Original Article

Motivational Influences on Volunteer Activities and Field Satisfaction: Insights from Medical Students in Peshawar

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Abstract

Objective: This study aimed to assess the level of satisfaction with the medical field among medical students in Peshawar.

Methods: A cross-sectional analytical study was conducted on 329 medical students from 1st May 2024 to 15th July 2024, in the Northwest School of Medicine, across seven private medical colleges in Peshawar. Data was collected through a structured questionnaire covering demographics, volunteer experience, motivations, and satisfaction levels. Statistical analysis, including Pearson Chi-Square tests, was performed using SPSS version 26 to examine associations between volunteer status and field satisfaction and stress levels.

Results: Out of all the participants, 183 (55.6%) had volunteer experience, showing significantly higher field satisfaction $p < 0.001$) than non-volunteers. Additionally, volunteers reported lower stress levels ($p = 0.028$), with motivations including helping others, skill development, and social connections. Time constraints were a significant barrier for non-volunteers, while the lack of institutional support also limited volunteer involvement.

Conclusion: Volunteer activities have a positive influence on field satisfaction and reduce stress levels in medical students, suggesting that their integration into medical education may enhance students' overall well-being. Addressing logistical barriers and expanding volunteer support in academic institutions could further benefit students and the communities they serve.

Keywords: Motivation, Social Support, Adaptation, Psychological Community-Institutional Relations.

Introduction

Volunteering plays an important role in community development by offering individuals an opportunity to contribute without competition and with a sense of autonomy and fulfilment. Through voluntary activities, individuals demonstrate commitment to society, and for students, volunteering has been linked to personal growth and development. Life satisfaction is an important factor influencing student' progress and determination in their academic pursuits.

Previous studies highlight the positive impact of volunteering across diverse contexts. In Karachi, a study reported that 64% of medical and dental students were engaged in volunteer activities, while 36% were not.[1] A Saudi study showed that 95.6% of participants found health-related volunteering to be beneficial, with only a small minority reporting neutral or negative experiences.[2] International evidence further supports these findings: volunteering over 100 hours annually is associated with improved mental health, reduced depression, enhanced physical activity, and a greater sense of purpose.[3] Longitudinal research from the United States demonstrated that continuous volunteers reported higher life satisfaction years later compared to non-volunteers.[4] Similarly, a Brazilian study found medical students' motivations for volunteering included altruism, obligation, and academic interest.[5]

Recent regional and international studies further reinforce the positive implications of volunteering for students and society. In Karachi, volunteering was identified as a significant contributor to life satisfaction among medical and dental students, demonstrating its role in promoting personal well-being and fulfilment.[6] Similarly, research among radiology students in Saudi Arabia found that health-related volunteering significantly enhanced self-skills and practical capabilities, highlighting its importance in professional development.[7] Beyond student populations, longitudinal evidence from the United States has shown that volunteering in older adults is associated with improved health and well-being outcomes, including better psychological resilience and life satisfaction.[8] Complementing these findings, another study indicated that volunteering dynamics can buffer the negative effects of ageing on life satisfaction through positive self-perceptions.[9] During the COVID-19 pandemic, volunteering also emerged as a platform for medical students to develop new competencies and strengthen motivation, reflecting its relevance during times of crisis.[10] Collectively, these studies underscore the multifaceted benefits of volunteering across different populations, contexts, and circumstances.

While the benefits of volunteering are well-documented internationally, limited research has explored its specific impact on medical students' field satisfaction and stress levels in Pakistan. Medical education is known to be demanding, often leading to stress and burnout, yet volunteering may provide a positive counterbalance by improving satisfaction and well-being.

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KK, KS, LA - Conception, Design
KK, KS, MZ, IA, SJ - Acquisition, Analysis, Interpretation
KK, KS, LA, SJ - Drafting
MZ, IA, SJ - Critical Review

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The present study, therefore, aims to assess the relationship between volunteer activities and field satisfaction among medical students in Peshawar, Pakistan, addressing a gap in the literature and providing evidence for integrating structured volunteer opportunities into medical education.

Materials And Methods

This cross-sectional analytical study was conducted among 329 undergraduate medical students, from 1st May 2024 to 15th July 2024, in the Northwest School of Medicine. A sample size of 329 was determined through Open Epi, utilising a 95% confidence interval and selected via simple random sampling. The study included medical students from 1st to 5th year who were willing to participate and able to understand the questionnaire, while students unwilling to participate were excluded. Data was collected using a structured questionnaire developed after a thorough literature review and expert consultation. The questionnaire comprised sections on demographic information, volunteer experience, motivations, benefits, challenges, satisfaction levels, future volunteering intentions, and feedback. Before data collection, informed consent was obtained from all participants. The questionnaire included both closed-ended and open-ended questions to gather comprehensive insights into the students' volunteering experiences and satisfaction levels.

Data was analysed using SPSS version 26. Descriptive statistics, including frequencies and percentages, were calculated to describe the demographic characteristics, levels of field satisfaction, stress, and motivations for volunteering. Chi-Square Tests were used to analyse associations between categorical variables, such as the relationship between volunteering and field satisfaction, and between volunteering and stress levels. Specifically, the Pearson Chi-Square test was applied to assess the significance of observed relationships. Results were reported with statistical significance set at $p < 0.05$. Findings were presented in tables and charts to display relationships between volunteer activities, field satisfaction, and stress levels visually and statistically. Quantitative data analysis allowed for identifying trends and patterns that highlight the positive effects of volunteer activities on students' satisfaction and stress levels.

Results

This study assessed the impact of volunteer activities on field satisfaction among 329 medical students from seven private medical colleges in Peshawar, Pakistan. The sample was balanced in terms of gender (153 males, 176 females), and participants ranged in age from 18 to 25, with an average age of 21 years.

Participants came from various socioeconomic backgrounds, with 6.4% from lower-middle-class, 31.0% from middle-class, 44.1% from upper-middle-class, and 18.2% from higher-class families. The demographic data also indicated an interesting trend in volunteering rates by socioeconomic status, with fewer volunteers among students from higher socioeconomic backgrounds. The study sample included students from all academic years, with the highest representation from third-year students (38%). Participation in volunteer activities was relatively balanced across the first three years; however, it dropped significantly in the fourth and fifth years, with only 11.2% and 2.4% representation, respectively. This may reflect the impact of increasing academic pressures in later years on students' ability to engage in volunteer work (Figure. 1).

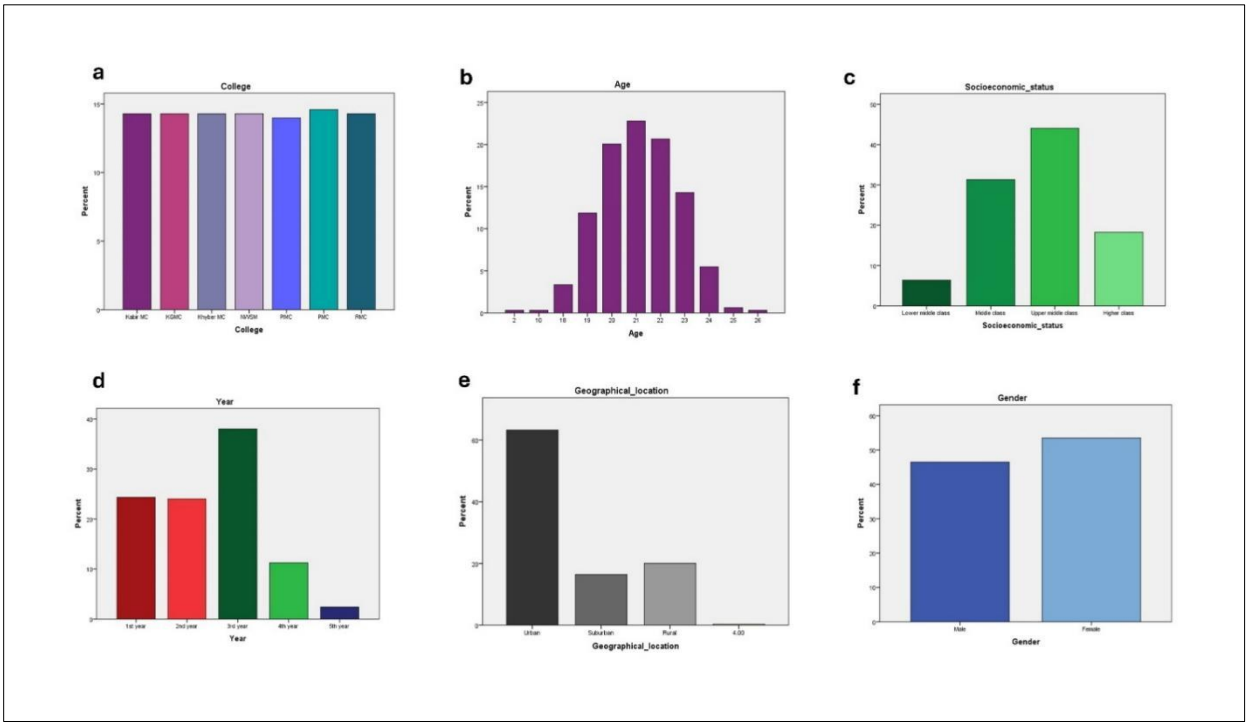

Figure 1: Demographics of the study population. a) medical colleges that the participants belonged to, b) Age of the participants, c) Socioeconomic status, d) Year of study, e) Graphical location and f) Gender.

Among the 329 respondents, 183 students (55.6%) reported participating in volunteer activities, while 146 (44.4%) were non-volunteers. Satisfaction levels were notably higher among volunteers. Among the 183 volunteers, 108 (59.0%) students expressed satisfaction, and 38 (20.8%) were highly satisfied. In contrast, non-volunteers reported lower satisfaction levels: 44 (30.1%) were satisfied, and only 3 (2.1%) were very satisfied. The association between volunteering and field satisfaction was statistically significant ($\chi^2 = 82.486$, $p < 0.001$, Cramer's V = 0.50), suggesting a strong relationship. (**Table 1**).

Table 1: Association between volunteer status and satisfaction with medical field experience. This table presents detailed satisfaction levels among volunteers and non-volunteers, showing that volunteers were significantly more satisfied compared to non-volunteers.

	Satisfaction with medical field experience					Total	Pearson Chi-Square
	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied		
No, non-volunteer	8	20	71	44	3	146	<0.001
Yes, volunteer	2	6	29	108	38	183	
Total	10	26	100	152	41	329	

The study also examined stress levels about volunteering. Among the 183 volunteers, only 18 (9.8%) reported feeling very stressed compared to 21 (14.4%) non-volunteers, while 21 (11.5%) volunteers reported no stress at all, compared to just 5 (3.4%) non-volunteers. This trend suggests that volunteer activities might help mitigate stress levels in medical students. The Pearson Chi-Square test ($\chi^2 = 10.850$, $p = 0.028$, Cramer's V = 0.18) revealed a statistically significant, though small, difference in stress levels between volunteers and non-volunteers. (**Table 2**).

Table 2: Association between volunteer status and stress levels in medical students. This table highlights how volunteering is associated with reduced stress compared to non-volunteering

	Feeling how much stressed in the medical field					Total	Pearson Chi-Square
	Very stressed	Stressed	Neutral	Not very stressed	Not stressed at all		
No, non-volunteer	21	49	43	28	5	146	0.028
Yes, volunteer	18	46	64	34	21	183	
Total	39	95	107	62	26	329	

Among the 183 students who volunteered, satisfaction with their volunteer work was high, with 172 students (94.0%) reporting positive experiences. The Pearson Chi-Square test revealed a strong association between volunteer participation and volunteer satisfaction ($\chi^2 = 112.3$, $p < 0.001$, Cramer's V = 0.59) (**Table 3**).

Table 3. Satisfaction levels among volunteers with their volunteering experience. This table shows the overwhelmingly positive feedback from students regarding their volunteer work, emphasising its potential role in promoting well-being.

	Satisfaction with volunteering work			Total	Pearson Chi-Square
	Non-Volunteer	Yes	No		
No, non-volunteer	139	3	4	146	<0.001
Yes, volunteer	0	172	11	183	
Total	139	175	15	329	

Discussion

Medicine is a noble profession centred on serving the community, and volunteering reflects this spirit by helping people in diverse ways.[11] Our findings demonstrate that medical student volunteers feel more connected to their field, reporting higher satisfaction compared to non-volunteers. Volunteers also expressed strong satisfaction with their current experiences and a desire to continue in the future.

In this study, the number of volunteers among medical students was greater than non-volunteers. Students typically volunteered less than once a month, with some engaging monthly. Although the duration of participation varied, most students had been volunteering for several months to years, often linked to the time since their admission into medical college. Motivations were diverse, with the most common reason being altruism (helping others), followed by skill development, resume/CV building, personal achievement, and social connections. These motivations remained consistent, with slight variations over time.[12] Institutional and peer influence also played an important role; schools and universities facilitated volunteering, while friends often motivated one another to participate.[12,13]

The demographic analysis provided interesting insights. Among the 329 participants from seven medical colleges in Peshawar, 153 were male and 176 were female.[14] Respondents were aged 18–25 years, with a mean age of 21 years. While volunteer rates were relatively balanced across the first three academic years, they dropped significantly in the fourth and fifth years, likely due to increasing academic pressures. We suggest that institutions consider easing academic schedules to allow volunteering opportunities, given their observed positive impact. Another notable trend was the higher proportion of volunteers from rural backgrounds, who appeared more enthusiastic about community service compared to urban students. Socioeconomic differences also emerged, with the lowest proportion of volunteers from higher-class families.

Volunteering is consistently beneficial, offering rewards for both recipients and volunteers. It enhances mental health, fosters life satisfaction, and nurtures a sense of connectedness with humanity.[15] Religious motivation also played a role; many students reported volunteering purely for spiritual reasons.[16] Respondents identified skill development, social connections, personal achievements, and improved mental well-being as key benefits of volunteering.

Given these outcomes, integrating structured volunteering into medical curricula could formalise these benefits, helping students acquire professional and interpersonal skills while contributing to their communities. Our study focused primarily on satisfaction with the medical field and its influencing factors; future studies should explore broader aspects, including other disciplines and the general population.

Time constraints emerged as the most significant barrier to volunteering.[17,18] Among the 144 non-volunteers, 55 cited lack of time as the primary reason. Students more often participated in non-clinical activities such as fundraising and community services, though some engaged in clinical volunteering such as hospital service and medical camps. Given their academic commitments, many students preferred short-term or group-based volunteering.[19]

Students who faced major barriers, including a lack of opportunities and logistical difficulties, also reported lower satisfaction with their field.[20] This highlights the need for institutions to improve volunteering infrastructure. A total of 135 participants expressed interest in volunteering with organisations outside their college, underscoring the demand for broader institutional support.[21] Future research should also examine motivations, barriers, and impacts across other student groups and the general public.

Open-ended responses further enriched our findings. Some students highlighted inadequate infrastructure and lack of institutional support, while others emphasised the positive effects of volunteering, such as improved communication, skill-building, self-confidence, and enhanced satisfaction with life and study.[22-25] These responses reinforce the need for well-structured programs.

For future development, organisations should focus on building robust frameworks, expanding opportunities, and providing guidance.[26] Awareness campaigns, financial assistance, safe environments, and secure transport, particularly for female students, would help increase participation.[27,28] Recognising volunteers through certification and appreciation would further encourage involvement.

Medical institutions should incorporate volunteering into the curriculum, given its substantial benefits for students and the community. Volunteering fosters empathy, broadens perspectives, and demonstrates how small acts of kindness can make a significant difference. By cultivating a culture of service, we can empower future physicians to contribute to a healthier, more compassionate society.[29]

This study has several limitations that should be acknowledged. First, its cross-sectional design prevents conclusions about causality between volunteering, field satisfaction, and stress reduction. Longitudinal studies would be needed to establish temporal relationships. Second, the research was conducted exclusively in private medical colleges in Peshawar, which may limit the generalizability of findings to students in public institutions or other regions of Pakistan. Third, data collection relied on self-reported questionnaires, which may be subject to recall bias or social desirability bias, potentially influencing how students described their experiences. Fourth, the study did not measure effect sizes for all associations or explore qualitative insights in depth, which could have provided a richer contextual understanding. Finally, as participation was voluntary, there is a possibility of selection bias, with more motivated or engaged students choosing to respond.

Future research should aim to address these limitations by including diverse institutional settings, adopting longitudinal designs, and integrating mixed-methods approaches to capture both quantitative and qualitative dimensions of student volunteering experiences.

Conclusions

This study found that volunteer activities significantly enhance field satisfaction and reduce stress among medical students in Peshawar, Pakistan. Of the 329 participants, 183 (55.6%) were volunteers, who reported notably higher levels of field satisfaction ($\chi^2 = 82.486$, $p < 0.001$), with 59.0% expressing satisfaction and 20.8% reporting high satisfaction. In contrast, satisfaction levels among non-volunteers were lower, with only 30.1% satisfied and 2.1% highly satisfied. Additionally, volunteers reported lower stress levels ($\chi^2 = 10.850$, $p = 0.028$), indicating that volunteering may serve as a valuable outlet for stress relief in medical training.

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References

1. Cañas-Lerma AJ, Campos-Vidal JF, Verger S. "Our focus is on illness and loneliness": Volunteer work engagement, compassion satisfaction, compassion fatigue, self-care and motivations to volunteer. Health Soc Care Community. 2022 Nov;30(6):e6631-e6644. https://doi.org/10.1111/hsc.13934
2. Hansen T, Aartsen M, Slagsvold B, Deindl C. Dynamics of volunteering and life satisfaction in midlife and old age: Findings from 12 European countries. Soc Sci. 2018 May;7(5):78. https://doi.org/10.3390/socsci7050078
3. Borgonovi F. Doing well by doing good. The relationship between formal volunteering and self-reported health and happiness. Soc Sci Med. 2008 Jun;66(11):2321-34. https://doi.org/10.1016/j.socscimed.2008.01.011
4. Barton E, Bates EA, O'Donovan R. 'That extra sparkle': students' experiences of volunteering and the impact on satisfaction and employability in higher education. J Further High Educ. 2019 Apr;43(4):453-66. https://doi.org/10.1080/0309877X.2017.1365826
5. Slavinski T, Bjelica D, Pavlović D, Vukmirović V. Academic performance and physical activities as positive factors for life satisfaction among university students. Sustainability. 2021 Jan;13(2):497. https://doi.org/10.3390/su13020497
6. Emad S, Nasir F, Akhlaq A, Pasha SR, Noor MJ, Ghani R. Volunteering activity as a source of life satisfaction among medical and dental students of Karachi, Pakistan. Pak J Med Dent. 2021;10(1):90-6. https://doi.org/10.36283/pjmd10-1/017
7. Alzain AF, Elhussein N, Hamd ZY, Fadulelmulla IA, Omer AM, Alotaibi A,et al. The impact of health volunteering of radiology students on improving their self-skills and practical capabilities in the Kingdom of Saudi Arabia. Front Med. 2024 Feb;10:1243014. https://doi.org/10.3389/fmed.2023.1243014
8. Kim ES, Whillans AV, Lee MT, Chen Y, VanderWeele TJ. Volunteering and subsequent health and well-being in older adults: an outcome-wide longitudinal approach. Am J Prev Med. 2020 Aug;59(2):176-86. https://doi.org/10.1016/j.amepre.2020.03.004
9. Huo M, Kim K. Volunteering dynamics and life satisfaction: Self-perceptions of ageing as a buffer. J Gerontol B Psychol Sci Soc Sci. 2022 Feb;77(2):321-31. https://doi.org/10.1093/geronb/gbaa111

10. Siqueira MA, Torsani MB, Gameiro GR, Chinelatto LA, Mikahil BC, Tempski PZ,et al. Medical students' participation in the Volunteering Program during the COVID-19 pandemic: a qualitative study about motivation and the development of new competencies. BMC Med Educ. 2022 Feb;22(1):111. https://doi.org/10.1186/s12909-022-03196-7
11. Emad S, Nasir F, Akhlaq A, Pasha SR, Noor MJ, Ghani R. Volunteering activity as a source of life satisfaction among medical and dental students of Karachi, Pakistan. Pak J Med Dent. 2021;10(1):90-6. https://doi.org/10.36283/pjmd10-1/017
12. Kwok YY, Chui WH, Wong LP. Need satisfaction mechanism linking volunteer motivation and life satisfaction: A mediation study of volunteer's subjective well-being. Soc Indic Res. 2013 Dec;114:1315-29. https://doi.org/10.1007/s11205-012-0199-5
13. Dury S, De Donder L, De Witte N, Buffel T, Jacquet W, Verté D. To volunteer or not: The influence of individual characteristics, resources, and social factors on the likelihood of volunteering by older adults. Nonprofit Volunt Sect Q. 2015 Dec;44(6):1107-28. https://doi.org/10.1177/0899764014556778
14. Emad F, Ali SM, Sardar H. Impact of motivation behind volunteerism on satisfaction with life among university students. Peshawar J Psychol Behav Sci. 2017;3(2):175-87.
15. Greenfield EA, Marks NF. Continuous participation in voluntary groups as a protective factor for the psychological well-being of adults who develop functional limitations: Evidence from the National Survey of Families and Households. J Gerontol B Psychol Sci Soc Sci. 2007 Jan;62(1):S60-8. https://doi.org/10.1093/geronb/62.1.S60
16. Lim C, MacGregor CA. Religion and volunteering in context: Disentangling the contextual effects of religion on voluntary behavior. Am Sociol Rev. 2012 Oct;77(5):747-79. https://doi.org/10.1177/0003122412457875
17. Tabassum F, Mohan J, Smith P. Association of volunteering with mental well-being: A lifecourse analysis of a national population-based longitudinal study in the UK. BMJ Open. 2016 Aug;6(8):e011327. https://doi.org/10.1136/bmjopen-2016-011327
18. Rovers J, Japs K, Truong E, Shah Y. Motivations, barriers and ethical understandings of healthcare student volunteers on a medical service trip: a mixed methods study. BMC Med Educ. 2016 Dec;16:94. https://doi.org/10.1186/s12909-016-0619-3
19. Green T, Green H, Scandlyn J, Kestler A. Perceptions of short-term medical volunteer work: a qualitative study in Guatemala. Glob Health. 2009 Dec;5:4. https://doi.org/10.1186/1744-8603-5-4
20. Pranaitytė I. The experience of compulsory volunteering: the obstacles for voluntary sector in a post-soviet country Lithuania. Soc Tyrimai. 2022;45(2):50-66. https://doi.org/10.15388/SocTyr.45.2.3
21. Wilson J. Volunteerism research: A review essay. Nonprofit Volunt Sect Q. 2012 Apr;41(2):176-212. https://doi.org/10.1177/0899764011434558
22. Atchley RC, Baxter SL, Blanchard J, Brady K, Comfort WE, Egbert AB. Working with seniors: Health, financial and social issues. Denver (CO): Society of Certified Senior Advisors; 2009.
23. Thoits PA. Role-identity salience, purpose and meaning in life, and well-being among volunteers. Soc Psychol Q. 2012 Dec;75(4):360-84. https://doi.org/10.1177/0190272512459662
24. Khasanzyanova A. How volunteering helps students to develop soft skills. Int Rev Educ. 2017 Jun;63:363-79. https://doi.org/10.1007/s11159-017-9631-4
25. McAllum K. Meanings of organizational volunteering: Diverse volunteer pathways. Manag Commun Q. 2014 Feb;28(1):84-110. https://doi.org/10.1177/0893318913517237
26. Brudney JL. Preparing the organization for volunteers. In: The volunteer management handbook: Leadership strategies for success. San Francisco (CA): Jossey-Bass; 2011. p. 55-80.
27. Kamaludin KM, Muhammad M, Abdul Wahat NW, Ibrahim R. Challenges in volunteering from cancer care volunteers' perspectives. Asian Pac J Cancer Prev. 2013;14(8):4795-800. https://doi.org/10.7314/APJCP.2013.14.8.4795
28. Krstikj A, Esparza MG, Vargas JM, Escobar LH, de la Rosa CL, Calderón ST,et al. Decision-support tool for coordination of volunteers in large-scale lockdowns. Int J Disaster Risk Reduct. 2021 Aug;62:102420. https://doi.org/10.1016/j.ijdrr.2021.102420
29. Tiberius V. Well-being as value fulfillment: How we can help each other to live well. New York (NY): Oxford University Press; 2018.