

# Perception and Interest of Medical Students Regarding Basic Medical Science Subjects

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## ABSTRACT

**Background:** Basic Medical Sciences (BMS) subjects are the core and pillar for understanding medical education. The students' interest in BMS and their choice of subject of BMS as a career is limited in Pakistan as most of the medical students opt clinical sciences.

**Aim:** To look into perception and interest of medical students regarding BMS as career choice.

**Methods:** This cross-sectional study was conducted at Avicenna Medical college involving 3<sup>rd</sup> year medical students. They were asked about demographic details and about their perception towards BMS. Also they were asked for reasons not joining BMS as career. All of the data were analyzed statistically by SPSS version 20.

**Results:** A total of 86 medical students participated in the study. Mean age of the participants was found to be 20.06±0.901 years. Of these, 55(63.9%) were females while 31 (36.1%) were male. A total of 10.4% of participants showed their interest towards BMS and 8.1% agreed on opting BMS as their future career. Another important question was the reason for not opting BMS as career. Most of the participants (38.3%) showed no interest in BMS, 8.1% had a family pressure and 17.4% labeled less financial growth as a cause. When interest was stratified according to demographic details, it was found not significant in any of the variables.

## Conclusion:

We conclude that attracting the medical students towards BMS is a must do job, particularly in a resource constraints country like us. BMS teachers can do this being a good role model and integrating BMS subjects along with clinical subjects.

**Keywords:** Perception; Basic medical sciences; Medical students

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## INTRODUCTION

Basic Medical Sciences (BMS) subjects are the base and cornerstone of medical education anywhere in the world. These subjects are thought as the main pillar and their ultimate learning is based on how much a student is strong in these subjects. Therefore, a strong grip and knowledge of medical students over BMS cannot be over-emphasized<sup>1,2</sup>. As clinical subjects deal with the application of BMS knowledge, so students must be focusing on the subjects very carefully and vigilantly, rather taking a casual attitude towards them<sup>3</sup>.

However, as evident from various studies, most of the medical students are interested in opting clinical sciences, rather BMS as their carrier<sup>4</sup>. Various studies have looked into the factors leading to more interest of medical students towards clinical sciences and have labelled many factors as causative<sup>5</sup>. In Pakistan, after MBBS, one year house job is compulsory for every medical graduate. After that

period, every graduate decide his/her future specialty and is allowed to work there<sup>6</sup>. Although the number of physicians working in Pakistan is much less than the desired, the number of medical students opting for BMS is still much lower and at any time, there is always a shortage of faculty members in a medical college in BMS.

The objective of this study was to look into the perception and interest of 3<sup>rd</sup> year medical students into the BMS as career and to plan further strategies by teachers of BMS to generate their interest.

## MATERIAL AND METHODS

This cross-sectional study was conducted at Avicenna medical College, Lahore among 3<sup>rd</sup> year medical students who have completed their BMS training in 1<sup>st</sup> and 2<sup>nd</sup> year of MBBS. They were given a proforma and were supposed to fill it anonymously. A verbal as well as written consent for inclusion in the study was obtained from all of them. They were supposed to mention their age, gender, parents as doctors (yes/no) and any elder brother/sister as doctor (yes/no). Regarding the perception, they were asked about interest in basic sciences (very much/ minimal/ nill), future plan to join it as career (Of

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course/ may be/ never), will guide your junior to opt BMS as career (Of course/ may be/ never), Why not to join BMS (not interested/ family pressure/ less financial growth/ less chances of promotion/ less thrilling field/ no role model/ other reasons), should BMS teachers encourage students to opt this field (yes/ no), should number of lectures be increased in BMS (yes/ no) and will integrated curriculum increase interest of medical students in BMS (yes/ no/ don't know).

All the data were analyzed by SPSS version 20. Mean  $\pm$  SD were calculated for age of the participants. Frequencies and percentages were calculated for the gender and answers to our questions regarding perception. Also stratification of the interest of the participants for gender, parents being doctors and elder brother/sister being doctor was done taking P value  $\leq$  0.05 as significant.

## RESULTS

A total of 86 students of 3rd year MBBS were included in the study. The mean age of participants was found to be  $20.06 \pm 0.901$  years. Among 86 participants, 55 (63.9%) were females while 31 (36.1%) were male. Thirty three participants (38.3%) had doctor parents while 53 participants (61.6%) had non-doctor parents. Also 41 participants (47.6%) had another elder brother or sister in the family who was doctor.

Regarding the perception and interest of the participants towards BMS, various questions were asked which are summarized in Table 1. Also stratification of the interest of the participants for gender, parents being doctors and elder brother/sister being doctor was done and was not found significant (Table 2).

Table 1: Perception of medical students towards BMS

<b>Are you interested in basic sciences</b>	
very much	9 (10.4%)
minimal	45 (52.3%)
nil	32 (37.2%)
<b>Future plan to join it as career</b>	
Of course	7 (8.1%)
may be	16 (18.6%)
never	63 (73.2%)
<b>Will you guide your junior to opt BMS as career</b>	
Of course	11 (12.7%)
may be	23 (26.7%)
never	52 (60.4%)
<b>Why not to join BMS</b>	
not interested	33 (38.3%)
family pressure	7 (8.1%)
less financial growth	15 (17.4%)
less chances of promotion	8 (9.3%)
less thrilling field	13 (15.1%)
no role model	4 (4.6%)
other reasons	6 (6.9%)
<b>Should BMS teachers encourage students to opt this field</b>	
yes	76 (88.3%)
no	10 (11.6%)
<b>should number of lectures be increased in BMS</b>	
yes	12 (13.9%)
no	74 (86.1%)
<b>will integrated curriculum increase interest of medical students in BMS</b>	
yes	16 (18.6%)
no	48 (55.8%)
don't know	22 (25.5%)

Table 2: Stratification of interest of medical students according to demographics

	Are you interested in basic sciences			P-Value
	very much	Minimal	Nil	
<b>Gender</b>				
Male	2	16	13	P= 0.593
Female	7	29	19	
<b>Parents as doctors</b>				
Yes	3	19	11	P= 0.742
No	6	26	21	
<b>Elder brother/sister as doctor</b>				
Yes	5	22	14	P = 0.799
No	4	23	18	

**DISCUSSION**

In this study we have tried to explore the perception of our medical students towards BMS and their preference regarding the BMS as choice of career. Also we have tried to find out the reason for students not getting interested into BMS. Overall 10% of the medical students were interested in BMS and 8.1% were sure enough to join BMS as future career. Also 18.6% showed their interest and they may join BMS after graduation.

Yamazaki Y et al conducted a similar kind of study and they found that 24.5% of medical students at a Japanese medical college were interested in BMS<sup>7</sup>. Kitajima et al reported a high percentage of medical students (74%) being interested in BMS<sup>8</sup>. Also we have asked from the students if integrated curriculum, which is going to be launched in Pakistan soon, will encourage students to opt for BMS. For this question, 18.6% of the participants reported it to be as expected outcome. Custers et al also conducted a similar research after administration of integrated curriculum at a medical college in Netherland. They had found that administration of integrated curriculum and organ based curriculum keeps the BMS really exciting and generates an interest in them<sup>9</sup>.

When we looked into the factors for disinterest of the participants in BMS, a significant number of participants (17%) reported less financial growth as a reason. Definitely financial constraints are a significant reason for not joining BMS at least in Pakistan. Other countries like Japan had also identified this reason and they had announced a substantial amount as scholarship for BMS teachers<sup>10</sup>. Many studies have looked into this matter and salary and financial growth is now considered as significant factor which influences the student's choice of subject as career and therefore, most of the students are always interested in clinical subjects rather BMS<sup>11,12,13</sup>.

In this study, 88.2% of the participants reported that BMS teachers should encourage the students to join it as a career. In a previous study, Kaufman and Mann had reported that enthusiastic medical teachers and role models in BMS may enforce and encourage the medical students towards BMS<sup>(14)</sup>. The role of the teacher and role model can never be ignored in attracting students towards a particular specialty. For that matter, many studies have emphasized and forced the idea that BMS teachers must encourage their students to join BMS as a career<sup>15,16,17</sup>.

**CONCLUSION**

We conclude that attracting the medical students towards BMS is a must do job, particularly in a resource constraints country like us. BMS teachers can do this being a good role model and integrating BMS along with clinical subjects. Also we recommend further trial to look into different factors which lead to disinterest of students in BMS so that they can be properly taken care of.

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