Original Article

Characteristics of mentoring programmes in the early phase of medical training at the Universiti Sains, Malaysia

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Abstract

Objective: Mentoring programmes are important elements of the personal and professional development of medical students. Mentors must focus on the real issues that students face during the mentoring process. This study explores the need for mentoring programmes for first-year medical students at the Universiti Sains, Malaysia (USM).

Methods: A qualitative case study was conducted with medical students who were in the early phases of their training. Purposive sampling was employed to select the study participants. Data collection was carried out using semi-structured interviews. The interviews were recorded and transcribed verbatim, and they were later analysed using NVivo 10 software and employing open coding, axial coding and selective coding techniques. Nine medical students participated in the study. To ensure trustworthiness of the data, member checks, an audit trail, the Cohen kappa index, and peer checking were utilized.

Results: Based on thematic analysis, four themes and seven categories were identified. Themes include soft skills, an academic overview, social skills and motivation from mentors. Categories include time management, study skills, communication skills, social adjustment, social activities, moral support and personal support.

Conclusion: Results indicate that mentoring is essential to medical students in developing their identity and professional maturity. The effectiveness of the mentoring programme is supported by several factors that, as a whole, lead to the development of a professional graduate.

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Introduction

According to Morzinski,1 the mentoring process provides a means by which students are mentored by experienced individuals and develop professional and academic skills such as career management, academic medical knowledge and other relevant skills. Based on the above definition, the mentoring components consists of a mentor, a mentee, setting objectives, development of a mutual relationship, scenarios, and results. Through personal growth and development, an effective mentoring relationship facilitates the formulation and realization of a student’s vision.

Mentorship programmes benefit mentees via several important outcomes, including increased career satisfaction, personal advancement, income and the capacity for personal and professional identity development.2,3 One study concludes that 86% of medical students need a personal, confidential support system at the institution level4; in addition, understanding the real issues faced by medical students is crucial.5 Conversely, unsuccessful mentoring has unfavourable impacts that lead to low academic performance. These impacts include language problems, difficulty adjusting to life outside the home, a lack of self-confidence, a fear of failure, and worrying about the future.4 Therefore, it is very important to ensure that the implementation of mentoring programmes is well-planned and considers all the contributing factors.

The mentoring programme at USM’s medical school has been active since the school’s first intake. In 2007, the mentoring programme was reviewed, and it became a peer mentoring programme in which senior students were appointed mentors of a group of students.6 In 2011, peer mentoring ceased due to changes in the curriculum, and faculty mentoring became the primary mentoring practice. The mentor’s responsibilities are to arrange meetings with mentees at least twice per semester; to discuss with mentees any relevant academic, personal and social matters; and to inform mentees about their examination results. Faculty members who volunteer to become mentors are trained through “train-the-trainer” workshops. These workshops focus on the skills needed to become an effective mentor, including the foundations and basics of guidance and counselling. Workshops are conducted by a group of professional trainers that includes a psychiatrist, psychologist, counsellor and medical educator. However, since the inception of the faculty mentoring programme at USM, there has been limited evidence gathered to support the need, from the mentees’ perspective, for mentorship programmes. Consequently, this case study was carried out to address the question of the actual need, from the perspective of mentees, for mentoring programmes in medical schools.

Materials and Methods

A case study method was employed to explore participants’ opinions. The unit of analysis was the need, from the perspective of medical students, for mentoring activities. To obtain data, the researcher conducted in-depth interviews with individual respondents. The interviews were conducted at USM in 2015 with nine first-year medical students. The interview sessions were voice-recorded and then transcribed verbatim. Participants were chosen using a purposive sampling method, in which the researcher uses his or her best judgement to select a sample that fulfils research requirements.

Two main criteria were considered in selecting research participants: (1) a status as a first-year medical student enrolled in the medical school at USM, Kelantan, Malaysia; and (2) an educational background either from the Malaysian Ministry of Education Matriculation stream or the Malaysia Education Higher Certificate (MEHC) stream. The matriculation stream is a one-year course, and MEHC is a two-year course. The data collection process occurred over a two-month period between February and March 2015. The interview was carried out using a semi-structured approach and was based on an interview protocol (see Appendix A).

Data analysis procedure

Data from each interview were analysed immediately after the interview session concluded. Each interview was audio-recorded and transcribed verbatim. The complete interview transcript was sent to the participants to be reviewed. Each transcript was given a code. For example, for the code P(1)-2/3/2015, P(1) denotes first interview, and 2/3/2015 refers to the date the interview was conducted (March 2nd, 2015). Interview transcripts were analysed using thematic analysis. The analysis was completed using NVivo 10.

Results

Participant’s profile

Nine first-year medical students participated in the study. With respect to ethnicity, there were four Malays, three Chinese, and two Indians. Five students were from

| Item             | Number of participants | Total |
|------------------|-----------------------|-------|
| Education Background | Matriculation         | 5     | 9     |
|                   | MEHC                  | 4     | 9     |
| Gender           | Male                  | 4     | 9     |
|                   | Female                | 5     |       |
| Ethnic Group     | Malay                 | 4     | 9     |
|                   | Chinese               | 3     |       |
|                   | Indians               | 2     |       |

Table 1: Participant profile.
the Matriculation stream, and four were from MEHC stream. The sample included four males and five females (Table 1).

Theme 1: soft skills

This theme consists of three categories: time management, study skills and interpersonal communications skills.

i. Time management

All the participants admitted that it is a problem for them to balance the time they spend on academic and co-curriculum activities. This concern was echoed by participant 3, who said:

 [...] From my point of view, I will always go and see my mentor to discuss studies and how to manage my time, because not everybody knows how to really manage their time. Maybe their mentor will have better advice on how to manage their time...Basically, I am a sportsman; I am very active in outdoor activities. I don’t really like to focus on studies. P(3) (15/3/2015)

Similar concerns were also shared by P6, as follows:

 [...] Then, I think in my own opinion, in here, we have too many co-curricular activities and we don’t know how to divide the time - when to study and when to participate in co-curricular activities. There is the Chinese club, Indian club, etc. Sometimes they meet until midnight. Sometimes we don’t know the best timing; when we get back from those activities, we are tired and sleepy. We still have class in the morning the next day. So, we hope there is a mentor that we can at least share our problems with, and who will help us choose the best timing -and the best way to schedule our time and our activities - because we have a lot of activities. P(6) (5/2/2015)

ii. Study skills

Data analysis has revealed that majority of participants need the study skills. For instance, P4 expressed his idea as follows:

 [...] as a first-year student, very new to the university, we are not experts in study skills, and I see that students here must be able to study independently. This style did not 100% occur while we were in matriculation. (P4) (1/2/2015)

P7 and P9 echoed similar concerns, as follows:

 [...] I strongly support what was just now mentioned. I hope mentors can guide us as to how to study smart at the university...we are very much in need of these skills. P7 (20/3/2015)

 [...] with regard to study skills...we don’t know how or where to start. We do need a leader, but sometimes even the leader has no idea what to do. One of the mentor activities is how to start a study group. Seniors always mentioned that a study group is very important, but we don’t have the skills. What is the best way to create a study group? Some people said that a study group is about sharing knowledge, but how to do so? People said that studying medicine cannot be done individually, but if we get nothing from a study group, it will be meaningless. Maybe, in the mentoring programme, the mentor can explain the best way to create a study group. (P9) (15/2/2015)

iii. Communication skills

The participants expressed their hope for mentors to be willing to share their thoughts about establishing good relationships with faculty and with seniors at the hostel. This concern was noted in the following statement:

 [...] We also need the skills to communicate within and outside of the university, especially with people who are from different backgrounds. (P7) (20/3/2015)

 [...] As doctors, we need communication skills, soft skills and everything, but we are beginners and are just learning. We don’t get to learn communication skills, so mentors can help us in communication skills - soft skills - because when we want to treat a patient, we have to talk to the patient. So, if we just learn by notes only, when we meet the patient, we can’t talk to them - there is no use for our knowledge. (P3) (20/2/2015)

Theme 2: academic overview

All participants need to be exposed to the structure of the medical courses in which they will enroll. Data from the interviews support this statement. For instance, P9 stated:

 [...] I was confused the first time I joined the class. I couldn’t visualize the components of the course. (Interview with participant nine 15/2/2015, translated by the researcher based on the original interview in the Malay language).

Theme 3: social skills

This theme has two sub-categories: social adjustment and social activities.

i. Social adjustment

Most of the participants felt that, as newcomers, they should get to know their surroundings because they would be residing at USM for at least five years. This fact is supported by P6 and P2 as follows;

 [...] Suddenly, we arrive and have culture shock...We need one person to guide us, show us: What is this? What is that? Show me the way, enlighten the path so that we will not be stranded in the middle, unable to follow the group and all. It is especially for us to adapt in the environment and all these things. (P6) (8/3/2015)

 [...] First-year students, as the newcomers, may face a lot of problems throughout our lives in the university, like culture problems, studies problems, relationship problems...
Participants also need encouragement from their mentors. These supports motivate them to become involved in activities.

i. Morale support

Mentors need to supervise the programmes organized by students. This concern is echoed by respondent P8:

[...] Maybe mentors can supervise us related to the programme. If we organize programmes, which are related to the mentoring programme for example (), mentors should present and supervise... If our mentors sat together, our motivation to do that would be high. (P8) (14/3/2015)

ii. Personal support

Personal support from the mentors is a crucial source of motivation for the mentee. This type of motivation is described as follows:

[...] For the long period before exams, we need mentors that will always remind us, when they see us, and always tell us not to forget to study. So, when we have someone close that keeps reminding us about this, the motivation to study is there. It is different from when we were in school, and our teachers always reminded us to study properly every day. But in here, the lecturer just comes in, teaches, and goes back home. The cycle is repeated. We don’t have anyone that always reminds us about that. So, we have lack in motivation to study in here. (P7) (20/3/2015)

Discussion

Medical students agree that, in the early stages of medical training, soft skills such as time management, study skills and communication skills are important. These concerns emerge from the cognitive, physical, and psychological demands of medical training, particularly during the period of adjustment to a new learning environment. Study skills and time management are interrelated abilities; they are closely related to students’ learning approaches (surface, strategic or deep). Students who adopt deep learning strategies typically learn by approaching topics with the intention of seeking their own meaning. A deep learning strategy enhances students’ understanding and mastery of the topic. Strategic learners learn through systematic study, approaching learning with the intention of attaining the highest possible marks. By contrast, students who adopt a surface-learning approach learn by memorizing facts; their intention is to pass and to get things done with minimal effort. Surface learning is guided by extrinsic motivation, wherein a student learns out of a fear of failure. For such reasons, deep and strategic learners consistently display better academic performance, greater psychological resilience, and a more positive perception of the learning environment than do surface learners. Our findings suggest that mentors should be aware of mentees’ expectations for guidance in the medical education programme. This concern can be highlighted and discussed during the “train the trainer” workshop to ensure that mentors have a similar level of understanding of, and preparedness for, the mentees’ needs. Likewise, mentees should be reminded to express their real needs during mentoring. (This recommendation could be emphasized during orientation week, prior to the assignment of a mentor.) Concerns related to communication skills may be addressed through demonstrations by mentors during the mentoring relationship. Medical educators around the globe agree that communication skills are among the core competencies needed to become a competent physician. Without them, patient care is at high risk.

Medical students’ major sources of stress — regardless of the phase of medical training — were academic requirements. For that reason, it is logical that an academic overview was one of the primary requirements for the mentoring relationship. It is interesting to note that medical students considered a curriculum map, which provided an overview of the programme’s academic requirements, to be an anti-stress tool. As newcomers to higher education, students need the glimpse of the big picture provided by a syllabus so that they are prepared, both mentally and emotionally, to plan their academic journeys. It is vital for students, particularly those in the earliest phase, to have a clear overview of the topics covered during medical training. The syllabus enables students to strategize their learning approaches effectively so that they can be prepared for training. One study found that factors including difficulty managing study time, lack of concentration while studying, the inability to retain studied material, anxiety before examinations, and the inability to write an examination, all contribute to academic problems. The implication of our findings are that mentoring activities, particularly those implemented during the early phase of medical training, can help medical students adapt to a new learning environment. A previous study also suggested that mentoring activities can improve students’ academic performance.
complement other abilities that enable an effective learning process. These findings are consistent with a previous study that reported that applying principles from other disciplines to academic medicine is likely to produce similar, positive outcomes, including personal satisfaction, collaboration, academic achievement and institutional advancement. The early phase of training is complicated for most new students, who are overloaded by academic content; have minimal time for relaxation; have high parental expectations; express a fear of ragging, humiliation by teachers; and experience loneliness and a host of other factors. Consequently, mentors could initiate social activities to encourage the development of social skills amongst their mentees. In addition, reintroducing the peer-group mentoring programme during the early phase of medical training might address this concern.6,7

Motivation is an important element for anyone, particularly for students who study at higher education institutions. Almost all participants, especially those who are from outside Kelantan (a state in Malaysia), stated that motivation is a crucial factor in examination performance. A study conducted by another researcher found that 86% of participants (medical students) agreed on the need for a personal and confidential support system at the institution level to boost their motivation.28 Likewise, the majority of first-year medical students believed that mentoring was helpful for improving communication and affective skills. Mentoring helps them feel more supported and motivated.29 Mentoring is a valuable activity that benefits students, not only in terms of academic aspects, but also in terms of personal and emotional aspects.

Several limitations should be highlighted for future research. First, the study sample comprised only first-year medical students from one institution and was confined to the medical field; thus, findings should be interpreted within this context. For that reason, future research should include a wider, multi-centre sample, drawn from different years of study and from different phases of medical training, to verify the present findings. Second, this research employed only one data collection method, which could compromise the validity of the findings. Future research should use additional data collection methods to verify the present finding. Finally, this study is a purely qualitative research study, and drawing inferences from its findings is cumbersome; therefore, so that better inferences can be made, future research should consider using our current findings as the basis for a research framework that utilizes quantitative methods. Apart from that, the researchers have utilized several strategies to ensure the trustworthiness of the qualitative data obtained from the participants. In addition, our findings provide valuable data regarding the need, from medical students’ perspectives, for medical school mentoring programmes at the early stage of training.

Conclusion

This study found four themes and seven categories related to the needs of mentoring programmes at the early stage of medical training. The four themes were soft skills (i.e., time management, study skills, and interpersonal communication skills), an academic overview, social skills (i.e., social adjustment and social activities), and motivation from mentors (i.e., morale support and personal support). Results indicate that mentoring is an essential platform for medical students in developing their identity and professional maturity. The effectiveness of the mentoring programme includes many factors, one of which is the mentees’ needs.

Authors’ contributions

ZMMN significantly contributed to designing the research, data collection process, interpretation and manuscript writing. SBYM significantly contributed to designing the research, data collection process, interpretation and manuscript writing. FAAR significantly contributed to designing the research, data collection process, interpretation and manuscript writing. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Conflict of interest

The authors have no conflict of interest to declare.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.jtumed.2017.01.003.

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