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ORIGINAL ARTICLE

Comparative Assessment of Motivation for Career Choice Among Students Studying in a Private Medical Institution

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ABSTRACT

Aims: (a) To compare career choice motivations between medical and dental students from the same institution and (b) To compare career choice motivations between male and female students at the institution.
Methodology: This was a cross-sectional study where 304 students answered a questionnaire regarding career choice motivations. Responses consisted of 6 dimensions and 18 items. SPSS 23 was used for data analysis.
Results: Both medical and dental students gave similar responses to career choice motivators with only one item showing a significant difference, diverse career opportunities, favoured more by medical students (p=.032). Both groups were more motivated by professional status and opportunity to care for people, less by working hours and high income. Genders showed significant differences in the dimensions of status and security (p=.004), and nature of occupation (p=.0001), with males scoring higher. From individual items, professional status was the highest motivator (92% males, 84.5% females). The lowest motivators for males was high income and regular working hours (both 60%) and regular working hours for females (31.1%) followed by high income (42.7%). Significant differences were seen in secure career (p=.004), regular working hours, (p=.0001), opportunity for self-employment (p=.013), use of manual skills (p=.012), general interest in science (p=.043), and high income (p=.0001), all favoured more by males.
Conclusion: Both medical and dental students selected their careers for mainly professional and altruistic considerations rather than monetary gain, however, males were more highly motivated by status, security and income compared to females.
Keywords: Career choice, dental students, gender, medical students, motivation.

INTRODUCTION

Although medicine has always been considered the noblest of professions, very few practitioners mastered the art of practicing with humanity; others are driven purely by monetary rewards. Between these two extremes lie multiple other motivating factors for career selection like status, security, nature of work and income. While one needs to earn to survive, a balance should be struck between urge for money or power, and the finer feelings of realizing one's true calling. As the great physician Virchow said, 'Only those who regard healing as the ultimate goal of their efforts can, therefore, be designated as physicians'[1]. Also, the medical field is highly stressful and noble motivations are protective and create a sense of internal satisfaction that can counter burnout or breakdown. In a groundbreaking article Gagne and Deci stated that the solution to physician burnout did not lie in increasing extrinsic rewards like pay raise, rather it lay in the intrinsic motivation that provides contentment in service to others[2].

Much work has been done regarding motivation of dental students for career choice, and somewhat lesser for medical students; however, we found just a handful of studies, none of them recent, that compared the two fields. Almost 20 years ago, Crossley and Mubarik claimed to be the first to do so; in their study in Manchester University, they found more dental students attracted by monetary gain compared to medical students who were mostly driven by professional ambitions and humane reasons[3]. An Indian study found similar results[4]. In contrast, an Iranian study found more medical students motivated by high income compared to dental, with both groups giving highest importance to social status, and least to community service[5]. We did not find any study directly comparing career choice motivations in medical and dental students in Pakistan.

From the last five years, we found most studies either analysed only one field or grouped both together. Results are conflicting, and comparisons inappropriate due to different settings. A study from Saudi Arabia showed both groups of students, giving highest priority to high professional and social status[6]. Another study from Kuwaiti dental students showed that socioeconomic considerations and the desire to help others weighed equally[7]. In A Hungarian study the desire to help others was the main motivator for medical students, not monetary considerations[8]. We did not find much relevant work from our region. A Chinese study found medical students motivated both by income and the desire to help others, as well as an interest in science[9]. Scarce work has been done from Pakistan. A study from Lahore that analysed medical and dental students together found them attracted by

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empathy rather than earning potential[10]. Similar results were seen in medical students from Rawalpindi and Islamabad[11].

Male and female students can also have different motivations for adopting a certain career path, but here, any difference would stem from their gender not their sex. Anne Oakley in her famous book 'Sex, Gender and Society' differentiated the terms; whereas 'sex' refers to biological differences between males and females, 'gender' refers to classifying the two sexes socially into 'masculine' and feminine', which is mostly determined by culture[12]. Genders largely respond to society's expectations. A Pew Research Centre survey showed that society valued nurturing and empathy in women while in men, professional and financial success ranked higher[13]. A review of major databases up to 2010 affirms this assumption and showed female doctors having a more empathetic, patient-centred approach compared to men, with greater consultation time per visit at the cost of lesser visits due to their emphasis on reassurance and positive talk[14]. A study in four medical colleges of Hazara also found that females were more highly motivated by altruism, nobility of the profession and social influences, while men felt more compulsion to succeed due to economic considerations[15].

The medical field used to attract the best and the brightest to its fold, but with its strenuous demands many bright minds are gravitating to other, less demanding fields. Pakistan too suffers from a severe shortage of healthcare workers[16]. We need to put into place policies to make the field attractive to the youth and for this it is important to know what motivates them to join. It is also imperative to see if those currently joining these professions are doing so for noble, altruistic intentions or purely for monetary gain, so that counselling programs can be put into place to ensure a healthy balance of expectations.

Therefore, we decided to conduct a research to explore this topic. The objectives of this study were, firstly to compare career choice motivations between medical and dental students from the same institution, and secondly to compare career choice motivations between male and female students at the institution.

METHODOLOGY

We conducted this cross-sectional study between January and April 2021. The population consisted of 1050 undergraduate medical and dental students studying in Combined Military Hospital Lahore Medical College and Institute of Dentistry which is considered an elite private medical institution in the capital city of Punjab. Ethical approval was taken from the Institutional Review Board of the college. A sample of 263 was calculated by WHO Sample Size Calculator; to be on the safe side we selected 304 students, 152 medical and 152 dental students, by Convenience Sampling as regular classes were disrupted at the time due to Covid-19 pandemic. Data was collected from any students available on campus during college timings. All students studying at the college, of both genders, were eligible to participate. After taking verbal informed consent, students were asked to fill in a questionnaire.

A pre-formed standard questionnaire from a study conducted in Manchester University was used for data collection, with minor changes to reflect demographics[3]. It listed 17 items that could influence career choice, grouped in 6 dimensions, namely status and security (items 1-4), nature of occupation (items 5-7), career opportunities (items 8-10), patient care and working with people (items 11-12), use of personal skills (items 13-14), interest in science (items 15-17) and an additional 18th item related to work experience. Respondents marked their responses on a 5-point Likert scale ranging from Strongly Agree to Strongly Disagree. Reliability was tested with Crohnbach Alpha (80.7%), and Community Medicine Specialists were consulted to ensure the document's validity. The questionnaire has been attached as an Appendix.

Data analysis was done on SPSS 23. Descriptive data was depicted using frequencies and percentages. As our data was not normal (Shapiro test values <0.05), we applied Mann-Whitney *U* test instead of independent *t*-test to compare Means. A *p*-value of ≤0.05 was considered statistically significant and ≤0.001 as highly significant.

RESULTS

Data from 304 students was collected and analysed. Response rate was 100%. Mean age of participants was 22.50±1.25, with maximum and minimum ages 27 and 18 years respectively. Details of demographic data is shown in Table 1.

To see the association of medical and dental students with career choice motivation, we used the Mann-Whitney *U* test to compare means. Results are set out in Table 2.

Mann-Whitney *U* test was used to see the association of gender with career choice motivation, and the results are set out in Table 3.

Table 1: Demographic characteristics of study participants (n=304)

	Frequency (f)	**Percentage (%)**
Age (years)		
18-21	38	12.5
22-25	262	86.2
26-30	4	1.3
Total	304	100
Gender		
Male	175	57.6
Female	129	42.4
Field of Study		
Medicine	152	50
Dentistry	152	50

Table 2: Association of medical and dental students with career choice motivation (n=304)

Questionnaire items regarding motivation	Medical students in agreement		Dental students in agreement		P Value
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	
Dimension 1: Status and security:					.490
Q1. High professional status	134	88.1	136	89.4	.253
Q2. Prestigious social standing	129	84.8	124	81.6	.709
Q3. Provides a secure career	129	84.9	127	83.6	.117
Q4. High income	85	56	75	49.4	.130
Dimension 2: Nature of occupation:					.252
Q5. Regular working hours	72	47.4	73	48	.660
Q6. Responsible job	123	80.9	129	84.9	.799
Q7. Self-employment and independence	113	74.4	105	69.1	.142
Dimension 3: Career opportunities:					.319
Q8. Diverse career opportunities	109	71.7	98	64.4	.032*
Q9. Interesting career	114	75	117	77	.546
Q10. Challenging career	121	79.6	123	80.9	.992
Dimension 4: Patient care and working with people:					.212
Q11. Opportunity to care for/help people	120	78.9	123	80.9	.082
Q12. Interacting with other people	110	72.3	106	69.8	.448
Dimension 5: Use of personal skills:					.700
Q13. Requires use of manual skills	115	75.7	116	76.3	.923
Q14. Requires use of mental skills	120	79	121	79.6	.373
Dimension 6: Interest in science:					.799
Q15. Opportunity to perform research work	93	61.2	105	69.1	.088
Q16. General interest in science	110	72.4	109	71.8	.119
Q17. Science-based occupation	116	76.3	113	74.4	.181
Q18. Work experience with dentists/doctors	106	69.7	108	71	.663

*statistically significant at p<0.05

Table 3: Association of gender with career choice motivation (n=304)

Questionnaire items regarding motivation	Males in agreement		Females in agreement		*P* Value
	Frequency(f)	%age	Frequency(f)	%age	
Dimension 1: Status and security:					.004*
Q1. High professional status	161	92	109	84.5	.184
Q2. Prestigious social standing	147	84	106	82.2	.994
Q3. Provides a secure career	159	90.8	97	75.2	.004*
Q4. High income	105	60	55	42.7	.0001+
Dimension 2: Nature of occupation:					.0001+
Q5. Regular working hours	105	60	40	31.1	.0001+
Q6. Responsible job	154	88	98	75.9	.284
Q7. Self-employment and independence	128	73.1	90	69.8	.013*
Dimension 3: Career opportunities:					.716
Q8. Diverse career opportunities	118	67.5	89	69	.432
Q9. Interesting career	133	76	98	76	.470
Q10. Challenging career	139	79.4	105	81.4	.117
Dimension 4: Patient care and working with people:					.335
Q11. Opportunity to care for/help people	148	84.6	95	73.7	.188
Q12. Interacting with other people	126	72	90	69.8	.733
Dimension 5: Use of personal skills:					.159
Q13. Requires use of manual skills	142	81.1	89	69	.012*
Q14. Requires use of mental skills	135	77.2	106	82.2	.668
Dimension 6: Interest in science:					.657
Q15. Opportunity to perform research work	110	62.8	88	68.2	.296
Q16. General interest in science	128	73.1	91	70.5	.043*
Q17. Science-based occupation	130	74.3	99	76.8	.295
Q18. Work experience with dentists/doctors	123	70.2	91	70.6	.751

*statistically significant at $p<0.05$

+statistically highly significant at $p<0.001$

DISCUSSION

Our study compared the motivation of medical and dental students, of both sexes, studying in the same institution, regarding career choice. To the best of our knowledge, this is the first research in Pakistan to do so.

The first objective of this study was to compare the associations between medical and dental students with motivating factors for career choice. Both groups of students gave similar responses with no significant difference between them in any of the 6 dimensions tested. Out of the individual 18 items, only one, diverse career opportunities, showed a significant difference (p=.032), with more medical students, (71.7%) favouring it compared to dental (64.4%).

High professional status turned out to be the most highly scored item from the entire list of motivators for both groups, 88.1% for medical and 89.4% for dental students. Prestigious social standing also scored highly, 84.8% for medical and 81.6% for dental students. These results are consistent with a Saudi study which showed social status being the most important dimension for both groups, with high professional status selected by 85% medical and 82.5% dental students[6].

Altruistic or humane considerations were also high on the list of motivators in our study with 78.9% medical and 80.9% dental students attracted by the opportunity to care for and help people. In keeping with this humanitarian stance is the low importance given to high income; only 56% medical and 49.4% dental students selected this option. While this could be a reflection of the privileged social background of our participants, it is heartening to see that humane considerations are important for both medical and dental students, as studies show that altruism protects from burnout[8]. Our results are consistent with those from Kenya which showed 74% dental students motivated by the idea of serving people, and from Islamabad which showed that while 13% were motivated by the idea of service to humanity, only 6.3% were attracted by monetary gain[17,18]. In contrast, a study in Saudi Arabia showed both medical (87.5%) and dental (80%) students motivated by financial independence, with more dental students (75%) compared to medical (65%) attracted by the prospect of making a lot of money[6]. A Chinese study on medical students showed major motivators to be interest in science (47.33%), income (45.67%) as well as altruism (39.98%)[9].

We did not find any recent study that compared the two groups. Crossley and Mubarik's results contrast sharply with our study. They showed significant difference in items from all the six dimensions tested, with altruistic reasons e.g., opportunity to care for people being the main motivating factor for 91% medical students compared to only 26% for dental students. Monetary and personal gain was the main attraction for dental students (61%), compared to medical students (35%). It is worth noting that this was a groundbreaking study from 2002 and motivations may have changed since then[3]. An Iranian study comparing the fields similarly found that while both were motivated mostly by high professional and social status, high income was significantly more important for dental students than for medical, while interacting with people was a significantly higher motivator for medical students[19].

In our study, the lowest score overall for both groups was for the item regular working hours, 47.4% for medical and 48% for dental students; this is understandable at least for medical students considering the erratic work schedule generally seen in their field. Crossley and Mubarik reported a higher percentage of dental students motivated by regular working hours (53%) compared with medical (4%)[3].

The second objective of our study was to compare the associations of career motivating factors between male and female students. Here we found several significant differences between genders, across both dimensions as well as items. Our results were diametrically opposite to those found by Crossley and Mubarik who found no significant difference between males and females in any item across all six dimensions[3].

The motivating factor scoring highest for both males and females in our study was high professional status (92% and 84.5% respectively), The least important motivators for males were both high income and regular working hours (60%) and for females it was regular working hours (31.1%) followed by high income (42.7%).

Males showed a significantly higher preference for the dimension status and security than females (p=.004). Within this dimension significant differences were seen in high income with 60% males selecting this compared to 42.7% females (p=.0001). Males also gave a significantly higher preference to having a secure career (90.8%) compared to 75.2% females (p=.004). This is understandable given that males are considered breadwinners in our society. These results are in conformity to the report on gender differences from the esteemed Pew Research forum which showed that professional and financial success ranked higher as driving factors for males than for females[13]. A study in Hazara, Pakistan similarly showed that male medical students were significantly more motivated by the domains of social and economic compulsions (Mean 14.58 and 21.42 respectively) compared to females (Mean 13.35 and 18.78 respectively). Females were significantly more motivated by nobility of the profession and compassion (Mean 12.86 and 12.34 respectively) compared to males (12.11 and 11.13 respectively)[15]. Similarly, a Hungarian study also showed that while both genders gave more importance to noble reasons and less to income, females were significantly more motivated by altruistic considerations (79.5%) compared to males (71.6%), while males were more motivated by economic considerations (25.1%) compared to females (15.4%)[8]. However, some studies show a contrasting view. A study of >4000 medical students in Latin America showed being male associated with significantly higher level of social/altruistic motivations than for females[20]. A study from Kenya which showed 74% male and female dental interns motivated by the opportunity to care for people showed no significant difference between the two groups[17].

In our study, a highly significant difference was also observed in the nature of occupation dimension, (p=.0001), with highly significant differences seen between males (60%) and females (31.1%) regarding regular working

hours (p=.0001) and also in opportunity for self-employment or independence, favoured by 73.1% males compared to 69.8% females (p=.013). This result contrasts with a Kenyan study which showed no difference between genders with regard to being self-employed[17]. We also observed in our study that, again in keeping with typical gender roles, use of manual skills also appealed to males (81.1%) more than to females (69%) with the difference being significant (p= .012). Similarly, an interest in science also showed a significant difference by appealing to 73.1% males compared to 70.5% females (p=.043).

Convenience sampling and data collection from only one institution prevent this study from being generaliseable. A larger, random sample with more diversity is needed to accurately assess career motivation.

CONCLUSION

Our study showed that both medical and dental students selected their careers for mainly professional and altruistic considerations rather than monetary gain, however, differences existed across genders with males more highly motivated by status, security and income compared to females. Regular counselling should be available at premedical level and for new entrants in these fields to stress the importance of high intrinsic motivation for career choice.

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REFERENCES

1. Gaither's dictionary of scientific quotations. New York: Springer Science + Business Media; 2008. p. 1108.
2. Gagné M, Deci EL. Self- determination theory and work motivation. Journal of Organizational behavior. 2005;26(4):331-62.
3. Crossley ML, Mubarik A. A comparative investigation of dental and medical student's motivation towards career choice. British dental journal. 2002;193(8):471-3.
4. Kulkarni S, Sibdewal H, Kumar S, Shah M, Prabu D. Comparison of dental and medical student's motivation towards career choice in India: A cross-sectional study Career choice. Journal of Indian Association of Public Health Dentistry. 2011;9(17):57.
5. Rad FH, Ghaffari T, Hoshyar E. Motivations for choosing field of study among medical and dental students of Tabriz university of medical sciences, Tabriz, Iran. Research and Development in Medical Education. 2014;3(1):25-9.
6. Al Subait A, Ali A, Andijani AI, Altuwaijry MA, Algarni SM, Alduhaimi TS, et al. Factors Influencing the career choices among Medical University students of King Saub bin Abdulaziz University, Riyadh Saudi Arabia; a cross-sectional study design. The Saudi Journal for Dental Research. 2017;8(1-2):73-8.
7. Khalaf ME AN, Alenezi H, Ziada H. . The motivation and confidence in choosing dentistry as a career amongst dental students: A mixed- methods study. Eur J Dent Educ. 2021.;00 1–10.
8. Győrffy Z, Birkás E, Sándor I. Career motivation and burnout among medical students in Hungary-could altruism be a protection factor? BMC medical education. 2016;16(1):1-8.
9. Cui X, Ding N, Jiang N, Li H, Wen D. Preliminary study of the relationship between career choice motivation and understanding of professionalism in newly enrolled medical students in China: a cross-sectional study. BMJ open. 2021;11(2):e041860
10. Anjum S, Nadeem N , Dogar F , Munshi MSM, , Zaib T , Sohail H et al. Motivation for Choosing Medical and Dental Profession. PJMHS. 2019; 13(4):910
11. Hassan M, Shahzad F, Waqar S. Seeking motivation for selecting Medical Profession as a Career Choice. Pakistan Journal of Medical Sciences. 2020;36(5):941.
12. Oakley A. Sex, gender and society Surrey, England: Ashgate Publishing, Ltd.; 2015. 115-16p.
13. Parker K, Horowitz JM, Stepler R. On gender differences, no consensus on nature vs. nurture: Americans say society places a higher premium on masculinity than on femininity Washington, USA: Pew Research Center; 2017 [updated 2021]. Available from: https://www.pewresearch.org/social-trends/2017/12/05/americans-see-different-expectations-for-men-and-women/.
14. Jefferson L, Bloor K, Birks Y, Hewitt C, Bland M. Effect of physicians' gender on communication and consultation length: a systematic review and meta-analysis. Journal of health services research & policy. 2013;18(4):242-8.
15. Hafeez A, SM HS. Impact Of Socio-Economic Status On Determinants Of Medical Career. Journal of Ayub Medical College, Abbottabad: JAMC. 2016;28(3):562-7.
16. Pakistan Economic Survey 2020-21. Islamabad: Finance Division, Government of Pakistan; 2021. p. 218.
17. Lukandu OM, Koskei LC, Dimba EO. Motivations for a Career in Dentistry among Dental Students and Dental Interns in Kenya. International Journal of Dentistry. 2020;2020:1017979.
18. Sadiq MA, Rehman KU, Chaudhry S, Arshad N, Shabbir RK, Afzal A. Why Pakistani students join medical college: passion or pressure! Rawal Medical Journal. 2020;45(3):716-9.
19. Kazemizadeh Z, Rezaeian M, Farnoodi M. Evaluation of motivations for choosing field of study among medical and dental students of Rafsanjan University of Medical sciences. Journal of Rafsanjan University of Medical Sciences. 2011;10(4):279-88.
20. Torres-Roman JS, Cruz-Avila Y, Suarez-Osorio K, Arce-Huamaní MÁ, Menez-Sanchez A, Aveiro-Róbalo TR, et al. Motivation towards medical career choice and academic performance in Latin American medical students: A cross-sectional study. PLOS ONE. 2018;13(10):e0205674.