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Original Article

Strength of Students' Motivation in Public and Private Dental Colleges

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Abstract

Background: Willingness to sacrifice, readiness to start and persistence are the key elements of students' for pursing their career in any field they opted.
Objective: To determine changes in the strength of students' motivation of first year dental students in public and private dental college in first six months of 1st year training using Strength Motivational Measuring Scale.
Study type, settings & duration: A comparative study was conducted at a private and public dental college of Karachi from December 2017 to May 2018.
Methodology: Two sets of same questionnaire was administered in the first month and then after six month of 1st year dental students of both public and private dental college for identifying the changes in strength of students' motivation.
Results: Out of 150 students, 106 participated in the study. Strength of students' motivation dropped in both private and public dental college from 17.16±3.91 to 15.47±4.94 in first six month of the first year training. In fact, drop in the mean difference from first to six month of strength of student motivation of public dental college was even greater (2.80±7.31) than the private dental college (1.39±3.92). Our study also indicates that the mean difference in strength of motivation in female students was dropped more 2.04±6.03 as compared to male students 0.28±5.03 in the first six months of their dental education.
Conclusion: Strength of students motivation drops within six months of first of year of training. Stakeholder should take appropriate measures for maintaining and improving students' motivation for producing competent dental practitioners.
Key words: Motivation, strength of motivation.

Introduction

There has been a rapid increase in the number of medical and dental colleges in the country over the past decade. According to PMDC statistics, there are currently 51 dental colleges across the country; 15 public and 31 private. Every year, Pakistan produces thousands of new dentists from these colleges.[1-3] In the private sector, one student pays around Rs. 6-10 lacs per year. This makes dentistry one of the most expensive educational options available in Pakistan. On the other hand, there are very few seats available in Government dental colleges where the cost of dental education is hugely subsidized.[1] Hence, there is stiff competition for these seats and students with highest merit could only qualify for an admission there. Also, the another challenge is pursuing post-graduation in dentistry as there are very few options available in Pakistan for pursuing post-graduation or one need a lot of money to go abroad and complete their post-graduation. Be it for merit or money, dental education in Pakistan is not everybody's cup of tea. It not only requires a lot of determination, hard work and money (in case of private colleges) but also a great deal of motivation to be able to pursue dental education in Pakistan.[4]

Motivation is just like systems software that brings an action to take place. Whether intrinsically or extrinsically motivated, it plays a key role in choosing and pursuing an academic career. Dental students pursuing dentistry as a career choice are

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Authors Contribution

SA conceptualized the project. SA, TA & KA did the data collection. SA, TA & NB did the literature search. SA, KA & NB performed the statistical analysis. Drafting, revision and writing of manuscript were done by SA, TA, KA & SIM.

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associated with varying external and internal motivation.[5] We can also say that motivation can be a predictor of students' career pathway. Thousands of candidates apply for admissions in public and private dental colleges. In order to have an appropriate and a stringent selection process, colleges (of both private and public sectors) spend a lot of time as well as money. Students are selected on the basis of entrance test along with their intermediate and matriculation results and interviews.

The most challenging part while conducting interviews is to evaluate students' motivation because they know they are being evaluated. They show their best attitude towards their interest in the subject so that they can get admission in the college.[4,6]

Studies have indicated that motivation is the driving force of learning.[7] Although, a lot of research work has been done on assessing the quality of motivation (that is, whether students are intrinsically or extrinsically motivated) but very less on evaluating the strength of students' motivation which in other words, is basically assessing students' preparedness for sacrificing and continuing dentistry despite the difficulties.[8]

It is important for both public and private dental college to identify the strength of motivation of students so that it could measure the willingness of the dental students to pursue dentistry even in the face of difficulty and sacrifice towards their career choice.[9]

Therefore, this study was carried out among the first year dental students of both private and public dental colleges to determine changes in the strength of student's motivation within the first six months by using Strength Motivational Measuring Scale (SMMS).

Methodology

We conducted a comparative study. Data was collected from 1st year dental students of two selected dental colleges. First set of data was collected in 2017 and the second one in May 2018. Convenient sampling technique was used. Approval from Ethical Review Committee was also taken along with written informed consent from all the participants. Inclusion criteria of the study were the first year dental students from the commencement of first month and then the same students after the six months whereas students from other years of dental colleges were excluded from the study. The sample size was calculated by using frequency of self-motivated for choosing dentistry as a career as 73% were self-motivated for choosing dentistry as a career,[1] margin of error as 7.5% and 95% confidence interval, the estimated sample size came out as 135 students. After getting the response rate of 79%, about 106 students duly completed the questionnaire.

A validated and reliable questionnaire called Strength of Student Motivation for Medical School (SMMS) was used to determine the strength of students'. Strength of motivation for medical school (SMMS) assesses the student's readiness to start and continue medical training regardless sacrifices, setbacks, misfortune or disappointing perspectives.[10,11]

There were two phases in which data was administered. In the first phase, the questionnaire was administered at the commencement of 1st year dental students and in the second phase same questionnaire was administered after 6 month to the same participants after educational intervention (i.e. exposure to dental education)

Statistical analysis was done by using SPSS version 20. Mean and standard deviation were calculated for all the items along with descriptive analysis. Paired t-test and post stratification t-test was applied. *p*-value <0.05 was considered as significant.

The Ethical approval was obtained from ethical review committee of Liaquat College of Medicine & Dentistry, Karachi.

Results

Total of 150 students were approached for the study and got the response rate of 79%. In the final analysis after excluding the missing data and lost to follow up, we had enrolled 106 participants. Majority of the students were females 85 (80.2%) and belonged to public dental college 60 (56.6%).

Descriptive statistics for subscales of SMSS for strength of dental were calculated at the first week after admission and after 6 months of educational intervention. (Table-1)

Change in strength of students was analyzed using paired t-test. The *p*-value showed significant difference of <0.05 (Table-2). Data was stratified according to gender and sector. Post-stratification paired t-test was applied. (Table-3)

DISCUSSION

Our study indicates strength of students motivation dropped in both private and public dental college from 17.16±3.91 to 15.47±4.94 in first six months of the first year training. In fact, drop in the mean difference from first to six month of strength of student motivation of public dental college was even greater 2.80±7.31 than the private dental college

Table 1: Descriptive analysis of subscales of SMSS for strength of dental students.

Strength of Motivation	*Strength at the first week after admission (Pre Strength Score)*		*Strength after 6 months of educational intervention (Post Strength Score)*		*p-value*
	Mean	*SD*	*Mean*	*SD*	
I would still choose dentistry even if I am never able to take a break from my studies	3.13	0.94	3.18	1.012	0.711
If it would take me 10 years to qualify as a dentist, I would stop studying	2.97	1.12	2.89	1.19	0.614
I wouldn't consider any other profession than becoming a dentist	3.24	1.262	2.2	1.199	0.001*
If my studies require average of 60 hours a week, I would seriously consider quitting	2.29	1.014	2.29	1.179	0.999
I would always regret my decision if I hadn't availed myself of the opportunity to study dentistry	3.08	1.339	2.41	1.225	0.001*
I would have applied year after if I were not given an admission to dental college this year	2.72	1.491	2.51	1.221	0.263

*p <0.05 was considered as statistically significant

Table 2: Change in strength of student.

Variables	*Pre Score*	*Post Score*	*Mean Difference*	*p-value*
Private College (n=46)	15.78±3.69	14.39±2.40	1.39±3.92	0.021*
Government College (n=60)	18.23±3.76	15.43±6.42	2.80±7.31	0.004*
Female (n=85)	17.24±4.02	15.20±4.86	2.04±6.03	0.004*
Male (n=21)	16.85±3.51	16.57±5.23	0.28±5.03	0.797

Paired t-test was applied, *p <0.05 was considered as statistically significant

Table 3: Stratified analysis of strength with respect to gender and sector.

Variables	*Pre Score*	*Post Score*	*Mean Difference*	*p-value*
Private College (n=46)	15.78±3.69	14.39±2.40	1.39±3.92	0.021*
Government College (n=60)	18.23±3.76	15.43±6.42	2.80±7.31	0.004*
Female (n=85)	17.24±4.02	15.20±4.86	2.04±6.03	0.004*
Male (n=21)	16.85±3.51	16.57±5.23	0.28±5.03	0.797

Paired t-test was applied, *p<0.05 was considered as statistically significant

1.39±3.92. Our study also showed that the mean difference in strength of motivation in female students was dropped more 2.04±6.03 as compared to male students 0.28±5.03 in the first six months of their dental education.

Studies conducted in the past have focused more upon validating the 'Strength Motivation for Medical School' (SMMS) scale. Only a few studies have actually evaluated the strength of students' motivation utilizing the SMMS scale.

One such study "A two factor model of performance approach goals in student motivation for starting medical school" conducted by Jacqueline[12] found no difference in the strength of students' motivation based on gender. The study recommended to further investigate how students' motivation changes over time. Our study in contrast showed that female students' motivation dropped more as compared to male students of first year. Additionally, our study also showed that over-all strength of students' motivation dropped within six months of their dental education in both public and private sector dental colleges.

Marja GH Nieuwh carried out a study called 'measuring strength of motivation for medical school'.[6] The study was conducted to investigate the psychometric properties of a Strength of Motivation for Medical School (SMMS) questionnaire. It was concluded that SMMS is a validated tool for students' selection procedures as it comprise of multiple variables which helps decision maker for appropriate selection

There is an opportunity to conduct a similar research comparing students motivation of private and public dental colleges which is not been done as yet.

The limitation of the study was small sample size targeted upon one private and one public dental college. Hence, the result of the study may be influenced and has limited generalizability.

Whereas this study measures the strength of students' motivation over a 6 months period,

there is a need to conduct another study to measure the level, factors and strength affecting motivation in entire 4 years of study as some studies suggest that student motivation increases during the clinical years.

It is further suggested to that the same study should be conducted across the country among private and public college to improve motivation of students towards dental education.

Our study concludes that Strength Motivation of students significantly dropped after entering dental colleges. Focus of dental colleges should be on students motivation in the initial months of their education.

Conflict of interest: None declared.

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