Dual peer mentoring program for undergraduate medical students: exploring the perceptions of mentors and mentees

Parya Abdolalizadeh¹, Saeed Pourhassan², Roghayeh Gandomkar³, Farrokh Heidari⁴, Amir Ali Sohrabpour⁴⁺

Received: 30 June 2016  Published: 11 Jan 2017

Abstract

Background: Despite the advantages of dual peer mentoring, there are a few reports of implementing and evaluating such programs for medical students. This study aimed at exploring the perceptions of mentors and mentees about the dual peer mentoring program for the first year undergraduate medical students of Tehran University of Medical Sciences.

Methods: This qualitative study was conducted at the end of the first year of implementing the mentoring program. All mentees and mentors were invited to participate in focus group discussions. Data were analyzed using a qualitative content analysis.

Results: All mentors (n = 12) and a group of mentees (n = 21) participated in focus group discussion sessions. We provided a variety of supports for the mentees including academic and psychosocial support and positive relationship; as a result, some developments occurred to the mentors. We also explored participants’ views on some unique aspects of the program such as student-authorized, dual mentoring, and role model sessions.

Conclusion: Our participants found the mentoring program beneficial in various academic achievements and psychosocial supports for both the mentors and the mentees. Dual peer mentoring program can be an alternative to school administered programs.

Keywords: Peer Mentoring, Dual Mentoring, Undergraduate, Medical Education

Introduction

Mentoring is a crucial factor in career success in medicine. There is growing evidence for the positive effects of mentoring programs in undergraduate medical education in professional and personal development. Different designs of mentoring programs for medical students have been described in the literature. Peer mentoring is a type of mentoring program in which individuals are equal in age, experience, and rank. This model requires fewer resources and offers an opportunity for more friendly and comfortable mentor-mentee relationship with more mutual understanding. Peer mentoring during the transition to academic institutions is essential to adapt to the new learning and teaching environment and the specific struggles that the newcomers face. Despite these advantages, there are a few reports of implementing peer mentoring programs in the early stage of medical school.

In peer mentoring programs, second year medical students are usually chosen as mentors for the first year students because of their common personal and academic issues. However, some of the new comers’ concerns such as uncertainty about the importance of basic science, unfamiliarity with their future role as a doctor, as well as their low motivation, may remain unaddressed. In this case, the idea of dual mentoring, in which any individual mentee is assigned to 2 students (one in the clinical phase and an-
Dual peer mentoring program

Table 1. Demographic Information of the Participants

<table>
<thead>
<tr>
<th>Focus Group Discussion Sessions</th>
<th>Participants</th>
<th>Number of the Participants</th>
<th>Gender of the Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Mentee</td>
<td>7</td>
<td>Female: 2/ Male: 5</td>
<td></td>
</tr>
<tr>
<td>Second Mentee</td>
<td>6</td>
<td>Female: 5/ Male: 1</td>
<td></td>
</tr>
<tr>
<td>Third Mentee</td>
<td>8</td>
<td>Female: 5/ Male: 3</td>
<td></td>
</tr>
<tr>
<td>Fourth Mentor</td>
<td>12</td>
<td>Female: 6/ Male: 6</td>
<td></td>
</tr>
</tbody>
</table>

other in the preclinical phase), may be an appropriate solution to satisfy the needs of the first year medical students (15).

A few models of dual mentoring have been applied in academic medicine (16-18) and nursing (19). However, to our knowledge it has not been used in undergraduate medical education.

Tehran University of Medical Sciences (TUMS), School of Medicine, launched a new outcome-based undergraduate medical education program in 2011. The fundamental reforms in the basic science phase of the program raised some concerns as to whether newcomers could cope with the upcoming changes. Thus, in September 2011, a dual peer mentoring program was designed and initiated to assist the first year medical students. A group of 4 volunteer fifth year medical students took the responsibility to organize the program after it was approved by the school administration.

Twelve medical students participated in the program as mentors: 6 from the clinical phase, and 6 from the preclinical phase, and 1 faculty member supervised the mentors. All mentors were trained on the concept of mentoring and communication skills. Each clinical mentor was connected to a preclinical mentor to form a couple of mentors based on the dual mentoring idea; and each couple had 6 mentees. Thirty-six mentees were randomly selected among 150 first year medical students, of whom 18 were male.

The mentors and their mentees were planned to communicate through the following methods: telephone call (once a week at the beginning to form the mentor-mentee relationship, which was gradually reduced to once every 3 weeks at the end of the program); email or virtual modalities (including email templates, addressing the first year students’ common problems and learning concepts and skills); and face to face meetings (individually or in groups). Meetings with the role models (those who were successful young clinical faculties of medicine) were another part of the program. Due to the probable limitations of the consulting abilities of the student mentors in psychological, educational, or financial affairs, a referral system was defined to refer the mentees to relevant supportive or executive centers of the university as needed. In addition, regular weekly intermentor sessions were held so that the mentors could exchange ideas and share their experiences.

The present study aimed at exploring the perceptions of the mentors and the mentees about TUMS dual peer mentoring program for undergraduate medical students.

### Methods

All the 36 mentees and 12 mentors were invited to participate in this qualitative study in September 2012 after one year of running the dual peer mentoring program. Twenty-one mentees and all the mentors accepted to participate. The present study consisted of 3 focus group discussion sessions with the mentees and a separate session with the mentors. Questions in the interview guide were about the participants’ experiences of the mentor-mentee relationship, the students’ perceptions about their own development, benefits and drawbacks of the program, and the quality of each component of the program. Each session lasted for approximately 60 minutes. An educationist, who was familiar with qualitative methodology, facilitated the discussions in all focus group sessions. All sessions were recorded and transcribed verbatim.

A conventional content analysis was performed for data analysis. Focus group texts were read several times, the meaning units were identified, abstracted, and labeled with appropriate codes. Subsequently, preliminary codes were compared for similarities and differences and followed by grouping into broader categories. Credibility and dependability were established through member checking, peer debriefing, and prolonged engagement with data. The purpose of the study was explained to the participants, and they were ensured of the anonymity of their responses. Informed consent was obtained from all participants.

### Results

In this qualitative study, 21 mentees and 12 mentors participated in the focus groups. Twelve mentees and 6 mentors were female (Table 1). Two common categories were extracted from the mentees and the mentors’ responses: “mentees’ support” and “mentoring as a program”. Another category was “mentors’ development” which emerged from the mentors’ comments. Table 2 provides a summary of the main categories and related subcategories.

**Mentees’ Support:** Participants referred to a variety of supports provided for the mentees during the mentoring program categorized as positive relationship, academic support, and psychosocial support.

**Positive Relationship:** Both mentors and mentees pointed out to some positive aspects of the formal peer mentoring program concerning the mentor-mentee relationship. They

Table 2. A summary of the main categories and related subcategories based on the mentees and mentors’ points of view

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentees’ support</td>
<td>Positive relationship</td>
</tr>
<tr>
<td></td>
<td>Academic support</td>
</tr>
<tr>
<td></td>
<td>Psychosocial support</td>
</tr>
<tr>
<td>Mentoring as a program</td>
<td>Dual mentoring</td>
</tr>
<tr>
<td></td>
<td>Student-authorized program</td>
</tr>
<tr>
<td></td>
<td>Communication methods</td>
</tr>
<tr>
<td></td>
<td>Role Model sessions</td>
</tr>
<tr>
<td>Mentors’ development</td>
<td>Personal development</td>
</tr>
<tr>
<td></td>
<td>Social development</td>
</tr>
</tbody>
</table>
stated that honesty and sincerity were the most prominent features of the relationship. They also compared the relationship with informal connection with senior medical students and believed that mentors’ guidance was more reliable, accurate, and specific. One mentee said, “...I have many senior friends who give me advices, but some are not reliable.... I usually share comments I receive from other seniors with my mentor to know whether they are true; and I often try to stick to my mentor’s...” Similarly, all mentors revealed that mentorship was different from what they had experienced as informal mutual relationship with their seniors in the past; they described mentorship as a systematic, persistent, and reliable relationship in which both the mentee and the mentor were engaged. One mentor stated, “I used to consult with senior students sometimes, but the mentoring program makes use of a group of trained and talented senior students who act in concert to provide genuine advices....” Some mentees mentioned that the friendly atmosphere was another beneficial feature of the mentor-mentee relationship. They believed that mentors might be real friends even beyond the mentoring program. However, 2 mentees emphasized the importance of the disciplined and structured interaction along with friendly relationship. One mentee said, “The atmosphere was friendly and sincere, not formal, so the mentees felt they were talking with a friend.” Another mentee echoed this thought, “I think if we have close and friendly relationship with our mentors, their advices will be more acceptable. However, being systematic at the same time can make our relationship serious enough and I think this is a necessity in such situations.” Both the mentors and the mentees believed that patience, persistence and being active were the most important characteristics of good mentors. All mentors revealed that although their mentees were not persistent on continuous connection and consultation, they behaved patiently to maintain the connection and promote mentorship. One mentor said, “I learned that if I want to help juniors, I should be persistent in following the relationship much more than them.”

**Academic Support:** Most mentees mentioned that their mentors played an important role in providing some academic support for them, which was mainly focused on the way of studying for exams. According to the mentees’ views, mentors provided information about different types of study methods and helped the mentees choose the suitable one that improved their study performance, and subsequently, their exam results at the early stage of the medical school. A participant said: “I didn’t know how to study biochemistry lessons in the elementary course. My mentor reviewed a chapter of biochemistry with me in about 1 hour and it helped me so much to learn a good way of studying.” Another mentee stated, “I received an email template from my mentor regarding different study methods before respiratory block exam. One recommendation was writing a list of what we should learn in a chapter. I tested it in my physiology lesson and it was really helpful.” Academic support, from the perspective of the mentors, was one of the most effective aspects of mentoring program as well.

**Psychosocial Support:** The mentees pointed out that the mentors tried to increase their motivation and hope, helped them reduce their stress, cope with new situations, and confront with difficulties. Mentees agreed that such psychosocial support was especially beneficial during the transition phase to medical school and while staying in the dormitory and away from home. The mentors agreed with the mentees about the importance of mentoring role in facilitating the adaption process throughout the medical school entrance and in reducing the tension for expatriate students. One mentor said, “Mentoring by itself is a positive point and having a mentor to is wonderful.” Mentors additionally said they tried to be good consultants for the mentees in making correct decisions and referred the mentees to appropriate authorities or individuals if needed.

**Mentoring as a Program:** The respondents had some perceptions about the mentoring program and its components and functions: dual mentoring, student-authorized program, commutation methods, and role model sessions. 

**Dual Mentoring:** All mentees believed that dual mentoring was one of the favorable features of the mentoring program because clinical and preclinical mentors provided different information and support for them. In their view, clinical mentors tried to modify the mentees’ attitude and knowledge towards medical profession, medical ethics, professionalism as well as the importance of basic science in clinical setting. One mentee acknowledged, “When my clinical mentor was talking about his experiences at hospital, especially how one can help patients, I found it pleasant.” Clinical mentors agreed with this point and said they were talking about the medical profession and professionalism most of the time to respond to the mentees’ queries. They also declared the use of learned and experienced communication skills in the clinical environment in enhancing the mentorship. The mentees and mentors expressed that preclinical mentors were more effective in offering advice and practical tips for the first year courses and upcoming exams because of their recent experience.

**Student-Authorized Program:** Some participants considered the student-authorized program or lack of direct control of school administration on the program as another advantageous dimension, which in turn resulted in trustful mentor-mentee relationship. In the words of one mentor, “I think independency was the most positive point of the program that caused mentees feel friendly and believe this program could help them.” However, they said that being independent from the school administration might have its own drawbacks. Another mentor stated, “Being independent was one of the strengths and also one of the weaknesses.... The mentees better accepted our advices when we were compatible with the revised school curriculum.” In addition, some mentors believed appropriate support from school administration might facilitate the implementation of associated programs like the role model sessions.

**Communication Methods:** The mentors and the mentees appreciated the diversity of connecting methods in shaping the effective relationship. The mentors emphasized...
Dual peer mentoring program

that group meeting with their mentees was specifically a
useful way to share concerns and opinions and to find and
suggest solutions for problems. Near half of the mentees
also preferred face-to-face conversation with mentors in-
stead of calling or emailing.

Role Model Sessions: Some mentees believed that role
model sessions in addition to the mentors’ supports im-
proved their perception about medicine as a profession
and professionalism issues. One mentee stated, “The role
model sessions were great! It made us excited! Our atti-
tudes and thoughts have really been changed in compar-
ison with other classmates who did not attend the meet-
ings.” The mentors also preferred that the role models
would talk more about basic science importance in stu-
dents’ clinical practice. Both clinical and preclinical men-
tors found the role model sessions to be useful. Preclinical
mentors said they considered clinical mentors as a role
model too.

Considering the valuable aspects of the program, the men-
tors made some suggestions for more improvement such
as holding briefing sessions for the mentees and mentors
and offering training workshops on communication skills
for the mentors. The mentors emphasized that they needed
to receive the mentees’ feedbacks about their performance
during the program to improve their weaknesses. Finally,
providing rewards was another suggestion to motivate the
mentors.

Mentors’ Development: According to the mentors’ point
of views, the mentoring program had some benefits for
them as well including personal development and social
development.

Personal Development: The mentors believed that com-
municating with several mentees with different behavioral
and emotional characteristics, specifically ‘difficult’ ones,
strengthened their patience and endurance as well as self-
awareness. One mentor stated, “I think my best experience
in this program was my own self-growth.” To help the
newcomers, the mentors had to reflect on their own expe-
riences and choose successful ones to solve similar prob-
lems of the mentees, which in turn improved their own self-
reflection ability. The mentors thought that intermen-
tor sessions provide them an opportunity for discussing
the mentees’ problems and finding solutions for them,
which enhanced their problem solving ability for similar
conditions in the future. The mentors found emotional
contentment in helping the mentees and felt self-satisfied
by being a mentor. One mentor stated, “I felt so happy
and energetic for a whole week when I heard one of my
mentees passed her IT exam with a high score.”

Social Development: Based on the mentors’ perception,
communicating with the mentees improved their social
skills, particularly their communication skills and sense of
empathy. In addition to interact with mentees, the mentors
had some opportunities to inform the medical school ad-
ministrative authorities about problems and concerns of
the newly entered students, which resulted in developing
an effective relationship with them. Communicating with
school officials as well as participating in inter-mentor
sessions improved the mentors’ ability to criticize and
provide feedback to others in an effective manner. They
also declared that participation in the mentoring program
improved their team-working skills.

Discussion

We explored the perceptions of the mentees and mentors
about the dual peer mentoring program of TUMS School
of Medicine. We identified a variety of supports including
academic and psychosocial support and positive relation-
ship for the mentees; and as a result, some improvements
occurred in the mentors as well including personal and
social development. We also explored the participants’
views about some unique aspects of the program such as
student-authorized, dual mentoring, and role model ses-
sions.

Consistent with the findings of a previous research on
mentoring first year medical students (2, 4, 20), our results
revealed that peer mentors could offer various academic
and psychosocial support for newcomer mentees. Medical
students generally look for more experienced seniors who
could help them comply with the new requirements during
the transition time (21), while our participants mentioned
that formal peer mentor-mentee relationship is more effec-
tive because of reciprocal commitment, and mentors’ reli-
able, accurate, and specific guidance.

Based on our results, dual mentoring was beneficial be-
cause preclinical mentors were helpful in guiding students
on their first year courses and upcoming exams, while
clinical mentors were effective in shaping mentees’ pro-
fessional identity and promoting their interests in basic
science subjects. The system of utilizing multiple mentors
has been applied in academic medicine to address some
challenges of differences between faculty mentors and
mentees (16-18). However, the advantages and disad-
vantages of this model in undergraduate medical educa-
tion need to be further investigated.

Although few studies demonstrated the effects of mentor-
ing on the mentors, no one who has ever been a mentor
can deny it. Those mentors who participated in the pro-
gram felt that this relationship was beneficial for them in
increasing their personal abilities, and social skills, and
more importantly, it brought about a sense of satisfaction
for them, which is consistent with the results of other peer
mentoring programs (22, 23).

According to participants’ views, student-organized men-
toring program resulted in a trustful mentor-mentee rela-
tionship. Considering other strengths such as saving the
resources, it may be concluded that student-organized
mentoring programs can be an alternative to school ad-
ministered-programs. However, independence from the
school administrations may result in losing some im-
portant support systems. Fornari et al. (2014) stated that
most schools house their mentoring programs in the office
of student affairs and the office of academic affairs with-
out any given responsibility to undergraduate medical
students (24). We explored the perceptions of the mentors
and mentees using a qualitative methodology. Examining
short- and long-term outcomes of our mentoring program
in academic improvement could quantitatively enhance
our understanding about the program. As another limita-
tion, our mentoring program was implemented only for
the first year medical students, which might have different
needs compared to the students in other phases. Moreover, this study was limited to a mentoring program in TUMS School of Medicine, which might have influenced the generalizability of the findings.

Conclusion
This study aimed at exploring the perceptions of the mentors and mentees about the dual peer mentoring program for the first year undergraduate medical students of Tehran University of Medical Sciences. We found that peer mentors could offer various academic and psychosocial support to the newcomer mentees. Our results revealed that both mentors and mentees preferred formal peer mentor-mentee relationship because of reciprocal commitment, and mentors’ reliable, accurate, and specific guidance. Dual mentoring was beneficial and the preclinical mentors were helpful in guiding students on their first year courses, while clinical mentors were effective in shaping the mentees’ professional identity and promoting their interests in basic science subjects. The program was also beneficial in increasing the mentors’ personal abilities and social skills. To conclude, student-organized dual peer mentoring program could be an alternative to school administered programs. Examining short and long-term outcomes of such mentoring programs is highly recommended.

Acknowledgements
The authors thank the mentees and the mentors for dedicating their time for the interview. The authors also extend their sincere appreciation to Azim Mirzaazadeh, for his time for the interview. The authors also extend their sincere appreciation to Azim Mirzaazadeh, for his considerable help and also his valuable feedbacks to draft this article.

Funding: Financial support for this study was provided by Tehran University of Medical Sciences, Tehran, Iran.

Conflict of Interest: None declared.

References