pinasco GC. Mental health problems among medical students in Brazil: a systematic review and meta-analysis. *Braz J Psychiatry*. 2017 Oct-Dec;39(4):369-378. DOI: 10.1590/1516-4446-2017-2223. Epub 2017 Aug 31. PMID: 28876408; PMCID: PMC7111407.
15. Moir F, Henning M, Hassed C, Moyes SA, Elley CR. A Peer-Support and Mindfulness Program to Improve the Mental Health of Medical Students. *Teach Learn Med*. 2016 Jul-Sep;28(3):293-302. DOI: 10.1080/10401334.2016.1153475. Epub 2016 Apr 19. PMID: 27092397.