



DOI: https://doi.org/10.1590/1981-5271v46.1-20200501.ING

Implementation of mentoring in a medical school – mentors and students' perceptions

Implantação de mentoria em uma faculdade de medicina - perspectiva de mentores e estudantes

Ester Franco de Souza Freitas Silva¹ o esterpsiq@gmail.com Maria Cristina de Oliveira Santos Miyasaki¹ o cmiyazaki@famerp.br

ABSTRACT

Introduction: In medical education, mentoring has the important function of supporting and complementing student's education through their relationship with a teacher, which fosters student's global development.

Objective: to assess the strengths and weaknesses of a mentoring program in a private school from the perspective of mentors and mentees; to identify, among students who did not participate in mentoring, the reason for not participating, knowledge about the concept of mentoring and the desire to participate in the future.

Method: Cross-sectional, descriptive study with a qualitative approach. The study participants included mentors, mentees and students who did not participate in the mentoring program. All participants answered a semi-structured questionnaire and the answers were submitted to a qualitative approach analysis.

Results: The answers were divided into two broad categories: strengths - bonding, exposing feelings/self-disclosure, mentoring as a two-way street, space for integration - and weaknesses – organization and scheduling difficulties, conducting group dynamics and addressed topics, of integration between group members. The students who did not participate in mentoring attributed their non-participation to lack of time and reported they wanted to participate in the future.

Conclusion: the reports showed strengths and weaknesses of mentoring for mentors and mentees, as well as aspects to be improved. Prospective studies of mentoring programs are needed to identify aspects that promote the development of participants and reduce their suffering, as well as their impact on medical education.

Keywords: Mentoring; Medical Education; Medical Students.

RESUMO

Introdução: Mentoria, em escolas médicas, tem a importante função de apoiar e complementar a formação do aluno por meio da sua relação com um professor, que fomenta o desenvolvimento global do estudante.

Objetivo: Este estudo teve como objetivos avaliar pontos fortes e fragilidades da mentoria de um curso de Medicina de uma instituição privada sob a perspectiva de mentores e mentorados, e identificar, entre os discentes que não fizeram parte do programa, o motivo da ausência, o conhecimento sobre o conceito de mentoria e o desejo de participar no futuro.

Método: Trata-se de estudo transversal, descritivo, com abordagem qualitativa. Participaram do estudo mentores, mentorados e alunos que não participavam do programa. Todos os participantes responderam a um questionário semiestruturado, cujas repostas foram analisadas na abordagem qualitativa.

Resultado: As respostas foram divididas em duas amplas categorias: pontos fortes – vínculo, exposição de sentimentos/autorrevelação, mentoria como via de mão dupla e espaço de integração – e fragilidades – dificuldades de organização, de horários, de conduzir a dinâmica de grupos e os temas abordados, e de integração entre membros do grupo. Os estudantes que não fizeram parte da mentoria atribuíram a ausência à falta de tempo e relataram que desejam participar no futuro.

Conclusão: Os relatos revelaram pontos fortes e fragilidades da mentoria para mentores e mentorados, bem como aspectos a serem aprimorados. Estudos prospectivos de programas de mentoria são necessários para identificar os aspectos que promovem o desenvolvimento dos participantes e reduzem seu sofrimento, bem como o seu impacto sobre a formação médica.

Palavras-chave: Mentoria; Educação Médica; Estudantes de Medicina.

Chief Editor: Rosiane Viana Zuza Diniz.

Associate editor: Kristopherson Lustosa Augusto. Received on 12/05/21; Accepted on 12/13/21. Evaluated by double blind review process.

¹ Faculdade de Medicina de São José do Rio Preto, São José do Rio Preto, São Paulo, Brazil.

INTRODUCTION

University life requires social, academic, self-care and organizational resources to deal with a new routine. The way students face and receive support to deal with these challenges has an important impact on their adaptation and their professional future¹⁻³.

An important way to support students and foster their global development at the university and in the future profession is mentoring⁴⁻⁶. Although the term can be used with several meanings, in academic contexts mentoring involves a collaborative relationship between two people, one of them older, the teacher, and the other younger, the student^{4, 6-14}.

Johnson⁶ defines mentoring as "a reciprocal personal relationship where a more experienced, usually older, university teacher acts as a guide, role model, teacher, and protector for a generally younger and less experienced student or teacher". The mentor provides the mentee with knowledge, guidance, advice, challenges and supports them in their quest to become a full member of a particular profession" (p.23). There are different mentoring formats, such as the mentor/mentee dyad, mentoring groups and peer mentoring. Group mentoring can include students attending the same course semester or students from multiple semesters. The latter format is mentored by both the teacher and peers, as students at more advanced stages of the course can support their younger peers^{5,15}.

Studies carried out on mentoring in different areas and with different populations (e.g., children/adolescents, university students, professionals) indicate positive results from this experience, both for mentors and mentees^{8-10, 12, 15-18}. Regarding the university mentoring, the benefits for the mentee include academic performance, productivity, professional skills development, networking, help in getting their first job, confidence and professional identity development, higher income level and faster promotions, professional visibility, satisfaction with one's career and the university, lower levels of stress and less conflict regarding one's roles (e.g., career X family) ⁶.

The mentoring process is also seen as an important element of teacher training^{19, 20}. It encourages updating and understanding of institutional changes over time, favors an asymmetrical non-hierarchical relationship and the mentor's self-perception in relation to their professional, personal attitudes and their life project^{21, 22}. The motivation to play the role of mentor includes several factors, such as interest in students and their development, feeling reinforced by the mentee's success, satisfaction with their relationship with students and responsibility for training good professionals^{6, 16}. Students who participated in mentoring programs, when they become teachers, report a desire to participate in

programs as mentors due to their experience and as a form of retribution²¹.

Regardless of the reason for becoming a mentor, these teachers must be adequately selected and trained for the task. They should also know the institutional policy and available resources at the university and in the community, in order to help students⁶.

Since the prospective follow-up of mentoring programs and the evaluation of their impact still need to be further explored, this study assesses strengths and weaknesses of a mentoring program in a medical course in a private institution from the perspective of mentors and mentees. It also identifies, among the students who did not participate in mentoring, reasons for non-participation, knowledge about the mentoring concept and desire to participate in the future.

METHOD Setting

The mentoring at a private medical school in the interior of the state of São Paulo was implemented in August 2016, associated with the institution's student support programs, which include the Educational and Psychological Support Center (NAEP, *Núcleo de Apoio Educacional e Psicológico*), the Inclusion Center, Leveling Activities, Exchanges and Social Support.

The Mentoring

All teachers and students of the institution were invited to participate in mentoring through wide institutional disclosure. The teachers who accepted the invitation received training on the concepts, mentoring proposals at the institution, reading material and monthly supervision with the psychiatrist who coordinates the NAEP, to which the program is linked.

The students who accepted the invitation were randomly assigned to groups comprising students from the different semesters (new students entering the institution were assigned to the existing groups). Participation was voluntary, but those who attended 50% or more of the meetings received a certification and the workload could be used as complementary credits, mandatory for the curriculum composition. The mentoring meetings took place every fortnight and lasted for one hour. The topics could be pre-determined (e.g., issues related to academic life, career project, personal relationships, life project) or meet the group's demands. The study took place a year and a half after the program was implemented (which took place in 2016).

Study design

Cross-sectional, descriptive study with a qualitative approach.

Participants

All mentors were invited to participate and those who agreed received a questionnaire by email to be answered and returned to the researcher, either by email or in print. All the institution's students, participants and non-participants in the mentoring activity, were also invited to take part in the study and, those who agreed, answered a questionnaire in the classroom, during break periods.

Instruments

Mentors and mentees answered structured and openended questions covering the performance of the mentor, the mentee, the mentoring group, difficulties and strengths of the experience. Students who did not participate in the mentoring activities answered questions about knowledge (or not) of the mentoring concept, reason for non-participation and the desire (or not) to participate in the future.

Data analysis

After data collection, they were transcribed, followed by reading until content exhaustion. The grouping of meanings and categorization was based on the frequency and extent of comments and the specificity of the response ²³⁻²⁵.

After the grouping into two broad categories (mentoring strengths and weaknesses), the content was submitted to two external judges for content validation in their respective categories²⁶. Reports of supervision content with the mentors were used to complement the information and assist in the interpretation of the categories.

Ethical aspects

The project was submitted and approved by the Research Ethics Committee (REC): Project (CAAE: 73410617.1.0000.8083) Opinion N. 2,355,023, issued on October 28, 2017. All participants signed two copies of the Free and Informed Consent form.

RESULTS

The institution had 21 mentors at the time this study was carried out, 18 months after the mentoring was implemented. All of them were invited, but only nine participated. Of the 600 medical students at the institution at the time of the study, 300 (50%) regularly attended mentoring activities and 144 participated in it. Among students who did not attend mentoring, 130 participated in the study.

Mentor and mentee's answers were grouped into two broad categories: strengths (positive aspects) and weaknesses (difficulties). There was 100% agreement between the two judges who evaluated the responses regarding their inclusion in the two categories.

Mentoring strengths

A strong point highlighted by both mentors and mentees was the **possibility of creating a bond between the members of the group** and with the institution itself from the meetings. Although there were spaces for social and academic integration in the institution, the mentoring provided a distinct experience, both for bonding and the integration of students.

The availability of a space that allows exposing one's feelings in a safe and welcoming environment was identified as important for the frequency and appreciation of mentoring. The mentor's learning from the experience showed that mentoring was a two-way street, an aspect considered positive by the participants. During the supervisions, the mentors reported that mentoring allowed them to learn from the students, especially aspects related to technology and social networks. Reports also pointed out that the experience allowed a greater understanding of the global structure of the course and the students' difficulties in conciliating different activities, something that is informed by the educational institution, but gains a different perception when this experience is lived by the teachers. There was a perception that intergenerational conflicts were reduced from this space of conviviality. This aspect of the experience was perceived and reported more frequently by mentors than by the students.

Although students have classmates, attend leagues, academic and athletic centers, in addition to parties and other college-related environments, mentoring seemed to provide a **space for integration** between students from different semesters and the mentor, which does not usually exist in other contexts. This integration ranged from the topic discussed during the meetings to the type of relationship experienced and a new perception about other people's behavior (Table 1).

Identified weaknesses

The most frequently reported difficulty for mentoring was the **organization of time** and the availability of a schedule, whether fixed or periodically agreed on, for both students and teachers. The intense study workload, curricular and extracurricular activities, in addition to the difficulty of conciliating personal life, were highlighted by the students. This perception did not differ from the difficulties pointed out by the mentors to conciliate the workload, aggravated by multiple responsibilities and jobs, the need to study and update themselves and to conciliate these activities with personal life. Many students also reported that the certification of complementary activities, mandatory in the curriculum composition, was the attraction to start participating in the activity, but that, later, if the bonding with the group does not occur, there in an overlap due to competition with other

Table 1. Positive aspects pointed out by mentors and mentees: categories and examples.

1. Possibility of creating a bond between group members

Mentor: I love the group. The students are polite, collaborative. They care about each other, about me too.

Mentor: What motivates me now: the bond I created with my students: I love it.

Mentee: Excellent, since there is the creation of bonds and exchange of knowledge between the mentor and the students.

Mentee: It's good to spend time with the mentor, because I can see that she loves what she does and loves to maintain a relationship with us.

Mentee: [Initial motivation was] ... knowing that it meant credits for the residency test. Afterwards, the meetings were fun and I went there for the pleasure of meeting the group.

2. Exposing one's feelings in a safe and welcoming environment

Mentor: I perceive that students feel comfortable talking about different college and personal topics as well. It's as if the meetings can be used as an escape valve for the pressure of studies.

Mentor: It's great, it's very important for students to express their feelings and feel welcomed and supported by the mentor and the group. Mentee: We all have space to talk and we have respect above all, so we understand different opinions.

3. Mentoring as a two-way street

Mentor: Very good! I think the experience for both mentor and student is fantastic. Also, it is very nice the exchange of experiences during supervision, with (the supervisor) and with the other mentors.

Mentor: It is important; promotes a closer relationship with the students, by providing an understanding of the generation, the networks, the anxieties and in the routine with the teachers, to help, accompany, and visit, because in this way, the barrier between teachers/students is broken.

Mentor: It makes us more empathetic with students. I started to see other aspects and their anxieties because of the project [mentoring].

Mentor: I believe that being a mentor brings great responsibility and at the same time brings me closer to a different generation.

4. Space for integration

Mentee: It brings the student closer to the mentor and this "embracement" is very important, especially for freshman students. It makes students from DIFFERENT SEMESTERS interact, promoting new friendships, support among the students.

Mentee: It helped me a lot! Especially in relation to not knowing what the course was like in the internship period! The contact with older students eliminated this anxiety. Also, discussing issues that go beyond college takes away some of the pressure.

Mentee: Meeting new people and saying different things than my friends and I always say.

activities. Among the students who did not participate in mentoring, the difficulty pointed out was lack of time.

If the certification of complementary credits was an attraction, in addition to curiosity about the program novelty at the institution, maintaining such interest can be a challenge for those involved. The competition of activities with practical or immediately measurable results is one of the contributing factors for the irregular attendance in the groups.

Many mentors complained about the **difficulty in proposing topics or triggers** for the meetings and this was observed by the students, although some groups did not need this type of mechanism due to the interaction between the members. There is no proposal for uniformity regarding the topic to be addressed, which may vary according to the characteristics of the mentor and the participating students. Therefore, there were groups where a previous reading, or a reading of an article or text during the meeting was proposed, as well as groups that preferred the emergence of subjects spontaneously.

Another commonly reported difficulty involved the **topics or triggers for the meeting**. Both mentors and mentees

pointed out that the discussions during the meetings tended to remain in the academic context and, for some groups, the deepening of relationships seemed more painful. The so-called "WailingWall", when students only complained about disciplines, teachers or tests, is a phenomenon that bothers mentors and students. A hypothesis formulated from the supervisions is that the place of the meeting favors this occurrence. The mentors observed that meetings held in the university/college provided more topics related to academic life and that meetings held in other environments (parks, coffee shops, cafeterias, mentor's or students' homes) allowed the expansion of the topic to include aspects of personal, social and family life.

The random composition of the group (carried out by drawing lots) can favor socializing with different people, which would not occur in other environments or contexts of the school. However, there may be no identification, rapport or empathy between the participants, despite the mentor's efforts and skills to make the **integration between the group members** occur (Table 2).

Among the students who did not participate in mentoring but who participated in the study (n = 130), 46 stated they knew

Table 2. Weaknesses identified by mentors and mentees: categories and examples.

1. Organization of time

Mentor: My problem lies in the ORGANIZATION (in mentoring, in life). I consider my performance at the meeting to be very good, regarding the ideas to be discussed, etc. but I have failed to schedule the meetings, usually at the last minute. The students know these meetings occur every fortnight, but we try to adjust the time to have as many attendees as possible and, in this, I fail!

Mentee: At first, I had difficulty participating because of the schedule that didn't fit mine, but today it's better.

Mentee: Conciliating the schedule with that of the entire group.

2. Topics or triggers for meetings

Mentor: Lack of conversation at the beginning, students only complained about the disciplines.

Mentor: Making students talk about themselves.

Mentee: I don't feel like going to Mentoring, because I think it doesn't add anything and makes me irritated due to the covered topics.

3. Integration among group members

Mentor: It is difficult to evaluate us, but despite my efforts it seems that I can't raise the participants' interest.

Mentee: Uninterested students, I don't know if the mentor was to blame for not conducting it properly. At first, I was an assiduous participant, but I got discouraged.

Mentee: There are people who don't like it because the group didn't match (game).

the concept of mentoring. The reason for non-participating was lack of time for the majority and approximately half of them reported a desire to participate in the future.

DISCUSSION

Results of evaluations of the mentoring process with medical students are not well established yet and many difficulties have been pointed out in the literature. These include, for instance, the use of instruments that adequately assess the evolution characteristics of mentoring, the mentormentee relationship and the organization where this process takes place²⁷. The confounding variables present throughout the academic trajectory, which also have an impact on the outcome considered as career success, as well as the different definitions for this outcome, are still obstacles to carry out this measure and perform broader studies ^{28, 29}.

The mentoring assessment is mainly qualitative, focused on satisfaction. Few studies explore the experience, the characteristics of the relationship, program configurations and the members' view, even a negative one. Therefore, the use of open questions was a strategy used in the present study to cover the participants' experiences and perceptions, both positive and negative ones^{18,30}.

This study included just under half of the mentors, half of the mentees and approximately half of the students not participating in mentoring. Participation was, therefore, higher than in other studies, such as the one by Moreira et al.⁴¹, which had the participation of 18.9% of the mentees in the medical course at a university in the Northeast. It is possible that a greater adherence by the mentees in this study was due to the fact that the mentoring is part of other

student support programs and is carried out in an educational institution that only offers the medical course. Moreover, attributing a certification of complementary activity to mentoring is a positive consequence of the participation, which may have been generalized to student participation in the present study.

Among the domains evaluated in the studies on mentoring are communication, the mentoring process, the development of the mentee, the mentor and the program itself²⁷. Promoting a safe environment for discussing problems and consolidating relationships is considered crucial for the satisfactory development of mentoring, which can have a personal, educational and professional impact^{31-32,33}. In this study, the possibility of creating bonds, of having a safe and welcoming space to express one's feelings were pointed out by both mentors and mentees as positive aspects of the experience.

The mentors are encouraged to participate as a way of updating themselves, attaining recognition in the academic career and being closer to students, strengthening the bond with the students and the institution²⁸. In this study, the mentors pointed out as positive aspects the exchange with their peers (other mentors, the psychiatrist who supervised the group), the possibility of better understanding the difficulties of students and the characteristics of a generation that is different from theirs, to getting closer to the students, having more empathy and being able to help.

Most mentoring programs do not offer financial compensation, the time spent is not included in the teacher's formal workload and it has no impact on the institutional plan for career progression. Hence, the mentors' motivation is a personal one, and their gains include experience, contact

with students and the possibility of growing in this process, as pointed out by the mentors who participated in this study.

The attachment to the group and the development of relationships appeared as motivators for participation, both for mentors and mentees. For the students, although the certification attribution and obtaining "complementary credits" were mentioned as the initial motivation, these reasons were later replaced by the bonding experience.

The possibility of exposing one's feelings in a safe and welcoming environment has already been reported as a strong point and a reason for satisfaction by the participants³³. It is not unusual among health professionals, especially among physicians, for the exposure of feelings to be considered inappropriate³⁴. Therefore, teachers – especially those trained in the traditional methodologies – have difficulty addressing the anxieties of students included in contexts of teaching active methodologies. When they become mentors, the program participants that make it possible to get closer to and understand the academic context report a high degree of satisfaction and consider this involvement an important part of teacher training¹⁶. This point was highlighted by the mentors of this study, who felt able to welcome students in their difficulties.

With the velocity of technological development, the opening of new medical courses and the hiring of younger teachers, there is the coexistence of several generations in the same scenario, among teachers and in the student body itself, which can be a source of conflicts classically enunciated as "in my time" or "when I was a student". In some cultures, the concept of "respecting one's elders" and maintaining the distance is still present³⁴. But for most millennials, the willingness to build closer and more personal relationships, even in a professional environment, can be stimulating and make an important contribution to the development of mentors.

Data from this study indicate that mentoring provided an exchange relationship, even between people of different generations. The mentees reported perceiving mentoring as a space to talk, where they respect and feel respected. The mentors, in turn, pointed out the exchange relationship with the students and the possibility of learning from them. This integration space provides a reduction in competitiveness, learning from differences and expansion of perspectives about the discussed topics¹⁸. Moreover, the exchange of experiences between students attending different semesters of the course, with the mentor's mediation, provides a broader and more comprehensive course for all participants³⁵.

Addressing the following areas is considered important in the mentoring context: career orientation, connection between students and teacher, development of professionalism,

choice of specialty, research support and academic career encouragement, planning of extra-curricular activities, stress reduction²⁸. Aspects such as the bonding and support perceived in mentoring, learning about the course, the development of professionalism (mentor as a model) and stress reduction were pointed out in this study. The latter is a crucial point for future doctors, who need to learn, during their training and in their professional life, to adequately manage high levels of stress.

Studies comparing students who had a mentoring experience with those individuals without this experience indicate a better performance by the mentees²⁸. There is also a report of improved academic performance in assessments such as CEX (Mini-Clinical Evaluation Exercise) and OSCE (Objective Structured Clinical Examination) when followed by mentors. The verification of this type of result can increase the credibility of mentoring programs, although this type of assessment privileges domains of training that are more directed to the summative or content than to the formative model.

Frei et al. emphasize that negative effects and difficulties of mentoring are rarely reported¹⁰. Therefore, the results of this study, containing criticisms and pointing out difficulties, are considered important.

Including mentoring meetings in the agenda was a problem frequently pointed out by the study participants. Difficulty managing time and conciliating the course load or professional life with other activities were reported by mentors and mentees. An excess of activities and problems in adequately managing time are important stressors among medical students³⁶.

Therefore, teaching time management skills is an important topic to be discussed in mentoring meetings.

Although obstacles are only briefly mentioned in the literature, one-fifth of mentoring relationships are lost within a year³¹. Dismissal/resignation of mentors, irregular scheduling of meetings, communication difficulties and uninteresting topics were pointed out by the mentees in this study. The inclusion of the activity in the curriculum is seen as an advantage by some participants, but for others, the mandatory nature impairs the development of mentoring. Identifying the variables responsible for low adherence is therefore relevant, since it discourages both mentors and students.

During the implementation of the mentoring program in this study, it was difficult to communicate with students by e-mail and the use of social networks was more effective in obtaining responses. For this reason, the questionnaire was sent by email only to the teachers. For the students, handing over the printed version and collecting it right after they answered it was the best way to obtain it. This observation points to the need to evaluate communication strategies,

as the generational differences and used tools can interfere with the program success and the obtaining of answers when conducting research about it^{19,20}.

Another aspect described in the literature and related to the availability of mentors is the importance and recognition attributed to the mentoring programs by the Institutions. This involves the provided financial and administrative support, the inclusion of the activity in the teacher's workload, the remuneration for the activity, the inclusion of mentoring as an evaluation item for promotions or career progression, access to continuing education and updated literature²⁸.

The institutional discourse is even related to the issue of the hidden curriculum, as it contrasts what the institution claims to be important and what it demonstrates to be important. In this sense, the existence of "protected time" and not concurrent with preparatory activities for external evaluations, for instance, must be considered and organized by medical courses, in addition to being disseminated among teachers, so that the discourses are consistent and do not exclude such activities²⁸.

When evaluating a mentoring program at an institution with the mandatory inclusion in the curriculum in a given semester of the course, the students consulted after the end of the activity and near the end of the course wanted the activity to have been continuous throughout the course, not mandatory and with fortnight or monthly meetings³⁷. A significant percentage of the interviewed students also admitted that they would not attend the activity if it were not mandatory³⁵.

Bauman describes the changes in bonding and relationships nowadays and highlights the fragility in relationship stability and the time dedicated to coexisting in this context of instantaneity. The photograph of the meeting is enough, but not necessarily being present in it³⁸.

Another difficulty found in mentoring, according to the students who participated in this research, was the performance of the group dynamics by the mentor and the topics chosen for discussion. Although the coordination and supervision of the program provide suggestions for topics or formats, it is the mentor's responsibility to define the functioning of the group, because there is an understanding that the process occurs more in the relationship between the participants than in the content or format itself.

Some students, however, felt they were "wasting their time" in the face of the undefined and unstructured. It is known that reflective activities encounter resistance among medical students, who do not perceive the value of this type of activity for learning curricular contents and aiding in assessments. The lack of time and the excess of work, as well as the discomfort in discussing in a group, also justify this type of evaluation, with data being found in our findings and in the literature¹⁸.

Assistance in career planning, networking, examples of professionalism, support for one's personal development, incentive for research and academic careers are among the most desired topics in mentoring meetings^{10, 28, 29}. It is possible that some of these topics, as the incentive for academic and research careers, have had little prominence in this study due to the fact that few teachers at the institution are primarily scholars and researchers.

The need for training and support for mentors is also highlighted, especially at the beginning of the activity, as the skills necessary for good group management may not be known beforehand. Mentor training programs are therefore described and recommended^{39,40}.

In our experience, the formation of a communication group among mentors, using the WhatsApp application, allowed the sharing of materials and ideas, both in terms of topics and formats, as well as meeting dynamics. Some groups need permanently discussion triggers, while others refuse external topics. The profile of the mentor and the members of the group directly influences this issue, and the group of the same mentor can acquire different characteristics over time. At this point, supervision and support to the mentor, in addition to the sharing of experiences between mentors, favors a better acceptance of this dynamic process of changes and needs of the group.

As the last difficulty found, we cite the integration between the members of the group. The mentor's availability to initiate and deepen relationships seems to be related to better results in this integration. But a guiding posture, a paternalistic attitude and mentor conflicts of interest can prevent an authentic relationship from being built³¹. As well as excessive formality or politeness, generational and cultural differences can distance mentors and students³⁴.

The random assignment of mentors or for the formation of groups can also be related to personality differences and communication difficulties that prevent the consolidation of the mentoring relationship^{28,41}. The mentoring relationship is a natural and spontaneous process; the choice to formalize the relationship and create an institutional program must be conducted in such a way that the "artificiality" of the process does not impede its development ³⁵.

The literature also describes that there is a desire to be close to the mentor from a temporal point of view, that is, to have contact with a recently graduated professional or with students from more advanced semesters³⁷. In this sense, group mentoring that favors the participation of internship students, the designation of "junior" mentors among students and even visits by graduates to the group were experiences in our program and considered positive for the integration of the group. A former student was hired as a preceptor and applied

for mentorship. His curricular evaluation in the residency exams was an experience that received special attention from the examiners; and the group was very well attended and evaluated by the students.

Studies also show that, although mentoring is associated with better emotional support and development, improved emotional adjustment, student well-being, improved social relationships, better performance, and reduced behavior problems, the effect size of such findings is small⁷.

There is agreement among authors that the success of mentoring is related to the establishment of intimate relationships, which is also confirmed at other times throughout life. Individuals need stable and meaningful relationships^{7, 42}.

As a strong point of this study, we can mention the identification of difficulties, pointed out by the participants, that hinder adherence to mentoring. As a weakness, the participation of less than half of the mentors in the study may not represent the perception of most teachers about the program.

CONCLUSION

Through this study, it was possible to identify positive points and others that still need to be improved in the institution's mentoring experience. Among the positive ones are the possibility of creating connections, integration, a safe space for displaying affections and feelings and learning for all participants, mentors and mentees. As negative points, the difficulty in managing time, in proposing topics of interest to the group, the excess of complaints by some students and integration among some members.

Among the students who did not participate in mentoring activities, approximately one-third reported knowing the concept of mentoring. Lack of time was the alleged reason for non-participation and most of them stated a desire to participate in the future.

The possibility of prospective monitoring of a mentoring program favors the identification of relevant aspects for the program to be effective (it makes sense and promotes improvement in the development of those involved, in addition to reducing suffering throughout the process) and allows addressing difficulties for the improvement of the program.

As perspectives for future works, we can list that time management and bonding capacity are aspects to be studied and observed in the institutional and work context of mentoring. The longitudinal monitoring of students and graduates may also contribute to verifying the effectiveness of mentoring as a tool in medical training.

AUTHORS' CONTRIBUTION

Ester Franco de Souza Freitas Silva contributed with the study

conception and design, data collection and analysis and preparation of the scientific article. Maria Cristina de Oliveira Santos Miyazaki critically reviewed the intellectual content of the manuscript and approved the final version to be published.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

SOURCES OF FUNDING

The authors declare no sources of funding.

REFERENCES

- University GaP. The 2014 GalupPUrdue Index Report. 2014. A study of more than 30,000 college graduates across the U.S. Estudo realizado em parceria pela Purdue Univsersity e Instituto Gallup.
- Fernandez AC, Oliveira SA, Lobato TCL, Siqueira GG, Albuquerque FHS, Pereira VS. Dificuldades e fragilidades vivenciadas por alunos durante a gradução em universidade pública. Brazilian Journal of Health. 2021;4(1): 3506-3414.
- Bolsoni-Silva AT, Fogaça FFS, Martins CGB, Tanaka TF. Promove universitários. Treinamento de habilidades sociais: guia teórico e prático. São Paulo: Hogrefe; 2020.
- Bellodi PL, Martins MA. Tutoria: mentoring na formação médica. São Paulo: Casa do Psicólogo; 2005.
- Barzansky B, Young GH. Student suport. In: Dent JA, Harden RM, Hunt D, editors. A practica guide for medical teachers New York: Elsevier; 2017.
- Johnson WB. On being a mentor. A guide for higher education faculty. 2nd ed. New York: Routledge; 2016.
- Eby LT, Allen TD, Evans SC, Ng T, DuBois D. Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. J Vocat Behav. 2008;72(2):254-67.
- Allen TD, Eby LT, Poteet ML, Lentz E, Lima L. Career benefits associated with mentoring for proteges: a meta-analysis. J Appl Psychol. 2004;89(1):127-36.
- 9. Skjevik EP, Boudreau JD, Ringberg U, Schei E, Stenfors T, Kvernenes M, et al. Group mentorship for undergraduated medical students: a systematic review. Perspect Med Educ. 2020;9:272-80.
- Frei E, Stamm M, Buddeberg-Fischer B. Mentoring programs for medical students: a review of the PubMed literature 2000-2008. BMC Med Educ. 2010;10(32):1-14.
- 11. Silva JEC, Pontes RF, Costa JCT, Sobral JF, Giuliano ECN, Vieira GIA, et al. Mentoria para o estudante de Medicina. Brazilian Journal of Development. 2021;7(4):42117-42137.
- 12. Burgess A, Diggele Cv, Mellis C. Mentorship in the health professions: a review. Clin Teach. 2018;15(3):197-202.
- Rossinot H, Brunoni A, Fipce V, Kalejs M, Liyanapathirana V, Senkubuge F, et al. From boss to partner: transitioning in medical education. *PeerJ Preprints* 5:e2948v1. https://doi.org/10.7287/peerj.preprints.2948v1. 2017.
- DeTurk SN, Kaza AJ, Pellegrino AN. Coaching and mentoring: focus on graduate medical education. Contemporary Topics in Graduate Medical Education. IntechOpen Book. Disponível em: https://www.intechopen. com/online-first/73843. DOI: 10.5772/intechopen.94182, 2020.
- Menezes DPF, Cunha ATR, Oliveira LCR, Souza LFF. Peer mentoring como etratégia de acolhimento ao estudante e adaptação ao método PBL. Rev Bras Educ Med. 2021;45(sup 1): e103.
- Colares MFA, Castro M, Peres CM, Passos ADC, Figueiredo JFC, Rodrigues MLV, et al. Percepções de estudantes de Medicina e de mentores sobre um programa de tutoria (mentoring) desenvolvido em grupos. Rev Bras Educ Méd. 2009;33(4):670-5.

- 17. Ghosh R, Reio TGJ. Carrer benefits associated with mentoring for mentors: a meta-analysis. J Vocat Behav 2013;83(1):106-16.
- Martins AF, Bellodi PL. Mentoring: uma vivência de humanização e desenvolvimento no curso médico. Interface Comun Saúde Educ. 2016;20(58):715-26.
- 19. Chaudhuri S, Ghosh R. Reverse mentoring: a social exchange tool for keeping the boomers engaged and millennials committed. Human Resource Development Review. 2012;11(1):55-76.
- Baily C. Reverse intergenerational learning: a missed opportunity? Al & Soc 23, 111–115 (2009). https://doi.org/10.1007/s00146-007-0169-3
- Gonçalves MCN, Bellodi PL. Ser mentor em medicina: uma visão arquetípica das motivações e transformações na jornada. Interface Comun Saúde Educ. 2012;16(41):501-14.
- Bellodi PL. Tutores, alunos e o curso de graduação em Medicina: um círculo virtuoso. Rev Bras Educ Med. 2011;35(3):382-8.
- 23. Bardin L. Análise de conteúdo. São Paulo: Edições 70; 2011.
- 24. Turato ER. Tratado da metodologia da pesquisa clínico-qualitativa: construção teórico-epistemológica, discussão comparada e aplicação nas áreas da saúde e humanas. Petrópolis: Vozes; 2003.
- Varpio L, Martimianakis MAT, Mylopoulos M. Qualitative research methodologies: embrancing methodological borrowing, shifting and importing. In: Cleland J, Durning SJ, editors. Researching medical education. West Sussex, UK: Associaton for the Study of Medical Education; 2015.
- Belei RA, Gimeniz-Paschoal SR, Nascimento EN, Matsumoto PHVR. O uso de entrevista, observação e videogravação em pesquisa qualitativa. Cadernos de Educação. 2008;30:187-99.
- Ng YX, Koh ZYK, Yap HW, Tay KT, Tan XH, Ong YT, et al. Assessing mentoring: a scoping review of mentoring assessment tools in internal medicine between 1990 and 2019. PLoS One. 2020;15(5): e0232511. https://doi. org/10.1371/journal.pone.0232511
- Fornari A, Murray TS, Menzin AW, Woo VA, Clifton M, Lombardi M, et al. Mentoring program design and implementation in new medical schools. Med Educ Online. 2014;. 19:1, DOI: 10.3402/meo.v19.24570
- Borch PV, Dimitriadis K, Stormann S, Meinel FG, Moder S, Reincke M, et al. Novel large-scale mentoring program for medical students based on a quantitative and qualitative needs analysis. GMS Z Med Ausbild. 2011;8(2) Doc26. doi: 10.3205/zma000738. Disponível em: https://www.ncbi.nlm. nih.gov/pmc/articles/PMC3149462/
- Moreira SNT, Albuquerque ICS, Pinto Junior FEL, Gomes AHB. Programa de Mentoria do curso de Medicina da Universidade Federela do Rio Grande do Norte: atividades integrativas em foco. Rev Bras Educ Med. 2020;44(4): e169.

- 31. Sng JH, Pei Y, Toh YP, Peh TY, Neo SH, Krishna LKR. Mentoring relationships between senior physicians and junior doctors ans/or medical student: a thematic rewiew. Med Teach. 2017;39(8):866-75.
- 32. Meeuwissen SNE, Stalmeijer RE, Govaerts M. Multiple-role mentoring: mentors' conceptualisations, enactments and role conflicts. Med Educ. 2019;53(6):605-15.
- Tan YS, Teo SWA, Pei Y, Sng JH, Yap HW, Toh YP, et al. A framework for mentoring of medical students: thematic analysis of mentoring programmes between 2000 and 2015. Adv Health Sci Educ. 2018; 23(4):671-697.
- Sawatsky AP, Parekh N, Muula AS, Mbata I, Bui T. Cultural implications of mentoring in sub-Saharan Africa: a qualitative study. Med Educ. 2016;50:657-69.
- Bellodi PL, Chebabo R, Abensur SI, Martins MA. Mentoring: ir ou não ir, eis a questão: um estudo qualitativo. Rev Bras Educ Med. 2011;35(2):237-45.
- Hill MR, Goicochea S, Merlo LJ. In their own words: setressors facing medical students in the millennial generation. Med Educ Online. 2018;23(1):530558 Disponível em: https://www.ncbi.nlm.nih.gov/pmc/ articles/PMC6179084/pdf/zmeo-23-1530558.pdf.
- Ribeiro MMF, Martins AF, Fidelis GTA, Goulart GC, Molinari LC, Tavares EC.
 Tutoria em escola médica: avaliação por discentes após seu término e ao final do curso. Rev Bras Educ Med. 2013;37(4):509-14.
- Bauman Z. Amor líquido: sobre a fragilidade dos laços humanos. Rio de Janeiro: Zahar; 2004.
- Feldman MD, Steinauer JE, Khalili M, Huang L, Kahn JS, et al. A mentor development program for clinical translational science faculty leads to sustained, improved confi dence in mentoring skills. Clinical anda Translational Science. 2012;5(4):362-7.
- Kow CS, Teo YH, Teo YN, Chua KZY, Quah ELY, Kamal NHBA, et al. A systematic scoping review of ethical issues in mentoring in medical schools. BMC Med Educ. 2020;20: 20:246 https://doi.org/10.1186/s12909-020-02169-3
- 41. Ng YX, Koh ZYK, Yap HW, Tay KT, Tan XH, Ong YT, et al. Assessing mentoring: a scoping review of mentoring assessment tools in internal medicine between 1990 and 2019. PLoS One. 2020 15(5):e0232511. doi: 10.1371/journal.pone.0232511.
- 42. Buddeberg-Fischer B, Herta K-D. Formal mentoring programmes for medical students and doctors a review of the Medline literature. Med Teach. 2006;28(3):248-57.



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.