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Original article

Effect of Structured Mentorship on New Entrant Medical Students

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ABSTRACT

Aim : To deliver structured mentorship to first year medical students and to scientifically document its effect on their scholastic performance. Materials & Methods : In a prospective randomised control trial, first year medical student volunteers of Sri Siddhartha medical college and research hospital, 16 capsules of mentorship models were administered. The post mentorship scholastic performance data were collected from the academic records of marks in tests, internal assessment, attendance and other feedback , if any. Results: The mentored group showed statistically significant increase in marks and attendance($p<0.006$)when compared to the non-mentored group. The gender wise distribution of marks among boys was statistically significant($p<0.03$) in the mentored group when compared to the non-mentored group. However the girls of both the groups did not show any significant value ($p>0.10$) as the number of girls taken in the study were less. Conclusion: In the present study the students of the mentoring group performed well in their academics and had good attendance when compared to the non-mentored group thus proving effective mentorship.

KEYWORDS: Mentorship, Scholastic Performance

INTRODUCTION

Mentorship is a relationship between a teacher and a student or a more experienced person (mentor) to a less experienced person (mentee). This relationship of mentor-mentee should be based on mutual trust, respect and willingness to learn and share. The mentor thus encourages the mentee to reach his/her goals by encouraging, by sharing knowledge and experience that provides emotional support [1].

Mentoring is needed for fresher's new entrants to medical school of first year MBBS students as they are suddenly exposed to the new environment of professional course unlike the PUC colleges, they now come across with vast curriculum, have to live in hostels with roommates, compromise on luxuries and comforts where they have to combat the huge stress and peer expectations. An experienced person who can guide, counsel and supervise them mutually is needed as a mentor as inability to cope up with extensive curriculum can affect their scholastic performance. An experienced person who can guide, counsel and supervise them can be of immense help, at the same time benefit mutually like the mentors experienced a feeling of being respected, acknowledged and needed. The mentors take the pride in the mentee's growth and feel an overwhelming happiness at their achievements [2,3].

Mentorship should be given to those persons who are capable of giving time , the mentor should understand the importance of the process and be able to give his or her exclusive time to the mentee. The mentor should be easily approachable, make himself /herself available and should have the ability to listen and solve the problems related to personal issues and academics[4,5]. Consequently, the medical education unit introduced near-peers mentoring in 2010. Near-peer mentoring is where an older peer mentors the younger one thereby bringing about effective mentorship [6].

The study objective of the present study is to deliver structured mentorship to first year medical students and to document its effect on their scholastic performance.

MATERIALS AND METHODS

This is a prospective randomized control trial study to evaluate effectively structured mentorship program among first year medical students of Sri Siddhartha medical college and research hospital, Agalkote, Tumkur after obtaining consent from the ethics committee.

Inclusion criteria- 1st year medical students of 2015-2016 batch, SSMC Tumkur, aged between 18 – 20 years, who volunteered to participate in this prospective study. Exclusion criteria- repeaters and non volunteers.

Volunteers were 44 in number who were counseled initially and out of these 16 were randomized as study volunteers as test group-Group 1. The rest,28 students formed the control group– Group 2. The study was conducted from August to November 2015. The study was approved by the institutional review board and the Vice Chancellor of the university. Informed consent was taken at the initiation & there was no conflict of interest. The students were given the option of withdrawing from the study at any point of the study.

The purpose of the study was clearly explained and the time taken for the study was 16weeks, during which capsules of mentorship models were delivered to the students during the regular college hours, in their spare time .The data required for the study post mentorship scholastic performance criteria was collected from the academic records of test marks, internals and other relevant feedback form from the teachers, if any.The16 modules which were administered are as follows: Indian values and learning systems, vision, mission and goals, grooming, stories of famous doctors and researchers, importance of physical activity, creative learning, responsibility, accountability and commitment, communication skills, interpersonal skills, stress and its management, how to face exams, importance of group activity, smart writing techniques, time management, medical practice, current perspective and ethics.

Group1 consisted of 16 students who were included in the mentorship programme among the 44 subjects who volunteered for the study. Group 2 consists of 28 subjects who did not undergo mentorship training. Group 1 subjects underwent 16 modules as mentioned in the methodology .

The average marks obtained in the first internal assessment test conducted in the month of November 2015 was derived as the aggregate average of 3 subjects included in the curriculum.

Statistics : The statistics used in this study in unpaired 't' test .

RESULTS

In the above study, 44 subjects volunteered to participate among which, Group1 consisted of 16 students who were included in the mentorship programme and Group 2 consisted of 28 subjects who did not undergo mentorship training. The average marks and attendance after the first internal assessment test conducted in the month of November 2015 was derived and an aggregate average of 3 subjects included in the curriculum.

The marks of group 1[23.76±12.65] was statistically highly significant [P=0.006] when compared to group 2 [14.5±5.60] and attendance of group 1 [23.71±12.27] was statistically highly significant [P=0.006] when compared to group2 [18.01±9.58] as shown in table 1.The gender wise distribution of marks among of boys group1[22.24±12.75] marks were statistically significant [P=0.03] when compared to boys of group 2 [14.30±5.60] and distribution of marks among girls of group1[28.32±12.92] was not significant statistically [P=0.10] when compared to group 2[16.63±6.42] as the number of girls taken in the study was less when compared to the boys as shown in table 2.

Table 1:The marks and attendance distribution of Group 1 and Group 2

Variable	Group 1(n=16)	Group 2 (n=28)	P value
Marks	23.76±12.65	14.5±5.60	0.006**(<0.01)
Attendance	23.71±12.27	18.01±9.58	0.006**(<0.01)

Data is expressed in mean±SD, **P value<0.001 is highly significant. The marks and attendance of group 1mentors is statistically highly significant when compared to group 2 non-mentors.

Table 2:The gender-wise distribution of marks among boys and girls of group1 and group2

Variable gender-wise marks	Group 1	Group 2	P value
Boys	22.24±12.75	14.30±5.60	0.03*(<0.05)
Girls	28.32±12.92	16.63±6.42	0.10(>0.05)

Data is expressed in mean±SD, *P value< 0.05 is significant. The gender distribution of marks among the boys of group 1(n=14) is statistically significant when compared to group 2(n=24), among girls marks distribution of group1(n=2) p value >0.05 is not statistically significant when compared to group2 (n=4).

DISCUSSION

According to Greek mythology Odysseus, the concept of mentoring appears to have its root from Homer's Odysseus where in ancient Greece, Odysseus was about to leave for the Trojan war, entrusted the education of his infant son Telemachus to mentor, a loyal servant and friend. A mentor was an older person who took a younger person under his wing as an apprentice[7].

Introduction of mentoring structured programme in medical colleges began in 1990's, as there is a lack of structured mentoring programs both at undergraduate and postgraduate levels. The term mentoring more than teaching, helps students to be successful. Mentoring is a process where the mentor can enhance the mentee's confidence and increase his/her self-esteem by showing genuine interest among the mentees. The advantage of mentorship is easy availability to mentees where they can approach and help building their self-confidence during the hard curriculum, as different category of students from various states across the country come where attitude, language and emotions can be a barrier[8].

It is observed according to one study that individuals who had high ranking mentors during their early career were successful and published one paper every year[9]. By allotting effective mentors they can help the mentees make important personal and professional decisions, like how to balance studies with personal needs, how to overcome learning difficulties, to help them develop problem solving and decision making skills. Literature search shows that encouragement provided by the mentor provides direction to mentees.

Mentoring relationships have been reported to facilitate self-directed learning, career advancement, productivity and a positive attitude towards another person's (mentee's) career. This was encouraged by our module on small group discussions.

In a study it was observed that peer mentored group students were high in anxiety experienced grades comparable to those with their low anxiety counterparts, the reason being the peer mentors were encouraged to share their personal experiences regarding their early university studies and academics success, specifically examples that featured poor academic results which later improved suggesting that success may be attributed to effort[10]. The affective domain could also be expected to advance, as a trusting relationship with the near-peer, who does not hold a high academic post, might facilitate communication. Also, the younger peer may find the skills of near-peers more achievable and easier to replicate[11].

The benefits of mentorship should be analyzed from cognitive, affective and motivation prospective as they receive the benefits of mentorship like study tips and training for academics. Social influence among the first years students in the mentoring programme probably created a great sense of belonging or by increasing their comfort zone resulting in lower levels of anxiety which did not have any negative effects on the achievements.

Many universities have implemented mentoring programme to increase the students retention, graduation rates and cross cultural understanding. Earlier mentoring was traditionally regarded as a type of apprenticeship for graduate education, however recent years mentoring has been increasingly regarded as a strategy for undergraduates and postgraduates[12].

A common challenge that the first year student usually encounter problems like is identifying, locating and utilizing college resources. Although students pay for campus resources as part of their tuition fees they may never utilize certain resources and get benefited from them.

Harvey and smith higher ratings of perceived accessibility and availability of campus resources was indeed a chosen variable that peer mentors brought up most focus group sessions that held prior to experimental setup.

The term mentor has gradually evolved to signify a designated person who dedicates some of their time to help individuals to learn during their developmental years, to progress towards and achieve maturity and establish their identity. Mentors are role models who act as guides for student's personal and professional development over time. Mentors can be role models who act as guides for the students through personal and professional development over a period of time. Mentors can be instrumental in conveying explicit academic knowledge required to master curriculum content.

Importantly they can also enhance implicit knowledge about the "hidden curriculum" of professionalism, ethics, values and art of medicine that are not learned from the text. In many cases mentors also provide emotional support and encouragement. The relationship benefits mentors as well, through great productivity, career satisfaction and personal gratification. Maximizing the satisfaction and productivity of such relationships entails self-awareness, focus, mutual respect and explicit communication about the relationship[13].

One study in which Garmel defines it as an insightful process in which the mentor's wisdom is acquired and modified as needed, as well as a process that is supportive and often protective[14]. Unlike coaching or counseling, a mentor is one who plays an active role in helping the student in his/her professional and personal development. Research on mentoring indicate that definitions of mentor need to include:

- Nurturing
- Role modeling
- Functioning (as teacher, sponsor, encourager, counselor and friend)
- Focusing on the professional development of the mentee.
- Sustaining a caring relationship over time.

Some authors also point out certain difficulties and pitfall like the short duration of first year where the initial time is taken in getting adjusted to the vast curriculum which makes it difficult for the students to have enough time to build up a successful professional relations[8].

CONCLUSION

Mentoring is obviously an important career advancement tool, which would benefit from early implementation at

medical school. As in the present study, the effect of structured mentorship program on the new entrants of first year medical students showed an improvement in their attendance and scholastic performances among the group 1 who underwent mentorship training program when compared to group2 who were non-mentors. Since the outcome of this structured mentorship program though performed on a small group of volunteers was statistically significant, such studies can be further encouraged in future for larger groups and can be recommended as a part of curriculum in order to improve their scholastic performances among the new entrants of first year MBBS and also for the subsequent years throughout the duration of the course.

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