

## Medical students' motivational factors and academic performance – undergraduate level of Bangladesh.

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### Abstract

**Background:** Motivation is the most essential influencing factor in academic performance. It plays an important role in academics, through its persistence and involvement which correlates with different academic dimensions and achievements. Motivational processes influence an individual's acquisition, transfer, and use of knowledge and skills. Educationally relevant concept of motivation is yet to be revealed. High intrinsic and extrinsic motivation scores are associated with higher academic achievement; whereas low intrinsic and extrinsic motivations are associated with low academic achievement.

**Aim:** To determine students' academic motivational factors and its relationship with professional result.

**Method:** A descriptive cross-sectional quantitative study conducted from January 2022 to December 2022 over 540 students; among the students 209, 119, 101 and 111 were from first, second, third and fourth phases of MBBS course respectively. A self-administered semi structured questionnaire was used for quantitative data collection. For statistical analysis chi squared tests were applied

**Result:** Important motivational factor for the learning was to become a good doctor (80.00%) and then to pass in the examination (65.40%). Most of the students were motivated by combined intrinsic and extrinsic mode of motivation; but these findings had no association with the performance of professional examinations.

**Conclusion:** This study has found that academic motivation of medical students could be influence by different factors. The existence of correlations between academic motivation and professional performance is still questionable and nonconclusive.

**Keywords:** Academic motivation, Motivational phenomenon, Academic achievement, Patient outcome.

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**Introduction:** Motivation is the most essential influencing factor in academic performance<sup>1</sup>. It plays an important role in academics, through its persistence and

involvement which correlates with different academic dimensions and achievements<sup>2</sup>. Motivational processes influence an individual's acquisition, transfer, and use of

knowledge and skills. Educationally relevant concept of motivation is yet to be revealed<sup>3</sup>.

The concept of academic motivation shows the correlation between student motivation with academic success and several other factors with their impact on it; these are students' expectations, teachers' attitudes, conditions for teaching activities, learning environment and personal structure<sup>4</sup>. Motivation is of two types: intrinsic and extrinsic. Intrinsic motivation refers to internal desire of an individual to perform certain action, while extrinsic motivation refers to an individual's action is to be performed due to the result, the reward that can be obtained and or the appreciation of others<sup>5,6</sup>. Intrinsic motivation is associated with better orientation and learning ability. High intrinsic and extrinsic motivation scores are associated with higher academic achievement; whereas low intrinsic and extrinsic motivations are associated with low academic achievement<sup>7</sup>.

Students are unique regarding their way of thinking, views and processing, analyse and organizing different information<sup>8</sup>. Thus, academic success is significantly affected by individuals' structure and learning characteristics, where motivation plays vital role<sup>9</sup>. Persistence efforts of student's also have impact on academics that is why

it is important to investigate the predictors of academic success<sup>10</sup>. Motivation in medical education can be influenced by multiple factors<sup>11</sup>. It has become a vital area of interest in the domain of health professions' education and been suggested to have a pivotal role for students' wellbeing, academic success and patients' outcomes and wellbeing<sup>12</sup>.

Regarding study of motivation; dramatic change has taken place during last 10 to 15 years. This change includes coherent, replicable, and educationally relevant body of findings related to clearer understanding of motivational phenomena<sup>3</sup>. Though it is challenging for medical educators; it is important to understand the personal factors that lead an individual to success in medicine<sup>13</sup>. Over the last decade there has been increasing research on motivation in health professions education<sup>14, 15</sup>. That is why we decided to conduct this study to identify academic motivational factors and its relationship with professional result of undergraduate medical students of Bangladesh.

**Method:** This is a descriptive cross-sectional quantitative study. The study period was 12 months from January 2022 to December 2022 and was carried out among the students of first, second, third and fourth

phase of MBBS course. Seven government and five non-government medical colleges selected conveniently from Dhaka and outside Dhaka. A total 540 willingly and voluntarily participated students were enrolled in this study; among the students 209, 119, 101 and 111 were from first, second, third and fourth phases of MBBS

course respectively. Performance of professional examination were assessed by pass or fail in the examination. A self-administered semi structured questionnaire was used for quantitative data collection. For statistical analysis chi - squared tests were applied.

## Result

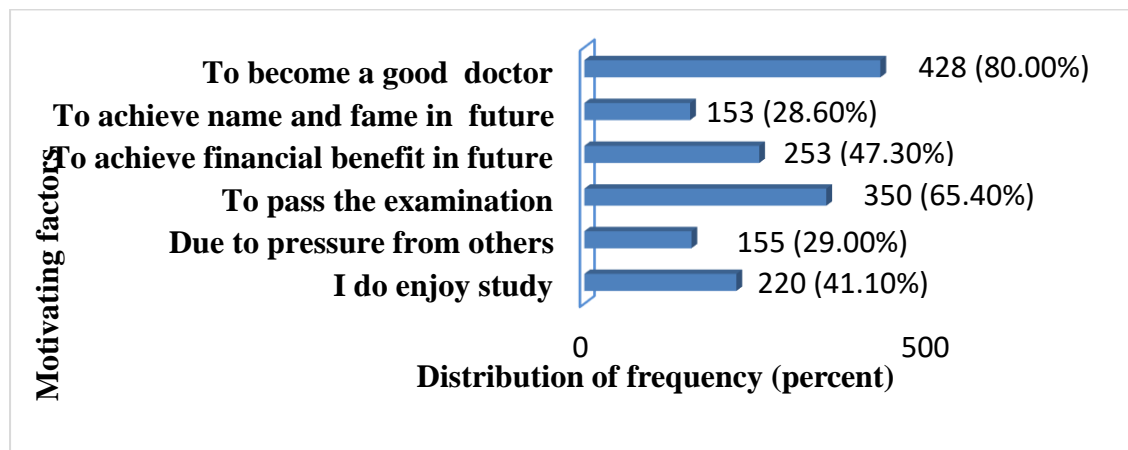
**Table 1: Distribution of the students by their gender and mode of motivation with statistical inference (n=535)**

Gender	Mode of motivation			Total
	Intrinsic	Extrinsic	Combined intrinsic & extrinsic	
Male	45 (19.3%)	41 (17.6%)	147 (63.1%)	233 (100.0%)
Female	66 (21.9%)	41 (13.6%)	195(64.6%)	302 (100.0%)
Total	111 (20.7%)	82 (15.32%)	342 (63.92%)	535 (100%)

\*Pearson Chi-Square =1.841, df =2 (p value = 0.398)

The study found that all the respondents were motivated to study medicine. Distribution of the medical students by their gender and mode of motivation showed both male and female were motivated in

similar fashion ie, combined intrinsic and extrinsic mode followed by intrinsic mode. The values are 147 (63.1%), 195 (64.6%) and 45 (19.3%), 66 (21.9%) respectively but there was no significant difference among both gender (one sided P=0.398).

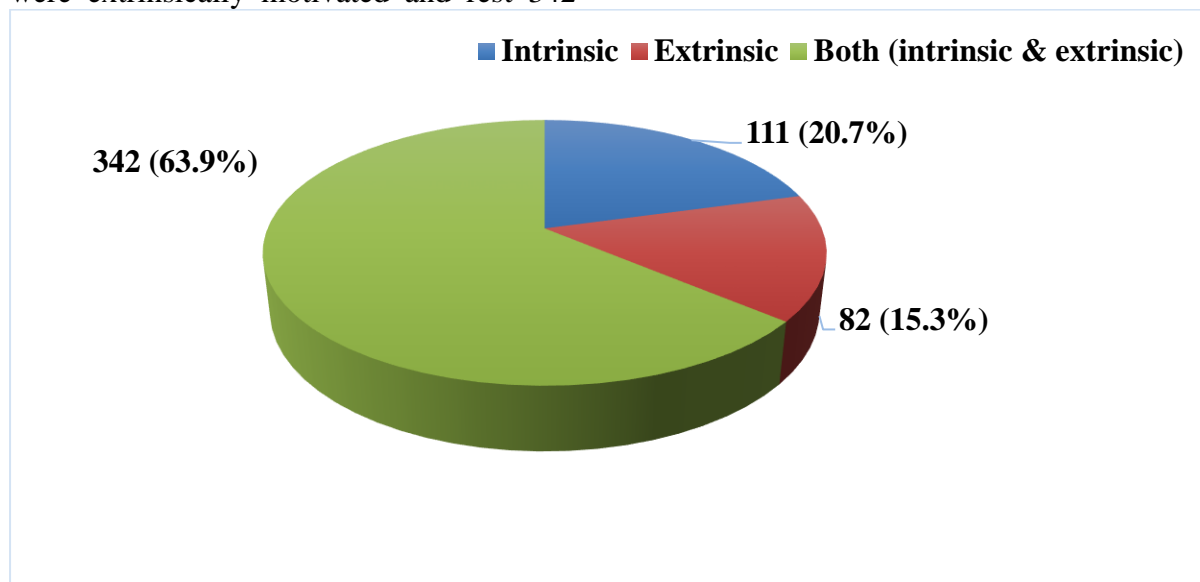


**Figure 1: Distribution of students by their opinion regarding the motivating factor (n= 535) \*Multiple responses**

Students' opinion regarding their motivation to study medicine showed most of the students 428 (80.00%) were motivated to become a good doctor and minority students 153 (28.6%) were motivated to achieve name and fame in future.

**Figure 2: Distribution of the medical students by their opinion regarding the type of motivation for their study (n = 535)**

Among total 535 respondents 111(20.7%) (63.9%) were both intrinsically and were intrinsically motivated, 82(15.3%) extrinsically motivated to study medicine. were extrinsically motivated and rest 342



**Table 2: Distribution of the students by their mode of motivation and performance in professional examinations with statistical inference (n=314)**

Mode of motivation	Regularity in professional examinations		Total
	Always regular (n=284)	At least one time irregular (n=30)	
Intrinsic	55 (93.2%)	4 (6.8%)	59 (100.0%)
Extrinsic	44 (88.0%)	6 (12.0%)	50 (100.0%)
Both intrinsic and extrinsic	185 (90.2%)	20 (9.8%)	205 (100.0%)

\* Pearson Chi Square = 0.881, df = 2, P = 0.322 (one sided)

Distribution of the medical students by their mode of motivation and performance in professional examinations inferred that regularity in passing (always regular) professional examinations were higher among students who were intrinsically

motivated followed by combined intrinsically and extrinsically motivated then the students who are extrinsically motivated and there was no significant difference among the groups (one sided P=0.322).

**Discussion:** Motivation of students' is an influencing factor in academic performance at all level of education. Medical students' motivation towards the course is an important contributing factor for academic success. Academic motivation of medical students are intrinsic or extrinsic or combination of two and it may vary person to person and gender to gender.

45 (19.3%) respectively but there was no significant difference among both gender (one sided P=0.398, Table 1). Kunanithaworn et. al.<sup>11</sup> found significant correlations for sex and motivation. Male medical students' account of 40% of total and showed lower extrinsic motivation than female on the other hand 60% of the subjects were female and showed extrinsic motivation was positively associated with them. The above findings are different to each other. These findings are also inconsistent with Kusurkar et. al.<sup>15</sup> study where females showed higher external motivation.

Present study showed both male and female were motivated in similar fashion ie, combined intrinsic and extrinsic mode followed by intrinsic mode. The values are 147 (63.1%), 195 (64.6%) and 66 (21.9%),

Al shawwa et. al.<sup>16</sup> describe high GPA students studied for enjoyment were (44.8%) and pressure from family members (11.6%). On the other hand, low GPA students studied for enjoyment (32.6%) and pressure from family members (12.4%). Both high and low group students had similar reason except frequencies. Students' distribution by their opinion regarding how they become motivate to study medicine of present study showed 41.1% enjoyed study and, 29% were motivated by external pressure (Figure 1). The present and Al shawwa et. al.<sup>16</sup> studies showed students' reasons of study medicine were different considering the cause and frequency perspective.

Considering the reasons of motivation; to become a good doctor, enjoyed study, to pass in examination, to achieve financial benefit in future, external pressure and to achieve name and fame in future (Figure 1). The findings indirectly support the generalizations of motivational beliefs of self-regulated learning that's self-efficacy; perceive academic task value and adoption of mastery goal for self-regulated learning<sup>1</sup>. Regarding the mode of motivation to study medicine among 535 respondents 20.7% were intrinsically motivated, 15.3% were extrinsically motivated and rest 63.9% were

combined intrinsically and extrinsically motivated to study medicine (Figure 2). Though highest frequency of mode of motivation was combined intrinsic and extrinsic; but professional examinations performance was higher among students who were intrinsically motivated than other groups and the difference was not statistically significant (one sided  $P=0.322$ , Table 2). Study findings of Salahuddin and Talukder<sup>17</sup> stated "performance of students who were willing to study MBBS were better than unwilling ones" that is self-motivation. The research findings were also supportive with present study.

A total 138 of the 250 first-year medical students were studied by Kunanithaworn et. al.<sup>11</sup> and his analysis showed; regarding decisions to study medicine self-choice was 81.9% and others influence was 18.1%. All students of present study (Figure: 1) were positively motivated to study medicine; they were interested intrinsically (%) and extrinsically (%). Kunanithaworn et. al.<sup>11</sup> found that 68.20% of their students were intrinsically motivated and 26.5% were extrinsically motivated. This study also reflects their students were motivated to study medicine by their self-choice i.e. intrinsically but most of the present studies were motivated to study medicine in

combined mode both intrinsically and extrinsically (Figure: 2).

**Conclusion:** This study has found that academic motivation of medical students could be influenced by different factors. Most of the research concluded that there is strong positive correlation between intrinsic motivation and professional performance and the individuals who are intrinsically motivated are more likely to be involved in deep learning and shows strength in their performance; but the existence of correlation between academic motivation and professional performance is still questionable and nonconclusive.

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