Perceptions and Effect of Mentoring of MBBS Students in a Peripheral Medical College of West Bengal

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Abstract:

Introduction: Various medical colleges of West Bengal have developed 'Mentoring Program' offering guidance to students. **Objectives:** To assess mentees' and mentors' perception regarding mentoring during MBBS, to identify the barriers in a mentor-mentee relationship, to observe the effect of mentoring on perceived stress among students and identify association between stress level and socio-demographic profile. **Methods:** Institution based analytical study (November 2021 - October 2022) where total enumeration of third year students was done (n=183). HESI scale was used for the stress score & association between stress level and socio-demographic profile (chi-square/fisher's exact test) were done. **Results:** Majority of the students 151 (82.51%) stated that they were benefitted from the mentoring. Among the benefitted students 35 (23.18%) stated it as academic, 22 (14.57%) as personal and 88 (58.27%) as both. Most of the students felt an ideal mentor should be friendly 161 (87.98%), easily approachable 166 (90.71%), a good listener 144 (78.69%), understandable 148 (80.87%), soft spoken 125 (68.31%), and should guide by valuable suggestions 138 (75.41%). About the barriers in communicating with the mentor 61 (33.33%) stated time constraints as the major barrier. A significant reduction in mean stress scores, from 2.48 (±0.39) before a mentoring program to 2.40 (±0.34) after ($p < .005$) by HESI scale was seen by paired t-test. Stress was not found to be significant with socio-demographic profile (chi-square/fisher's exact test). **Conclusions:** Perception regarding mentoring among the mentors & mentees was found to be positive. Mentoring played a significant role in stress reduction among the students.

Keywords: Medical education, Mentoring, Mentors, Medical students, Psychological stress

Introduction:

Mentoring is crucial for successful career in medical field. Mentoring was introduced formally in medical education during late 1990s.[1] As per the definition of Standing Committee on Postgraduate Medical and Dental Education it is, "A process whereby an experienced, highly regarded, empathetic person (the mentor) guides another (usually younger) individual (the mentee) in the development and re-examination of their own ideas, learning, and personal and professional development."[2]

The three essential purposes of mentoring are continuing education, personal support and professional development. A successful mentoring relationship

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depends on the active participation of both mentor and mentee. Mentoring in relation to the medical education is a long-term relationship between the mentor and the mentee, benefitting the mentor and mentee as well as the society by bringing out the best medical graduate who can take care of the community.

MBBS course can be stressful to students. There is a growing concern about stress and depression in MBBS students and its effect. Students are often unwilling to seek help for stress and emotional problems which can only be magnified leading to burnout occurring early in their careers.[3,4]

Though mentoring is practiced in many medical colleges in West Bengal, the analysis on how far it helps the students in achieving its objectives is not much known. [5,6]

As a part of Advance Course in Medical Education project mentoring of the Phase III Part 1 MBBS students of Bankura Sammilani Medical College, Bankura started from 2022. Hence, the present study was done to assess the perception of mentees and mentors about mentoring programme and its effect on perceived stress among medical students. The objectives of the present study were to assess the perception of mentoring programme among the mentees (Phase III Part 1 MBBS students) and mentors (Selected Faculties of Department of Community Medicine of the Institution), to identify the barriers in a mentor-mentee relationship, if any to observe the effect of mentoring on perceived stress among the MBBS students & to find out any association present between stress level and socio-demographic profile.

Methods:

It was an institution based analytical study with longitudinal design. Total study period was 12 months (November 2021 - October 2022). Study Population were Phase III MBBS students (2019- 2024) of the medical college as mentee and selected ten faculties of Department of Community Medicine of the said Institution. The inclusion criteria were all the students of Phase III Part 1 MBBS and exclusion criteria was students who were not willing to take part in the study.

Total enumeration of Phase III Part 1 MBBS students was done. Out of total 200 students 183 students responded.

Study tool: Questionnaire was prepared after thorough literature search, and was validated by the faculties of the department, and pilot study was done. The questionnaire contained questions regarding perception of mentoring and perceived stress (Higher Education Stress Inventory Scale) in medical education.

To assess the stress levels, the instrument Higher Education Stress Inventory (HESI) developed by Dahlin et al.[7] specifically to assess stress among medical students was used. The instrument contained 33 statements designed to assess degree of stress and its generators. The responses are rated on a four-point Likert scale (i.e. 1-4), "1=totally disagree", 2=somewhat disagree", 3=somewhat agree, 4=totally agree; with reversed order for items describing absence of stressors. High scores are always less favourable. Total questions were 33, total score of each student was divided by 33 to get the mean stress score for each student. Then the total mean stress scores of all students were divided by the total number of students(183) to get the final mean stress score. The instruments were initially tested in a pilot study in 20 students and reliability and validity assured.

Study technique: The students of Phase III Part 1 MBBS (2019 batch) experienced the mentorship programme for 6 months. This was their first experience with a mentorship program. First week of every month was scheduled for a formal meeting between the mentors and the mentees. From the department of Community Medicine, 10 faculties acted as their mentors. Apart from this, the students met their mentors whenever needed as an informal meeting. The students shared with their mentors any academic challenges, personal issues or any psychological problem which they were facing while pursuing the course.

Before starting of the mentoring programme, the mentees were asked to fill up the HESI questionnaire in a google form shared with them in a common WhatsApp group to assess the perceived stress score. After 6 months of mentorship program the mentees were again asked to fill up the HESI questionnaire to assess the perceived

stress score. The mentees and the mentors were asked to fill up and submit a google form questionnaire online containing various questions regarding their perception of mentoring.

Data analysis: Data were entered into Microsoft excel. IBM SPSS Statistics for Windows, Version 22.0; IBM Corp., Armonk, NY, USA) was used for analysis of the data. For analysis of categorical data number and percentage were used. As data were normally distributed, so paired t-test was used to test the difference between HESI scores of medical students before and after mentoring programmes. To test association between stress level and socio-demographic profile chi-square test/fishers exact test was used. For all statistical purposes, p value less than 0.05 was considered significant. Ethical consideration: Ethical clearance was taken from the Institutional Ethics Committee (BSMC/Aca:-3710). Written informed consent was obtained from all the students and their mentors.

Results:

Out of 200 students 183 participated and properly filled the questionnaires which were taken into consideration for analysis of results. Among the students 109 (59.56%) were males & 74 (40.44%) were females. The age of the students was expressed in mean ± SD was 21.73 ± 1.07 years. Among the students 6.01% students had doctor parents and 86.89% were resided in the hostel.

Out of 6 mentoring sessions conducted, 25.68% of students had attended all the sessions, whereas 12.02% had attended only one session, 10.38% attended five sessions and 14.21% attended four sessions. Average number of sessions attended by the students were 3.63 ± 1.83.

Majority of the students (82.51%) stated that they were benefitted from the mentoring sessions. Among the benefitted students, 23.18% stated it as academic, 22 (14.57%) as personal and 88 (58.27%) as personal and academic both.

One to one mentoring was preferred by 34.42% students, whereas 29.51% students preferred group mentoring and 36.07% students preferred both one to one and group mentoring methods. Among the students who preferred one to one mentoring, all (100 %) preferred to have mentoring through face-to-face meeting whereas some preferred interaction over phone (38.10%), email (3.17%) and WhatsApp (71.43%)(multiple response question). The quality of the contact with mentor was stated as adequate by 83.06% students, and the rest 16.94% did not have adequate contact with mentor. Among the mentees 62.30% stated that they were proactive during the sessions.

Topics discussed during the mentoring sessions were academics (87.43%), hostel issues (38.25%), personal problems (69.95%) and general discussion nothing in particular (15.85%).

Majority of the students (98.36%) had the opinion that mentoring was a good idea. Regarding perceptions of mentees about which were most enjoyable, most of them (74.32%) stated to be interaction followed by mentors concern (59.02%) and felt supported (49.18%). (Table 1)

Majority of the students (97.81%) stated that the goal of mentoring was to develop professionalism and support students in their personal growth while many students had opted that to help in career development (49.18%) and few opined for the support in the research (27.87%).

Among the students 93.44 % thought that their mentors were approachable. About 54.10% felt very relaxed and satisfied after mentoring session, 33.33%

Table 1: Distribution of mentees according to the part most liked during the mentoring sessions (N= 183)

Part most liked in the mentoring sessions	Number (%)*
Interaction	136 (74.32)
Mentors concern	108 (59.02)
Felt supported	90 (49.18)
Advice about medical profession	77 (42.08)
Allowed settling in	37 (20.22)
Single person addressing all problems	27 (14.75)
Nothing	16 (8.74)

* Multiple responses

felt relaxed to some extent, and 4.37% of them were not relaxed but confused.

Most of the students (90.71%) feel an ideal mentor should be easily approachable followed by friendly (87.98%) and understandable (80.87%). (Table 2)

Most of the students opine that the responsibilities of a mentee are to listen to their mentors (78.14%), to be punctual (65.03%), to discuss their problems freely with their mentors without any hindrance and follow their mentors instructions (85.79%). In addition, 92.35% suggested that choice to be given for the mentees in selecting their own mentors.

About the barriers in communicating with the mentor, 33.33% stated time constraints as the major barrier. (Table 3)

Though 70% mentors think that mentoring is a good idea, among the mentors 50% think that there was inadequate contact with the mentees. Among the mentors 70% believed that mentees are getting benefitted from the program. Things mentors enjoyed most about mentoring like personal contact with students (90%), saw things from students perspective (70%) etc.

Table 2: Distribution of mentees according to characteristics an ideal mentor should have (N= 183)

Characteristics an ideal mentor should have	n (%)*
Easily approachable	166 (90.71)
Friendly	161(87.98)
Understandable	148 (80.87)
A good listener	144 (78.69)
Should guide the students by their valuable suggestions	138 (75.41)
Soft spoken	125 (68.31)

* Multiple responses

Table 3: Distribution of mentees according to barriers in communicating with the mentors (N= 183)

Barriers in communicating with the mentor	n (%)*
No barriers	84(45.90)
Time constraints	61(33.33)
I didnt commit to the program	26(14.20)
Combination of the above reasons	23(12.57)
Tried but couldnt meet	17(9.29)
Mentor was uninterested	2(1.10)

* Multiple responses

Table 4: Association between sociodemographic profile of study participants with their stress level (N= 183)

Sociodemographic profile	Stress level		χ^2	p-value
	Low (92) n (%)	High (91) n (%)		
Gender				
Male	53 (49.1)	55 (50.9)	0.152	0.764
Female	39 (52.0)	36 (48.0)		
Staying at				
Hostel	84 (52.8)	75 (47.2)	3.171	0.075
Home	8 (33.3)	16 (66.7)		
Residence				
Rural	27(51.9)	25 (48.1)	0.079	0.779
Urban	65(49.6)	66 (50.4)		
Medium of School Education (Fishers Exact Test)				
Bengali	35(51.5)	33(48.5)	0.133	0.966
English	53 (49.5)	54(50.5)		
Hindi	4 (50.0)	4(50.0)		
Doctor Parent/s				
Yes	5 (45.5)	6 (54.5)	0.109	0.742
No	87 (50.6)	85 (49.4)		

Among mentors 80% thought they developed both communication skills: listening & affective skills: problem solving during mentoring.

Things found difficult by the mentors in the program like mentees lack of interest (60%), lack of time (40%) etc. Suggestions for improvement by the mentors were circulate mentoring guide (80%), frequent review or feedback (60%), mentor to mentor meetings (60%) etc.

According to the HESI scale the mean stress score was 2.48± 0.39 before the mentoring program had started (min score 1.24, max score 3.42). The mean stress score was 2.40± 0.34 after the mentoring program ended (min score 1.24, max score 3.30). Difference between the stress score before and after mentoring program was statistically significant (p= 0.00043 by paired t-test. Considering median value of stress to be 2.42, the study participants were categorized into High stress level 91 (49.73%) with score more than 2.42 and low stress level 92 (50.27%) with score 2.42 or less. There were no significant association between stress level & socio-demographic profile.(Figure 4)

Discussion:

Mentoring means guiding someone through proper approach. As mentoring was not a regular part of this institution, this was first time that mentoring was introduced, as a result the impact of this mentoring program for low. In the present study, majority of the students 82.51% stated that they were benefitted from the mentoring sessions. Among the benefitted students, 23.18% stated it as academic, 14.57% as personal and 58.27% as personal and academic both. A study by Karuna SP et al.[6] showed the students benefitted academically (36%) or personally (4.7%) or both (16.3%). Among the students who preferred one to one mentoring in this study, all (100 %) preferred to have mentoring through face-to-face meeting which is similar to the study by Karuna SPet al.[6] and the remaining preferred over phone (38.10%), email (3.17%) and WhatsApp (71.43%). The quality of the contact with mentor was stated as adequate by 83.06% students similar to study by Karuna SP et al.[6]

Majority of the students (97.81%) stated that the goal of mentoring was to develop professionalism and support students in their personal growth while many students had opted that to help in career development (49.18%) and few opined for the support in the research (27.87%). Present study findings are comparable with study done by Karuna SP et al.[6], Bhatia et al.[5] and Rose et al.[8]

Among the students 93.44 % thought that their mentors were approachable. About 54.10% felt very relaxed and satisfied after mentoring session, 33.33% felt relaxed to some extent, and 4.37% of them were not relaxed but confused. Most of the students felt an ideal mentor should be friendly (87.98%), easily approachable (90.71%), a good listener (78.69%), understandable (80.87%), soft spoken (68.31%), and should guide the students by their valuable suggestions (75.41%). These findings are similar to the study by Shilpa M et.al.[9]

About the barriers in communicating with the mentor, 45.90% students stated that there were no barriers in communicating with the mentor, but most of them (33.33%) stated time constraints as the major barrier and some (12.57%) stated the combination of reasons which are quite similar to study by Alqahtani SS et al.[10]

Things found difficult by the mentors in the program were mentees lack of interest (60%), lack of time (40%) etc while suggestions for improvement by the mentors were circulate mentoring guide (80%), frequent review or feedback (60%), mentor to mentor meetings (60%) etc. which are similar to the study by Saeed Saleh Alqahtani et al.[10] and Bhatia et.al.[5]

According to the HESI scale the mean stress score was 2.48± 0.39 before the mentoring program had started and 2.40± 0.34 after the mentoring program ended. Among the students 91(49.73%) had stress. A study by Dagistani et.al[11] revealed prevalence of stress of 54.7% among medical students. Difference between the stress score before and after mentoring program was statistically significant(p= 0.00043) by paired t-test. Thus, the mentoring programme achieved significant reduction in stress among the students.

Strength and Limitations:

The Strength of the study is that it emphasised the importance of including mentoring programme in the ongoing medical education curriculum as amended by NMC much before the current ongoing mentoring programmes in some medical institutions.

The study had some limitations like sample size calculation was not done instead complete enumeration of 3rd phase Part 1 MBBS students were done. Other Professional MBBS students could not be included due to time constraint. Self-reported data(google form) were used and only 10 mentors were included in the study which can have potential bias.

Conclusion:

The study advocates that mentoring should be an essential part of medical education. The effort needed is small, as it is not difficult for committed faculties to find time for their mentees. Importantly, there are benefits for both mentors and mentees; also bonding and trust between teachers and students grow.

Recommendation:

The authors further recommend conduction of interventional studies for seeing the effect of such mentoring programme in medical education among MBBS students.

Declaration:

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