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Mentorship in Medicine and Other Health Professions

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Abstract
Mentoring skills are valuable assets for academic medicine and allied health faculty, who influence and help shape the careers of the next generation of healthcare providers. Mentors are role models who also act as guides for students' personal and professional development over time. Mentors can be instrumental in conveying explicit academic knowledge required to master curriculum content. Importantly, they can enhance implicit knowledge about the "hidden curriculum" of professionalism, ethics, values, and the art of medicine not learned from texts. In many cases, mentors also provide emotional support and encouragement. It must be noted that to be an effective mentor, one must engage in ongoing learning in order to strengthen and further mentoring skills. Thus, learning communities can provide support, education, and personal development for the mentor. The relationship benefits mentors as well through greater productivity, career satisfaction, and personal gratification. Maximizing the satisfaction and productivity of such relationships entails self-awareness, focus, mutual respect, and explicit communication about the relationship. In this article, the authors describe the development of optimal mentoring relationships, emphasizing the importance of different approaches to mentorship, roles of the mentors and mentees, mentor and mentee benefits, interprofessional mentorships for teams, gender and mentorship, and culture and mentorship.

Keywords Mentorship · Mentor · Multidisciplinary teams

Introduction

As seen in Homer's Odyssey, where Telemachus was entrusted to Mentor, mentors historically were responsible for the mentees' education, moulding of their character, and knowledge of decisions—overall forming the individual at a critical point in their growth and development [1]. This ideology and practice of mentorship continued forward, and in 1978, David J. Levinson headed the publication of *The Seasons of a Man's Life* that stated mentorship is a critical relationship in an individual's life. According to Levinson, mentorship is dependent on a mentor, who is senior and more knowledgeable in the field the mentee is entering, successfully completing the role of a teacher, model, advisor, and sponsor [1].

Levinson's definition of mentorship is one of many definitions—there is no standardized definition for mentorship in the literature [2]; however, for this review article, mentorship will be defined as a two-way relationship and type of human development in which one individual invests personal knowledge, energy, and time in order to help another individual grow and develop and improve to become the best and most successful they can be [3]. Mentoring processes use several strategies such as providing guidance, giving advice, and facilitating decision-making in order to help professional development of the mentees and work-family balance [2].

1. Coaching is used to impart a specific knowledge or to aid someone in achieving a defined goal [2].
2. Role modelling is the demonstration of how to be, in other words, someone whose professional behaviours are mirrored by the mentee [2].

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3. Collaboration highlights the importance of a partnership between mentor and mentee in which one is not more or less than the other, and where there is a mutual goal of development [2].

Mentoring is beneficial to both mentee and mentor [4]. The mentee, through successful mentorship, will experience personal growth and development, increased academic productivity, and career guidance and satisfaction while also being able to network themselves in their field of interest. It was identified that among adolescent medicine faculty, 95% of those who completed a survey indicated that their mentor was important to them, and this was correlated with personal development and career satisfaction [5]. In a study examining 24 medical schools in the USA, individuals with mentors had significantly higher career satisfaction results than those who did not have a mentor [5]. In respect to choice of speciality, mentors also played a critical role [5]. In addition, a formal mentoring program was strongly associated with the passing rate of the American Board of Internal Medicine certifying exam. Some of the benefits to mentors are professional stimulation and rejuvenation, aiding the professional growth of the next generation and institutional recognition.

Despite the benefits of mentorship, literature indicates that access to mentors can be challenging. A review of literature from 1966 to 2002 stated that mentoring becomes less common upon formal training completion—once individuals have completed their medical training, mentorship becomes less frequent [6]. In addition, the prevalence of mentorship at the undergraduate level—perceived as a critical period in the development of young physicians—highlighted only 36% of the third and fourth year students having mentors [5]. Some of the reasons may be linked to faculty isolation, lack of interprofessional collaboration, increased stress, burnout, and higher rates of staff turnover.

The purpose of this review is to evaluate the current literature on mentorship in academic medicine with focus on different approaches to mentorship, mentor and mentee roles and responsibilities, mentor and mentee benefits, interprofessional collaboration, and mentorship in respect to gender and culture.

Methods

The search used for the present literature review was conducted in *Ovid MEDLINE*® database covering the period from 1946 to January Week 2 2018 database. Both subject headings and key words were utilized for the terms. The outcomes were further limited to articles published since 2013 and solely in English. This search produced a total of 589 articles. Thirty-five articles, which contained information relative to the aspects we were interested in, were then extracted from these 589 articles and were used for this literature review.

Discussion

Approach to Mentorship

There are several models of mentorship—dyadic, multiple, apprenticeship, and team—that are further divided by the form and means in which they are delivered—formal or informal and peer, senior, distance, or virtual [7].

Informal mentoring refers to the self-selection of mentors and mentees, particularly noting that it is typically initiated by the mentee [2]. In this form of mentoring, there is no formal training, goals and outcomes are undetermined, and the relationship between mentor and mentee is very flexible [2]. Traditionally, mentorship within medicine was predominantly informal because its flexibility allowed trainees or residents to easily develop mentorship relationships with senior doctors whereby gaining knowledge that would help in their growth and development and also networking [4]. The study by Kibbe et al., looking at characterization of mentorship programs in Departments of Surgery in the USA, indicated that only half of the departments of surgery in the USA have established mentorship programs, and most are informal and unstructured [8]. However, there are drawbacks to this form of mentoring in that it is preferable for short-term goals rather than long term due to the informal nature and it could compound social exclusion—appealing to more extroverted mentees who are more confident in approaching seniors and indirectly leaving out introverted or marginalized groups. Formal mentoring is more challenging to develop and execute because it does require a strict selection and training process, the signing of formal agreements, a curriculum that explains the explicit rules and responsibilities, goals and expectations, scheduled reviews, and "no-fault" divorce clause [2]. Similar to informal mentoring, there are drawbacks, particularly in that it requires a significant amount of commitment from both mentor and mentee—noting the demanding schedule for senior doctors and for incoming trainees.

Informal or formal mentoring may be executed in any of the following forms of mentoring models highlighted which may then be further divided depending on the method of delivery (Table 1).

Mentors' Roles and Responsibilities

It is critical to highlight the ideal characteristics of a mentor that may fall under three main categories—personality, interpersonal abilities, and professional status.

Personality

Mentors should have an altruistic personality wherein they are fully committed to the mentee and their goals—the mentor

Table 1 Mentoring models and method of delivery

Form of mentorship	Definition
Dyadic	Dyadic mentoring is the traditional mentoring model in which there is a one-to-one relationship between mentor and mentee, and it has been the most common mentoring model and has influenced the progress of mentorship [9].
Multiple	Multiple mentoring is very reminiscent of dyadic; however, in this model the mentee is mentored by several mentors simultaneously and noting that each mentor is facilitating the development of a particular area [2].
Apprenticeship	While this form is not a significant form of mentorship in of itself, it may fall under that of dyadic mentoring—it is when the mentee observes and emulates the skills of the mentor [7]. The difference between this model of mentoring and that of the dyadic is that in this model the mentor may facilitate educational knowledge but may not be involved in helping the mentee in developing their careers or providing holistic support [7].
Team	Resembling the multiple mentoring models is the team-mentoring model that standardizes the concept of several mentors into a formal committee, just as in multiple mentoring. Each mentor brings a different knowledge but that also has interaction and communication between the several mentors whereby facilitating more efficient and effective mentoring [2].
Method of delivery	**Definition**
Peer mentoring	Very collaborative and mutually beneficial as the relationship is formed among the mentors peers or colleagues. In this situation, the mentee may be more inclined to share their difficulties and questions with peers, who are at an equal or similar level of knowledge and seniority, as opposed to senior faculty [2].
Senior mentoring	Most common form of delivery [7] in which there is a senior faculty taking the role of the mentor and a junior mentee.
Distance and virtual mentoring	Distance mentoring and virtual mentoring may be considered under the same category as distance mentoring is when the mentor and mentee are in different locations [5].It may be related to virtual mentoring wherein social media could be used as a tool to achieve goals, particularly with respect to biomedical research faculty, but which could be further researched in other fields.

should uptake measures to make sure that the mentee's success is at the forefront [2]. In a study conducted by Cho et al., one of the most recurrent words used to describe an ideal mentor was generosity and selflessness. In conjunction with being altruistic and generous, a mentor must possess a level of patience and understanding in guiding the mentee in achieving their goal [2]. There must be an acknowledgement that success will not occur in an instant but rather is a process, which requires patience on the mentors' and mentees' part. Honesty is another characteristic that is critically important in defining an outstanding mentor [10]. Many may argue that this particular characteristic is to be expected, as one would assume that individuals would search for and be more inclined to mentors who demonstrate a strong character rooted in honesty. Beyond intrinsic characteristics, there are characteristics that are more predominantly regarded during the relationship with the mentor and mentee. In one respect, mentors should be exceptional at communicating, in that that they must be active listeners [2]. This critical characteristic of being a proficient listener is vitally important because mentors must be able to understand the mentees' body language and messages that are not explicitly communicated [11]. Mentors must be able to actively listen and then interpret and understand what has been communicated to them in a way that reflects what the mentee intended and is not skewed towards what the mentor understands. Mentors must have the personality to strive to continuously educate themselves to adapt to the educational needs of different mentees. Not every mentee is the same, and a proficient mentor must have the skills to adapt themselves to the mentee to guarantee the best outcome. In this respect, a mentor must understand the need to continuously develop their mentoring skills. In order to be an effective mentor, one must acknowledge that mentoring is a continuum of constant learning, improvement, and professional development. It is important to highlight that currently many students will ultimately choose their. It is important to highlight that today, many students will ultimately choose their mentor based on personality characteristics rather than academic achievements [12].

Interpersonal Abilities

There are several interpersonal abilities that are deemed necessary in defining an ideal mentor. A mentor should be available and approachable; two characteristics, which may relate back to being selfless and altruistic, are noted as critically important [12]. Ultimately, a mentee requires a mentor who will be able to provide guidance when needed but also to keep in contact with the mentee so as to be aware of their progress [13]. The mentor should be capable of identifying the mentee's strengths and weaknesses without judgement, and be able to use this knowledge in helping the mentee achieve their goals appropriately [2]. Without the capability of being to critically assess the mentee's strengths and weaknesses, the mentor will not be capable of guiding the mentee in the right direction to achieve their goal in such a way that they are still being challenged while also recognizing weaknesses. This interpersonal ability of being able to define strengths and weaknesses of the mentee coincides with the ability to provide

constructive feedback in a supportive and non-judgemental manner [2]. Mentors are able to progress the mentee in achieving their goal with this constructive feedback because it is not meant to demean them but rather to support and encourage them so that they are capable of learning from their mistakes and achieving their goals [14]. Another prominent interpersonal characteristic is the ability of being a teacher and guide and not forcefully deciding what the mentee needs to do and what they need in order to achieve their goal [15].

Professional Status

It must be noted that the mentor's professional, academic, and research standing and achievements are important—it is understandable and predictable that a mentee would want a mentor who is reputable in the field of interest; however, these seem to be secondary to the personal and interpersonal characteristics [16]. A mentee will want a mentor who is thoroughly knowledgeable and reputable in the field of interest because this will give a reassurance that the mentor will be able to successfully integrate the mentee into the field of interest and enable the mentee to network themselves in an otherwise competitive and closed environment.

Mentee Responsibilities

While there are significant roles and responsibilities on behalf of the mentor, it is important to note the responsibilities of mentees to ensure success of the relationship and achievement of their goal(s). One of the foremost responsibilities of a mentee is being pro-active due to the fact that this will go on to influence other responsibilities of the mentee and the mentor-mentee relationship and success. Being pro-active starts from the beginning with a mentee being responsible in finding a mentor—identifying a potential mentor cannot be achieved by anyone other than the mentee, and this can be achieved inside the field of interest and/or where they are studying or working or it can be done outside their field of interest and institution [14]. Mentees are responsible to network themselves amongst peers and senior faculty in order to present themselves earlier, rather than later, to find a suitable mentor(s). As the mentee aims to be an active participant in the mentor-mentee relationship [17], pro-activism is required with respect to keeping up with meetings and ensuring that steps are taken prior to those meetings to ensure that they are productive in furthering the mentees in achieving their goals.

Responsibilities of the mentee can be further highlighted through the concept of "managing up," as presented by Zerzan et al. (2009). The concept of managing up emphasizes the responsibility of the mentee in directing and taking "the driver seat" in the mentor-mentee relationship. Managing up also entails that the mentee take responsibility in effectively communicating with their mentor to ensure that goals are clearly stated, that they understand the ways in which their mentor will assess success and must be responsive to these criticisms [17]. A mentee must make sure that they are actively participating in the relationship such that they communicate when they do not understand something or have not been able to achieve a certain task [17]. The mentee is responsible in guaranteeing, from the start of the relationship, the ways in which communication will occur so that the mentor will always be kept up to date about progress and the mentee has a means of asking questions [17]. This is particularly important because without identifying the preferred means of communication, the mentee is potentially jeopardizing the success of the relationship which is dependent on constant communication. As determined from both mentor and mentee perspectives, a successful mentorship program hinges on three key factors—anticipated goals of mentorship relationship, characteristics of the participants, and the structure of the program [18].

Mentee and Mentor Benefits

Mentee and mentor benefits will be highlighted below

Mentor benefits	Mentee benefits
Exposure to novel ideas and opportunities via communication with the mentee [12]	Mentors provide support and guidance—increasing potential of the mentee and their chances for success [2]
"Get to hear about students community outreach projects and so broadens my horizons." [19]	
Aiding the professional development of junior colleagues [12]	Mentoring is associated with increased career satisfaction and higher rate of promotion [13]
Development of longitudinal relationships with students from year 1 through residencies and wherein becoming peers [19]	
Professional stimulation and rejuvenation—professional satisfaction is increased [12]	Increased academic productivity [10]
Intellectual stimulation as a result of learning new information or relearning past material [19]	
Institutional recognition and reward—advancement in their field of interest as a result of their mentees success [12]	Alongside providing career support, mentors also provide psychosocial support—mitigating stress and burnout, particularly amongst residents [13].
Positive relationships with residents and faculty members [12]	Many medical students indicated the role of a mentor in helping them select a speciality [20].

Improves job satisfaction and helps prevent burnout, "gives me a sense of purpose beyond my job as a physician." [19]	Aids in networking [2]
An opportunity to get answers or reflect ideas for issues with teaching methods or problem students [19]	More likely to receive grant support and have better retention at their academic institution [10]
"We are a diverse group and I appreciate wekly[sic] Friday meetings where there is much collegiality and support. Allows me to say 'I have a problem and need help to resolve it…' and know we are all willing to help." [19]	
As a group, mentoring provides a form of validation [19].	Potentially stimulates personal growth [13]
"Am I as good as I need to be?" [19]	

Interprofessional Mentorship

Interprofessional collaboration involves groups of varying healthcare disciplines collaborating to examine a patient(s) wherein each individual contributes independently to the diagnosis and treatment of the patient alongside any determinants they deem important to the provision of treatment to the patient [21]. Why it is considered interprofessional is because of the fact that multiple healthcare disciplines are working together and uniting their individual ideas to bring about a more holistic, multidiscipline diagnosis and treatment.

The interprofessional mentorship initiative involves an integrated approach that combines several educational strategies (didactic, experiential, and self-learning) and virtual communities of practice model to embed interprofessional care through mentorship exchanges in healthcare professionals [21]. In other words, a palliative care interprofessional mentoring education program is rooted in four main components:

1. Diadactic teaching [21]
2. Case discussions [21]
3. Simulation [21]
4. Clinical rotation [21]

The key pillars of the initiative include a mentor/mentee application and matching process; an integrated curriculum (two, two-and-a-half hour sessions), an online social utility network, and the evaluation framework.

The Centre for Interprofessional Education University of Toronto recognizes interprofessional mentorship as an important element for enhancing team collaboration in the healthcare settings.

The mentoring program description has been captured in the following acronym: *SHAPE*. It stands for *Share experience*, both clinical and career experience, learning, research, and solutions; *Help others*, as colleagues and healthcare professionals; *Acquire new knowledge*, as a mentor and mentee; *Promote interprofessional benefits and future* of collaborative care and education; and *engage in interdisciplinary team collaboration*. Overall, the core competencies that are identified in the interdisciplinary practice are communication with other disciplines and collaboration with other healthcare providers to develop an interdisciplinary framework [22].

It is important to cultivate such competencies by mentors and mentees. A study by Guise et al. (2017) demonstrated that team mentoring was beneficial to their career development and research by 90% of respondents. Advantages of interprofessional team mentoring were diversity of opinions, expanded networking, and development of stronger study designs and modelling of different career paths [23]. However, scheduling and managing conflicting opinions were main challenges to interprofessional mentoring [23].

The increasing complexity of science, technology, and issues facing society has created a demand for integrated interdisciplinary research teams to work together. However, little is known about the effects of interdisciplinary team mentoring on mentoring researchers [24]. As healthcare education and science move towards interdisciplinary and interprofessional models, there is increasing interest in the competencies required for researchers to be successful in team science and how to cultivate them [24].

Recent reviews into mentoring in medicine, surgery, nursing, physiotherapy, occupational therapy, and social work that represent the key specialities within a multidisciplinary team (MDT) suggest that mentoring could provide much desired holistic, timely, appropriate, and individualized support for healthcare professionals working with multidisciplinary teams [24].

Respect for Culture and Gender in Mentorship

Mentorship and Gender

Advancement in Academic Standing

It is noted that female physicians generally have much slower academic advancement rates in comparison to males; in other words, the probability of academic promotion is substantially lower for females than for males. From a top to bottom perspective, in 2006, it was identified that approximately 85% of full professors at professional, academic medical facilities were males—this is a significant proportion of males over females in an upper position in this field [25]. Approximates indicate that females in a position of a chair or professor only comprise 13.9%—a significantly lower proportion than that of males—however, females have a 33.3% prevalence as assistant professors and a 32% prevalence in the field of associate

professors [26]. Overall, studies ascertain that males are more likely to be in a senior position whereas women are generally not present at all in these positions, particularly with respect to their overall proportion and presence in the field [26].

Gender Differences in Specialities

A study conducted by Burgos and Josephson [27] highlights that there are gender variations in surgery, gender differences in learning surgery, and gender distinctions in speciality interest at the undergraduate level.

With respect to surgery, there is a significant disproportion and underrepresentation of women in leadership and higher-income roles of surgical departments and surgical specialities. This underrepresentation of women is notable as it is not a result of women failing to complete surgical residencies since there are an increasing proportion of women finishing surgical residencies [28]. This underrepresentation is due to the fact that, while women are increasingly completing surgical residencies, they are being barred from advancement to full surgical professions. Evidence through linear regression highlights that completion of surgical residence has a balanced gender ratio; however, advancement into full professors or surgery has an imbalanced gender ratio skewed towards males [28].

In terms of distribution in specialities in medicine, women are overrepresented in certain specialities and underrepresented in others—gynecology and obstetrics have the highest proportion of females from 2011 to 2012 with 54%; however, women are also overrepresented in family medicine and paediatrics.[26]. Women's faculties in surgical specialities and in cardiology tend to be significantly less in comparison to males and, once again, with respect to the overall prevalence of females graduating from surgical residency and in the medical profession.

Gender Differences in Publication

Alongside gender differences in academic standing and specialities there are differences in publication productivity. It is noted in the study conducted by Holliday et al. (2014) that males had an increased median number of publications in comparison to females, indicating that males publish more papers in comparison to females. Males had higher *h* index publications, which takes into account quantity and quality of publications—versus females, once again highlighting the differences in publication productivity [26].

Mentoring and Gender

The benefits of mentoring for a mentee—male or female—are numerous such as increasing potential, career and psychosocial support, rate of promotion, and increased academic productivity. Numerous studies have indicated and proven these benefits; however, despite the increasing proportion of females in the physician workforce, the availability and accessibility of female mentors are consistently unavailable and even finding a mentor—male of female—is proven difficult for females [29]. In both situations, females are prevented from experiencing the benefits of mentoring that their male counterparts receive.

With respect to finding a mentor, women have difficulties getting a mentor whether they are male or female. In one situation, a woman explained that even in departments and faculties that accepted women, there were very few males who were willing to become their mentors—22 responses to the Survey of Women in Academic Medicine Regarding Mentors and Role Models also certified this difficulty in simply finding a mentor [29]. Adding to the difficulty in finding a mentor, irrespective of sex, is trying to specifically find senior women to uptake the role of being a mentor—in other words, a lack of accessibility and availability of senior women in the physician workforce to take on the role of and serve as mentors [29]. This difficulty was significantly noted among women with a larger proportion of women commenting on this lack of accessibility and availability—48–50 responses to the Survey of Women in Academic Medicine Regarding Mentors and Role Models [29]. Both of these highlight the fact that despite the notable benefits of mentoring, females are being systematically barred from these benefits due to a lack of availability of individuals willing to be their mentors.

Mentoring Models and Gender

Dyadic Mentoring Model Dyadic mentoring is the traditional mentoring model in which there is a one-to-one relationship between mentor and mentee and has been the most common mentoring model and has influenced the progress of mentorship [9]. With regard to this approach to mentoring, one of its primary drawbacks is with respect to sexual dynamics—while a mentor of the opposite sex can provide the mentee with particular insights that a mentor of the same sex may not be able to, sex-matched mentors will generally be able to understand the mentees' situation, opportunities, and work styles better and more efficiently [25]. One of the primary ways in which the dyadic mentoring model relates to gender and fails to always align with women is because it is based on a male socialization model [25]. Through the male socialization model, males put predominant value on individual achievement and establish a hierarchy that regulates how they act and relate [25]. As a result of being rooted in this model, the dyadic approach has two major components—emphasizing challenge, competition, and independence and emphasis on technical and informational conversation over psychosocial issues [25]. These two components highlight why this model of mentoring is relatively disadvantageous to some women

because women are more often inclined to encouragement rather than challenge, women align towards collaboration over independence, and women engage predominantly in equalizing behaviour over hierarchical behaviour [25]. Thus, the fact that this mentoring model continues to be the most common mentoring approach and has influenced various approaches highlights the disproportionate and systematic disadvantage females are at.

Multiple Mentoring Model Multiple mentoring is very reminiscent of dyadic; however, in this model the mentee is mentored by several mentors simultaneously, noting that each mentor is facilitating the development of a particular area [2]]. This approach to mentoring is more in line with females and provides advantages to them, in comparison to that of the dyadic model, primarily because it provides females the opportunities to look for and establish a strong network within their field [25]. For example, the model highlights the importance of having multiple mentors; thus, there is an opportunity to have mentors who are in line with values and behaviours typically associated with females but also behaviours typically associated with males—equalizing or hierarchical relationships, collaboration and independence, encouragement, and challenge [25].

Peer Mentoring Models This method of delivery is very collaborative and mutually beneficial as the relationship is formed among the mentors' peers or colleagues [2]. In these situations, the mentee may be more inclined to sharing their difficulties and questions with peers who are at an equal or similar level of knowledge and seniority, as opposed to senior faculty [2]. One of the key aspects that this model focuses on is removal of hierarchical behaviour and seniority that is predominantly emphasized in the dyadic mentoring model [25]. This focal point already is advantageous for women as they are more inclined to equalize behaviour over hierarchy and superiority and the need for collaboration and group affiliation. This model of mentoring overall provides a number of benefits in that it facilitates mutual learning, support, and collaboration and allows for different perspectives to be heard and incorporated—these are, once again, all in line with the socialized differences of females and thus perpetuate their ideologies and values, work styles, and goals more accordingly and accurately than the dyadic mentoring model that is far more inclined to male socialization [25].

Another potential benefit towards a peer mentoring approach to mentoring, when considering gender, is that it is much more lenient in the balance between commitment and time flexibility—as a result of this, females, who predominantly also have to worry about the labour of care for their families, are given the opportunity to still have the benefits of mentoring to move them forward professionally but also still given the chance to still take care of their family [25].

Mentorship and Culture

Similar to how the medical profession is no longer homogenous with respect to sex, it is also no longer homogenous with regard to the diversity in ethnicities of students and physicians. According to Patel et al. (2014), in 2011 with regard to medical school applications, the following are stated:

- Caucasian (54.7%), 20% Asian, 8% Hispanics, 6.8% African American, 4% foreign applicants, 3.43% unknown, 2.7% multiple races, 0.2% Hawaiians and Pacific Islanders, and 0.2% American Indians/Alaskan natives

There is a wide array of individuals from multiple ethnicities entering into medical schools and entering into the medical profession; however, efforts must be made to ensure that this increase in diversity is persistent. One way to ensure this diversity continues to persist, with respect to medical school applicants, is through implementing mentoring programs that tackle ethnic and socioeconomic status diversity.

Patel et al. (2014) conducted a pilot pipeline (MSMP) for high school students interested in a career in medicine or a health-related field—pipeline programs put primary importance on mentoring individuals from ethnic or racial minorities, lower socioeconomic status, and varying underprivileged backgrounds. Thus, the program ensures that mentors were representative of these individuals such that, with respect to ethnic and racial minority groups, the mentors also came from those demographics [30]. As such, mentees would be receiving tailored mentoring from individuals of their culture and who would understand the knowledge, beliefs, values, behaviours, and practices associated with that particular group of people. The difficulties that most of these mentees faced, prior to the MSMP pipeline program and that may be associated with a lack of culturally rooted mentoring, included no one to talk to about the process of applying, finding one's way, no guidance, hard time deciding on career, and other passions [30].

When someone is provided with mentoring that puts primary emphasis on understanding the culture of the individual, it allows for the individual to be seen in context rather than an individual identity uncluttered by influences. In other words, the issues of guidance, finding one's way, and decision about career are strongly influenced by culture. Thus, having a mentor who understands this can help these individuals find answers to these questions. For example, with regard to decisions about career and passion for other activities like art, many cultures perpetuate a norm of physicians being the elite career and thus individuals may feel culturally pressured to choose as such. Having a mentor who understands this will be

able to appropriately guide an individual such that they make the decision of whether or not to pursue medicine based on their own beliefs as opposed to cultural.

Overall individuals who took part in this MSMP program reported success with medical school applications and went on to report acceptance into medical schools—highlighting the importance and the need for culturally based mentoring programs for individuals [30]. Failing to understand the importance of culture and the fact that cultural context will influence ones thoughts, values, behaviours, and practices can potentially lead to a decrease in diversity in medical school applications.

Real-World Application

The present literature review is not restricted to a North American context; instead, the findings which approach mentorship, roles of the mentors and mentees, mentor and mentee benefits, interprofessional mentorships for teams, gender and mentorship, and culture and mentorship are applicable to understand, improve, and develop optimal mentoring relationships in medicine as a whole. Alongside this, the literature review does account for the fact that, while there is an increase in the diversity of females and ethnicities of medical student applicants, students, residents, and physicians, there must be continual implementation of mentoring programs that tackle ethnicity, socioeconomic status, and gender diversity.

Conclusion

Mentorship is an essential process in academic medicine. The benefits of mentoring are not limited to the mentee but also extend to the mentor with respect to professional satisfaction and institutional recognition. Alongside this, mentoring helps maintain positive associations with residents and faculty members [12]. There are a number of different models of mentorship currently present that can be further categorized depending on the form and means in which the mentoring model is delivered. Women in academia as well as ethnic minorities entering into medicine and allied health professions face systematic barriers to mentorship that should be acknowledged, and thus, access to mentors for women faculty members and from ethnic minority groups should be improved. Future research must be conducted to investigate how these particular groups can be more successful allowing these positive shifts in the medical and other healthcare fields to continue.

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