Establishing core competencies for a structured Mentoring Program in Pediatric Residency Training

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Abstract

Background: Mentoring has been recognized as fundamental to success in career development in young practitioners. An efficient mentoring can improve residents' learning and enhance their personal and professional skills. In resident training, cooperation and participation from both faculty and residents are key in implementing a mentoring program. Different set of frameworks of core competencies have been described in pediatrics residency training. However, the competencies for the mentoring program within pediatrics residency training never been reported. Thus, we sought to identify and establish core competency for a mentoring program in pediatrics postgraduate residency training. Methods: A convenience sample of all the faculty members and residents at the Department of Pediatrics in King Abdulaziz Medical City-Riyadh was recruited for the study. A self-administered questionnaire with 43 items covering the CanMEDS core competencies was used. The seven core competencies of CanMEDS were Medical expert, Communicator, Scholar, Professional, Manager, Health Advocate, and Collaborator. Result: The faulty response rate was 76% (n=44 / 58) and residents was 91% (n=62 / 68). Nearly all faculty members and residents reported mentoring to be very important in Pediatrics. Two-thirds of the residents and faculty members reported mentoring to had an important influence on their career. The Medical expert, Scholar, Manager, and Collaborator were identified as essential for mentoring out of all seven core competencies. Conclusion: Most of the pediatric residents and faculty surveyed identified mentoring as an important element in Pediatrics. More than two third of the faculty and residents have experienced mentoring at some point in their career and 75% of the faculty members recognize their important role in mentoring the residents. We were able to identify Medical expert, Scholar, Manager, and collaborator as the key core competencies for the mentoring program in pediatrics, reported by both residents and the faculty.

Background

Residency training programs are given the responsibility of training health care practitioners to aid in advancing their patient care, research skills, and education. Mentoring has been recognized as fundamental to success in career development in trainee and young physicians [1,2,3]. On the other hand, the lack of mentoring has been recognized as a challenge for trainees in any program. It has been identified as either the first or second important factor impeding career progress in academic medicine [4]. A recent study revealed a significant prevalence of burnout among pediatric residents. This adds to an urgency to give more deserving attention to mentoring in Pediatric residency training [5].

Mentoring is defined as a "*process whereby an experienced, highly regarded, an empathic person (mentor) guides another usually younger individual (mentee) in the development and re-examination of their own ideas, learning, and personal or professional development*"[6]. Mentoring can be divided into two types, formal or informal. The formal or structured mentorship program is very beneficial to all stakeholders; mentor, mentee and the organization. This type of mentoring is overseen by the organization and intends for the professional development of mentees. It necessitates the availability of staff, training of mentors, and commitment from both mentor and mentee. In this type of mentoring, the

mentor can be self-identified by the mentee or assigned by the department. A mentee who has been allowed to choose his mentor is more likely to show better compliance with the program [1,7].

An efficient mentoring can improve residents' learning, and enhance their personal and professional skills. Acknowledging the importance of mentoring, many institutions have created structured mentoring programs to assist faculty members with career advancement [8]. However, the identification of core competencies for the mentoring program from both mentor and mentee perspective has never been established.

Informal or traditional mentoring is individualized, limited to the mentor who accepts to give advice on the request of the mentee. It can be very effective, but cannot be standardized and monitored [4]. The aim of mentorship mainly depends on the need and demand of mentee. It changes according to the time and level of development of the mentee. The common examples of such needs are career planning, exams guidance, research advice or preparing curriculum vitae. However, it has been reported that physicians of all levels, at all career stages, benefits from mentoring [6,9]. Despite the available evidence that mentoring is helpful, there may be differences with regards to implementation between training programs in different fields of medicine and in different cultures [4].

A study was conducted among nursing students in Jeddah, Saudi Arabia, regarding the preferred model for the mentorship. In that study, a structured mentoring program was found to be more favorable than the program that encouraged self-directed learning [10]. This type of mentoring may facilitate psychological adjustment and foster a sense of professional identity [11]. In a study conducted by Umoren and Frintner, 87% of pediatric residents reported having a mentor [12]. However the mentoring activities are often loosely monitored and the outcomes poorly evaluated [2,13].

The main aim of this study was to explore the perception of the faculty members and residents about the importance of mentoring, at the Department of Pediatrics, King Abdulaziz Medical City, Riyadh. It also identifies the core competencies for the mentoring program and compares the rating given by the faculty members and residents of the relative importance of those competencies.

Methods

We used an adapted questionnaire of 43 items taken from a study conducted for the assessment of mentoring in the Department of Anesthesiology, Cleveland clinic and CanMEDS competencies framework [14,15]. The study was conducted in the Pediatrics Department at King Abdulaziz Medical City, Riyadh. The pediatrics training program at the Department of Pediatrics, King Abdulaziz Medical City is the largest training program in Saudi Arabia. All the residents and the faculty members involved in the training of the pediatrics residents were included in the study.

A non-probability, consecutive sampling technique was used for both residents and the faculty members in this study. The questionnaire was distributed in a group setting during the residents' academic half-day and self-administered to the faculty members to ensure a good response rate. The questionnaire was

composed of close-ended questions in 43 items to cover the seven core competencies of CanMEDS (such as Medical expert, Communicator, Scholar, Professional, Manager, Health Advocate, and Collaborator). It also included questions about the importance of mentoring in pediatrics, the importance of mentoring to the career of the respondent so far and how the respondent feels about his/her role in the mentoring program. The response categories on a 5-point Likert scale ranging from “not at all important” to “very important”. Demographic characteristics of both the residents and the faculty (age, gender, and level) were also included. Face validity regarding clarity of language, correction of flaws and understandability was done before distribution of the questionnaires. An institutional review board approval was obtained through King Abdullah international medical research center (KAIMRC).

Results

A total of 44 (76 %) out of 58 faculty members in the Department of Pediatrics responded to the questionnaire. There were 31 male and 13 female faculty members. There was 91% (62 out of 68) response rate from the residents, composed of 35 males and 27 females.

The mean age for residents was 26.7 ⨦1.8 years (range 24-33) and for the faculty members, it was 44.6 ⨦6.3 years (range 32-54). More than half of the residents (n=35) were junior residents in their first or second year of training. The distribution of residents according to the level of training was as follows, 23% of respondents were in the fourth year of their training, 21% were in their third year, 26% in their second year, and 30% in their first year of training. The demographic characteristics of participants are shown in Table 1.

There were 63% (n=39) residents who reported that mentoring has been important for their career and 75 % (n= 33) of the faculty members stated that their role in mentoring is important. The residents ranked Communicator and Professional competences with less importance as compared to the faculty members. The aspects in which these two competencies were considered different between the two groups are shown below (see Figures 1a &1b). The faculty members ranked health advocate as less important as compared to the residents (see Table 2). There was no difference between male and female neither in faculty members nor residents in ranking the competencies.

There was no significant difference between the junior and senior residents for realizing the importance of mentoring. Residents in their first year of training ranked scholar competency as less important as compared to residents in the third year of their training (p=0.04). There was a difference due to the level of training among residents. The senior residents compared to junior residents felt that scholar and collaborator are not essential to core competencies for a mentoring program with p-values of p=0.02 and p=0.04, respectively.

Discussion

To the best of our knowledge, this is the first study to had investigated the importance of core competency of mentoring program in postgraduate training. We were able to recognize Medical expert, Scholar, Manager, and collaborator as key core competencies for mentoring program in pediatrics as reported by both residents and the faculty.

The faculty members and residents felt that mentoring is key in Pediatrics training. This result is in congruence with the study by Ramanan, et al, in which 93% of internal medicine residents from five training centers in the United States reported that it is important to have a mentor during residency [16]. This has also been reported in two further studies, where the majority of postgraduate trainees considered it important to have mentors [16,17]. Antecedent research works indicate that formal mentoring is linked to successful personal development, career guidance, career choice and research productivity [3].

Davis and Nakamura, identified six interactional foundations for the optimal mentoring environment including emotional safety, support, a protege´-centeredness, informality, responsiveness, and respect [18]. They suggest that the optimal mentoring environment may differ between specialties and hospitals, but there remains a core set of attributes that ought to be inherent in every optimal mentoring environment. This is very similar to our results that in our study, the residents and the faculty members considered Medical expert, Scholar, Manager, and Collaborator as essential core competencies for a formal mentoring program in Pediatrics. These are the same five essential competencies that were identified in a study from Duke internal medicine residency program. It included Collaborator and Scholar and three other competencies [19].

Two-thirds of the residents and faculty members who participated in the study reported that mentoring has been important to their career. This concurs with previous studies which showed that 60% of postgraduate doctors had a mentor [2,16,20,21]. A study by Umoren and Frintner, reported that the proportion of mentoring linearly increased in residents training in pediatrics from 83% in 2006 to 87% in 2012 [12].

Our study identified the core competencies required for mentoring in the pediatric training program from the perspective of the residents and the faculty. We used an established framework (CanMEDS) which validates our study. We were able to include most of the faculty members in the Department of Pediatrics and nearly all of the Pediatric residents in the largest training center in Saudi Arabia. We propose that the difference in ranking of the communicator and professional competences by the faculty and the residents are probably due to the perception of the residents, who consider those competencies to be part of the pediatrics profession. It could be speculated that by providing open-ended questions or using a different framework of competency may have yielded a different result. However, this could be a subject for further study.

Conclusion:

To conclude, nearly all pediatric residents and faculty participated in a survey identified mentoring to be an important element in Pediatrics training. Two-thirds of the faculty members and residents were reported to have been mentored at some stage of their career and three-fourths of the faculty members recognised their important roles in mentoring the residents.

According to our study findings, we recommend strong mentoring programs in residency training programs and more in pediatrics as this study was limited to one center and one unit of the pediatrics. However, further studies in other departments and cities of Saudi Arabia should be initiated to develop standardized mentoring programs for the kingdom of Saudi Arabia.

Abbreviations

CanMEDS Canadian Medical Education Directions for Specialists

Declarations

Ethics approval and consent to participate

The study obtained approval from the Institutional Review Board at King Abdullah International Medical Research Center (KAIMRC), reference number SP14/105. A written consent was obtained from all participants in this study.

Consent for publication

Not applicable

Availability of data and materials

The survey and datasets generated and analysed during this study may be available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests

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None

Authors' contributions

JT conceived the study, was involved in data collection and data interpretation, and made substantial contributions to drafting of the manuscript. MD and AO were involved in study design and data analysis.RK was involved in data collection.LB was involved in drafting of the manuscript. All authors have read and approved the final manuscript.

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Tables

[Table 1 could not be inserted here due to technical limitations. It can be found in the supplemental files]

Table 2: Comparison of Mean scores for the Competencies for Mentoring between the Residents and the Faculty members

Competencies for Mentoring	Residents (n=62) Mean ± sd	Faculty Members (n=44) Mean ± sd	p-value
Medical Expert	4.3 ± 0.7	4.2 ± 0.8	.37
Communicator	4.1 ± 0.8	4.5 ± 0.7	**.004***
Scholar	4.2 ± 0.7	4.2 ± 0.6	.85
Professional	4.0 ± 0.8	4.3 ± 0.5	**.02***
Manager	3.9 ± 0.8	3.8 ± 0.6	.73
Health Advocate	3.9 ± 0.8	3.6 ± 0.9	**.02***
Collaborator	4.1 ± 0.8	4.2 ± 0.6	.40

* Statistically significant at p<0.05

Figures

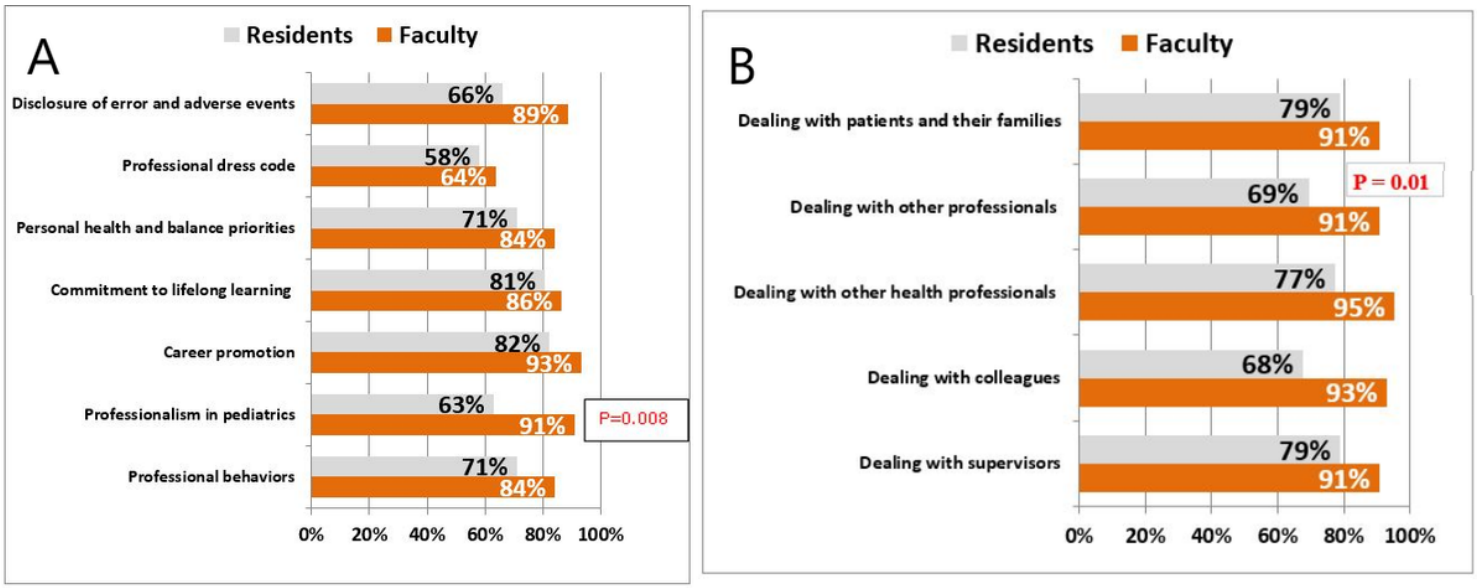

Figure 1

1a: Comparison of Residents' and Faculty members' perceptions about 'Professional' attributes. 1b: Comparison of Residents' and Faculty members' perceptions about 'Communicator' attributes

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Table1.docx