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Sponsorship in academic medicine in Switzerland: Push and pull

Förderung in der akademischen Medizin in der Schweiz: Fordern und Fördern (Push-and-pull-Prinzip)

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ABSTRACT

Introduction: Mentorship provides general career guidance in academic medicine. Sponsorship advocates for a sponsee by endorsing this person for a position or role. Sponsorship is less common and originates from the corporate world. The objective was to evaluate current mentorship and sponsorship practices in academic medicine in the German-speaking areas of Switzerland. The aim was to assess to which degree sponsorship is implemented in academic medicine in Switzerland.

Methods: Cross-sectional survey of current and alumni participants of career development programs at two Medical Faculties of Swiss universities. Both programs build on institutionalized mentoring. The anonymous electronic survey was based on a literature review with non-validated questions about mentorship and sponsorship.

Results: The overall survey response rate was 37.6% (38/101). The majority of respondents was female (31/38; 81.6%) and between 30 and 40 years of age (22/38; 57.9%).

Almost all participants had at least one mentor (37/38; 97.4%), and mentoring addressed all or most (21/38; 55.3%) of the relevant topics regarding academic career development. More than one third of the respondents (13/38; 34.2%) did not have a sponsor, 4/38 (10.5%) were unsure whether they had a sponsor, and 5/38 (13.2%) had not yet heard about sponsorship.

Discussion: In Switzerland, mentorship is well-established in academic medicine while awareness for the benefits of sponsorship needs to be fostered in order to further advance academic careers in medicine. **Conclusion:** Mentoring and sponsoring may be considered key instruments for empowerment of junior faculty/physician scientists to become leaders in the field of academic medicine.

ZUSAMMENFASSUNG

Hintergrund: Mentoring dient der allgemeinen Karriereberatung in der akademischen Medizin. Beim Sponsoring hingegen wird die geförderte Person gezielt für eine Position oder Rolle nominiert. Sponsoring ist weniger verbreitet und stammt aus der Unternehmenswelt. Das Ziel war die Untersuchung der aktuellen Mentoring- und Sponsoring-Praktiken in der akademischen Medizin in der deutschsprachigen Schweiz, insbesondere die Erhebung, inwieweit Sponsoring in diesem Kontext etabliert ist.

Methode: Querschnittsstudie unter aktuellen und ehemaligen Teilnehmenden von Karriereförderungsprogrammen an zwei Medizinischen Fakultäten Schweizer Universitäten. Beide Programme bauen auf institutionalisiertem Mentoring auf. Die anonymisierte, elektronische, nicht validierte Umfrage basierte auf einer Literaturrecherche zu Mentoring und Sponsoring.

Ergebnisse: Die Antwortrate der Umfrage lag bei 37,6% (38/101). Die Mehrheit der Antwortenden war weiblichen Geschlechts (31/38; 81,6%) im Alter von 30 bis 40 Jahren (22/38; 57,9%). Fast alle

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Teilnehmenden hatten zumindest eine Mentorperson (37/38; 97,4%), und Mentoring beinhaltete alle oder die meisten (21/38; 55,3%) relevanten Themen bezüglich Karriereentwicklung. Mehr als ein Drittel der Antwortenden (13/38; 34,2%) hatte keine Sponsorperson, 4/38 (10,5%) waren unsicher, ob sie eine Sponsorperson hatten, und 5/38 (13,2%) hatten bisher nicht von Sponsoring gehört.

Diskussion: In der Schweiz ist Mentoring in der akademischen Medizin weitverbreitet. Das Bewusstsein für die Vorteile des Sponsorings hingegen sollte weiter gestärkt werden, um akademische Karrieren in der Medizin weiterzuentwickeln und gezielt voranzutreiben.

Schlussfolgerung: Mentoring und Sponsoring nehmen eine Schlüsselfunktion in der Förderung von zukünftigen Führungskräften in der akademischen Medizin ein.

Introduction

Medical leadership has increasingly gained importance in academic medicine.

Mentorship and sponsorship are both closely linked to advancing medical careers and raising to leadership positions [1]. During the past decade, mentorship has been established both through individual initiative and also by institutionalized mentorship programs [2]. A mentor provides guidance to a mentee to foster his/ her career development. Mentorship is associated with increased academic productivity [3] and is considered the most important tool in career advancement, despite low evidence [4,5]. Nevertheless, "mentorship is not enough" [3] since it is insufficient to transform career trajectories [6,7]. Mentorship has not been shown to facilitate career advancement and takeover of leadership roles, especially in later career stages [8].

This might explain why the concept of sponsorship has been recognized lately [3,8]. A sponsor specifically recommends a sponsee for a position or role. Most publications on sponsorship originate in the corporate world [9] and sponsorship slowly advances to other academic fields, such as academic medicine. Specific sponsorship programs have been applied to form leaders in academic medicine [8]. Parallels between the corporate world and the field of academic medicine have been drawn [3,8]. However, the concept of sponsorship in academic medicine needs further exploration.

Studies on mentorship and sponsorship in academic medicine have not been reported in Swiss cohorts in the past decade [10]. To gain insights into current mentorship and sponsorship activities and practices in academic medicine in Switzerland, we performed a cross-sectional survey at the Medical Faculties at the University of Bern and at the University of Zurich. Both Medical Faculties offer a career development program for physicians with academic career aspirations.

Material and methods

Definition of mentorship

Mentorship is defined as "developmental partnership in which knowledge, experience, skills, and information are shared between mentors and mentees to foster the mentee's professional development and, often, also to enhance the mentor's perspectives and knowledge" [11]. In short, a mentor gives advice/guidance and helps someone develop their capabilities [12].

Definition of sponsorship

Sponsorship is defined in a distinct relationship between a sponsor and a sponsee [3].

A sponsor is "a person in an organization who is in a position of influence and power (with access to networks and resources) who actively supports the career of a sponsee whom they have identified as having high potential" [3]. A sponsor provides external validation and endorsement [13]. The Latin origin of the word "sponsor" means "to pledge" [1]. A sponsee is a highly-talented individual who grows into the assigned task at hand, is productive and is distinguished by loyalty to the sponsor. In short, a sponsor actively advocates for someone by endorsing the person for a position or role [12].

Methods

The pillars of the career development programs COMET - Coaching, Mentoring and Training (University of Bern) and Filling the Gap (Medical Faculty of the University of Zurich) are funding of protected research time, structured institutionalized mentoring and career planning. Both programs aim to increase the number of female academic (physician) scientists. Current participants and alumni of both career development programs (COMET since 2016, Filling the Gap since 2014) were invited to participate in the electronic survey in June 2021. We invited 31 participants of COMET (female gender as criteria for program eligibility) [14] and 78 participants (male and female) of Filling the Gap [15]. This cross-sectional survey was designed individually based on a literature review. Survey questions have not been validated. The anonymous survey consisted of 17 open and closed questions and was carried out electronically using LimeSurvey [16]. The survey questions can be found in the Appendix A.

The invitation including the survey link was sent by email by the program directors with a reminder after four weeks. The survey was left open for participation for another four week period after the reminder (survey closure and last data access: August 31, 2021). Descriptive statistics were applied for analysis of responses to the survey.

Results

Demographic information

All 31 COMET participants were contacted by email. For the Filling the Gap cohort, 6 of 78 email addresses were no longer valid and those alumni could not be contacted to participate in the survey which led to exclusion from the survey. One person did not accept the Filling the Gap funding and was thus excluded from the survey. One individual was excluded from participation in the survey due to potential response bias. This results in 70 eligible Filling the Gap funded individuals.

Response rates to the survey were 12/31 (38.7%) for the COMET cohort and 26/70 (37.1%) for the Filling the Gap cohort. This results in an overall survey response rate of 38/101 (37.6%).

All but one participants were still associated with the University of Bern or the University of Zurich, respectively. Most respondents were female (31/38; 81.6%) and between 30 and 40 years of age (22/38; 57.9%). Only three respondents were male (3/38; 7.9%) and four respondents preferred not to indicate their gender (4/38; 10.5%).

Reasons for non-response to the survey were not reported.

Mentorship

20/38 (52.6%) participants had quarterly to six-monthly meetings with their mentors during the funding period. For a small number of alumni (5/38 (13.2%)), the mentoring relationship continued after the funding period. Almost one third of participants (11/38 (28.9%)) indicated that they did not have regular mentoring meetings. Two respondents did not complete this question.

Most participants had one to two mentors (19/38; 50.0%) in the timespan after graduation from medical school until the survey time-point, some participants had three to five mentors (18/38; 47.4%). None reported more than five mentors. There was one non-response to this question.

Mentors were often perceived as role models by their mentees. Mentoring did address all or most (21/38; 55.3%) relevant topics regarding academic career development. One respondent was not sure whether all relevant topics were sufficiently covered (1/38; 2.6%). Six respondents (6/38; 15.8%) reported that not all relevant topics were addressed. One respondent commented: "I am a physician, my mentor is not. There are many duties in medicine that cannot be understood by 'outside' persons." Some respondents would have appreciated more advice on clinical advancement besides research support and career planning advice in general. Six respondents indicated that they would have benefitted from a sponsor (6/38; 15.8%) in addition to a mentor. This question had four non-responders.

What respondents valued most about their mentorship experience included (Figure 1).

Respondents highly appreciated their mentors' support and advisory career input ("specific unbiased advice", "advice on smart career steps", "out of the box ideas", "experienced advice"). Respondents valued the time investment in mentorship, "open discussions" with their mentors and introduction to professional networks.

Sponsorship

Sponsoring was less well-established in this survey cohort, independent of gender. Only 8/38 (21.1%) respondents had one

sponsor, 3/38 (7.9%) respondents indicated to have more than one sponsor. Most respondents (13/38; 34.2%) did not have a sponsor, 4/38 (10.5%) were unsure or did not know whether they had a sponsor and 5/38 (13.2%) have not heard about sponsorship yet. There were five non-responders to this question.

Activities perceived and considered as sponsorship were equally balanced between the following topics: supporting grant acquisition in research, introducing to networks and committees, nominating for leadership opportunities, promoting clinical promotion and allocating high-visibility assignments (order according to most frequent nomination). Similarly, respondents felt that sponsors could support their academic careers by providing the "extra boost", introducing them to politics and institutional culture, accelerating the career process "faster and further", playing favorites and playing it forward (again order according to most frequent nomination).

Perceived benefits of sponsorship in academic medicine included (Figure 2).

Regarding the benefits of sponsorship, respondents reported that sponsorship "increases your (research) network and makes you visible" and that "promotions in the medical field depend more on internal politics than actual clinical and scientific capabilities, that's why a sponsor is crucial". Sponsors select sponsees for career opportunities with adequate pay. One respondent stated that sponsorship "allows you to go through the bottleneck/breaking the glass roof (for females)". Another respondent concluded that "without sponsorship success is very limited; sponsorship remains more important than individual performance" or in other words: "[a successful] career is not possible without a sponsor".

Potential drawbacks for sponsorship that were mentioned included "playing favorites can create jealousies", "being too dependent on sponsor, not developing enough independence", "bias and selection", "unfair competition", "not your own achievement", "conflict of interest", and "gender specific distribution, not very transparent". Some respondents reported that they did not perceive any potential drawbacks for sponsorship at all.

Respondents considered sponsorship most important during the mid-career phase (24/38; 63.2%). i.e. after board certification, during consultant position, advancing to senior consultant position or "Habilitation". Sponsorship was less important in earlier academic career phases (3/38; 7.9%). However, importance of sponsorship lasted until later career phases (4/38; 10.5%), i.e. during advancement to chief position or becoming division head. One



Figure 1. Word cloud of responses to the question: What do you / did you value most about your mentor?



Figure 2. Word cloud of responses to the question: What are potential benefits of sponsorship in academic medicine?

respondent (1/38; 2.6%) was unsure about the significance of sponsorship related to career phase. This question had six nonresponders.

28.9% (11/38) of respondents have actively sought out a sponsor, 52.6% (20/38) reported to have never sought out a sponsor and seven participants did not respond to this question. One respondent commented that he/she "never found out how to get a sponsor".

The distribution of gender between mentors was equal: 44.7% (17/38) female mentors and 44.7% (17/38) male mentors. With regard to sponsors, the picture changed: only 3 female sponsors were reported (3/38; 7.9%) in contrast to 9 male sponsors (9/38; 23.7%). 28.9% (11/38) of participants had both mentors and sponsors. This question had seven non-responders.

Independent from the career development programs, some respondents (10/38; 26.3%) reported an established formal mentorship program at their work setting. Only one established formal sponsorship programs was reported (1/38; 2.6%). Most respondents recommended to establish both mentorship (26/38; 68.4%) and sponsorship programs (24/38; 63.2%). Reasons for not recommending it were not reported.

Discussion

This cross-sectional survey sought to establish current practice on mentorship and sponsorship by interviewing recipients and alumni of two career development programs of Medical Faculties at Swiss universities to provide most recent insights.

The survey findings indicated that the concept of mentorship is well-established in academic medicine in Switzerland as almost all respondents reported to be mentored, while addressing most relevant topics for career advancement with their mentors. The concept of sponsorship was less known and thus less established amongst the respondents. Only one third of respondents indicated to have a sponsor at all. Opportunities for further implementation of sponsorship in academic medicine were identified.

Mentorship versus sponsorship

Mentorship and sponsorship are complimentary but distinctive [7,17]. The survey findings support that both are essential for professional and personal development [6,18,19]. Both are critical to gain perspectives and connections to facilitate career advancement. However, mentorship differs from sponsorship.

A mentor is often a role model who has the knowledge and shares it with the mentee by providing guidance, career advice and psychosocial support [20]. The survey results are in agreement with previous studies that mentorship is especially useful during earlier stages of career development [21]. A sponsor is someone who has power and advocates actively to advance the career of the sponsee. For the survey respondents, sponsorship gained specific importance in mid- to later career advancement. Especially in academic medicine, the importance of sponsorship increases with progress of an academic career [22].

Mentorship often entails a bottom-up approach with responsibility on the mentee whereas sponsorship is top-down, sometimes even with institutional responsibility [23]. Mentorship (mentormentee) is characterized by transformational leadership whereas sponsorship (sponsor-sponsee) relies on transactional leadership, built in strategic alliance [6,13]. The success of mentorship is often measured by subjective participant satisfaction [4,7,21] whereas sponsorship results in objective career advancement.

Given the appropriate power and position, mentors can also take on the role of sponsors [3,18]. This highlights that mentorship and sponsorship could also been seen on a continuum [17]. This approach to developing sponsorship rather than a binary view on sponsorship (i.e. full commitment versus no commitment) might be beneficial in avoiding controversies regarding mandating a sponsee who is insufficiently known to the sponsor with his/her own reputation at stake [17]. Ibarra et al. suggest a spectrum from mentor – strategizer – connector – opportunity giver – to advocate, reflecting the classic sponsorship [17]. The relationship can develop stepwise and evolve incrementally through the different stages [17]. To some degree, sponsorship has to be "earned" by the sponsee [12].

Sponsorship

The definition of sponsorship highlights the power and influence of the sponsor and focuses on the career advancement of the sponsee [23] – the concept of "pushing the sponsee". In other words: "A sponsor is a person who has power and will use it for you." [17]. Importantly, the powerful sponsor is careerestablished and well-connected and can thus act as a talentscout [3]. A sponsor has the power and position to publicly spotlight and advocate for "nascent talent" and shows public commitment to the advancement of a specific talent [8,20] – the concept of "pulling (up) the sponsee" [7].

Sponsorship is episodic and relates to specific opportunities to highlight the capability of the sponsee (e.g. nomination of the sponsee for leadership positions, introduction into networks was reported by survey respondents) [13] and to develop specific leadership/managerial skills of the sponsee [9]. Sponsorship is to benefit high performers by increasing their visibility [9]. It is applied as a deliberate strategy for career advancement of the sponsee [3] and is critical for high-level advancement [13].

A sponsor might risk his/her own credibility if the sponsee does not fulfill the expectations [3]. If, however, expectations are met, sponsors can experience deep satisfaction from sponsoring [8]. Furthermore, sponsors gain information that lead to growth, develop their leadership skills, build reputational capital and tend to raise their awareness of what is happening in all layers of the organization [9].

Loyalty, commitment and productivity of the sponsee limit the risk for the sponsor [3,6,9]. The back-up by a sponsor supports the professional self-advocacy of the sponsee [20]. However, sponsees may encounter the risk of imposter syndrome (internal belief that own success is fraud and not merit-based), and suspicion of favoritism by peers [6]. Being sponsored includes the risk of compromising lateral relationships by fostering vertical ones [13].

Sponsorship provides an "extra boost to get further and faster" [13]. Tension and disconnect between sponsorship and core academic values of transparency, fairness and merit have been described [13]. However, sponsorship does not replace merit based promotion, it complementarily empowers talents [6]. Academic medicine needs more than meritocracy, it needs sponsorship to promote merit-based successes and to build professional networks. This is why a sponsor is especially needed for female sponsees who otherwise hardly get access to male dominated professional networks, so-called "boys clubs". Despite ongoing efforts, female professional networks are still less common.

The rationale of sponsorship is constituted by visibility, credibility, and professional networks [1,20]. "Sponsorship is critical to advance to high-level leadership roles" according to a study using semi-structured interviews on sponsorship by Ayyala et al. [3]. In a similar study set-up, Levine et al. defined three main topics with regard to sponsorship that should be addressed: "1. People (how and who), 2. Process (faster and further), and 3. Politics and culture (playing favorites and playing it forward)" [13].

However, studies on sponsorship with high-level scientific evidence in academic medicine are currently lacking [3,6,13] and this crucial topic thus needs further investigation.

Sponsorship and diversity

Diversity in academic medicine is still lacking and needs to be addressed. Women in top leadership positions remain rare in academic medicine and mentorship cannot fully fill this gender gap [8,13]. One well-known quote from the Harvard Business Review is that "women are over-mentored, but under-sponsored" [7]. This finding is supported by this survey and has been confirmed by Hilsabeck et al. in their investigation on mentorship and sponsorship in neuropsychologists [12]. Levine et al. showed that women seek out and receive - maybe also perceive - sponsorship differently [13]. Women without sponsorship are less likely to be appointed to leadership positions and might even be more reluctant to go for it [7]. Moreover, "just when women are most likely to need sponsorship [...] they might be the least likely to get it" [7]. Women might still be perceived as "risky" appointments by male-dominated panels [7], so-called "manels" [23], by introducing potentially divergent views causing debate in previously homogenous panels.

Establishing sponsorship, especially for underrepresented minorities (e.g. women, people of color), might help to increase diversity in academic leadership and launch new leaders in academic medicine [3,6,13]. Sponsorship might path the way to leadership diversity [13]. Diversity improves organizational performance [8].

Structural institutional bias, implicit bias, stereotypes, and unconscious attitudes contribute to inequalities, best seen in gender differences [13,20]. The concept of role congruity could be mitigated by raising awareness, leading to meaningful behavioral change [13].

Similar to the field of mentorship, implementing formally organized institutionalized sponsorship programs as a sound business practice is critical and might help to overcome biases [1,20,24]. Some institutions perform regular training courses for sponsors and hold sponsors accountable [7]. Making individual and organizational decisions about using sponsorship as a deliberate approach will also address leadership diversity [13].

Strengths and limitations

Response rates to this survey were lower than expected. This might be due to multiple reasons. It remains unclear how many participants were actually reached by the survey invitation by email.

However most importantly, sponsorship and career advancement in academic medicine are very personal and thus sensitive topics that might be difficult to explore with a questionnaire, despite offering open and closed questions. This is supported by rather low response rates in comparable studies in academic medicine [4], however cohort populations differ between studies and thus limit generalizability.

Sociocultural aspects of a population with residency in Switzerland might also play a role with regard to response rates. Sponsorship is anchored in personal, institutional and societal context. In Switzerland, personal career aspirations and strategies for achievement are less often openly disclosed compared to North-American populations, for instance. Social desirability bias is possible if participants perceived the survey to be related to their funding support through the career development programs.

Conclusions

In summary, mentorship is currently well-established in academic medicine. This is supported by the literature review and confirmed by the set-up of the career development programs with institutionalized mentoring at the Medical Faculties of the University of Bern and University of Zurich as well as by the survey results. Sponsorship is less well-known and not yet implemented in the field of academic medicine, both internationally and in Switzerland. However, the awareness for the importance of sponsorship in academic medicine is rising.

Overall, gaining and expanding medical leadership skills are increasingly important in academic medicine to advance one's own career and to empower others by mentorship and sponsorship. Sponsors, let's push and pull up the sponsee!

Abbreviations

Not applicable.

Ethics approval and consent to participate

Data collection, evaluation and publication for this study was waived by the Swiss ethical committee of the Canton of Zurich. Informed consent for publication was obtained from all subjects.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Conflict of interest

The authors declare that they have no potential, perceived, or actual competing interests. BG currently participates in the career development program Filling the Gap at the Medical Faculty of the University of Zurich. This research did not receive any specific grant from funding agencies in the public, commercial, or notfor-profit sectors.

CRediT author statement

BG and BL made the conception of the study. BG was responsible for acquisition of data, data analysis and interpretation, search and review of literature, and drafting of manuscript. BL supervised the design of the study, data analysis and interpretation, and critically reviewed the manuscript. All authors have read and approved the final manuscript.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.zefq.2022.05.006.

References

- [1] Gottlieb AS, Travis EL. Rationale and models for career advancement sponsorship in academic medicine: The time is here; the time is now. Acad Med 2018;93(11):1620–3.
- [2] Kashiwagi DT, Varkey P, Cook DA. Mentoring programs for physicians in academic medicine: a systematic review. Acad Med 2013;88(7):1029–37.
- [3] Ayyala MS, Skarupski K, Bodurtha JN, González-Fernández M, Ishii LE, Fivush B, Levine RB. Mentorship is not enough: Exploring sponsorship and its role in career advancement in academic medicine. Acad Med 2019;94(1):94–100.
- [4] Sambunjak D, Straus SE, Marusić A. Mentoring in academic medicine: a systematic review. JAMA 2006;296(9):1103–15.

- [5] Sambunjak D, Straus SE, Marusic A. A systematic review of qualitative research on the meaning and characteristics of mentoring in academic medicine. J Gen Intern Med 2010;25(1):72–8.
- [6] Raphael JL. The role of sponsorship in achieving workforce diversity in academic pediatrics. Pediatrics 2019;144(2).
- [7] Ibarra H, Carter NM, Silva C. Why men still get more promotions than women. Harv Bus Rev 2010;88(9):80-5, 126.
- [8] Travis EL, Doty L, Helitzer DL. Sponsorship: a path to the academic medicine Csuite for women faculty? Acad Med 2013;88(10):1414–7.
- [9] https://www.catalyst.org/research/sponsoring-women-to-success. Accessed January 21, 2021.
- [10] Buddeberg-Fischer B, Stamm M. Mentoring in der Medizin. Formen, Konzepte und Erfahrungen. [Internet]. Available from (last accessed August 07, 2021): https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/ Forschung/Chancengleichheit/SBF_Schriftenreihe_Mentoring_Bericht_2012. pdf.
- [11] Beech BM, Calles-Escandon J, Hairston KG, Langdon SE, Latham-Sadler BA, Bell RA. Mentoring programs for underrepresented minority faculty in academic medical centers: A systematic review of the literature. Acad Med 2013;88 (4):541–9.
- [12] Hilsabeck RC. Comparing mentorship and sponsorship in clinical neuropsychology. Clin Neuropsychol 2018;32(2):284–99.
- [13] Levine RB, Ayyala MS, Skarupski KA, Bodurtha JN, Fernández MG, Ishii LE, Fivush B. "It's a Little Different for Men"-Sponsorship and Gender in Academic Medicine: A Qualitative Study. J Gen Intern Med 2020.
- [14] COMET, University of Bern: https://www.unibe.ch/ universitaet/portraet/selbstverstaendnis/gleichstellung/ schwerpunkte/comet/index_ger.html. Accessed June 25, 2021.
- [15] Filling the Gap, University of Zurich: https://www.med.uzh.ch/de/ Nachwuchsfoerderung/fillingthegap.html. Accessed June 25, 2021.
- [16] LimeSurvey, University of Zurich: https://www.uzh.ch/zi/cl/ umfragen/index.php/admin/authentication/sa/login. Last accessed August 31, 2021.
- [17] Ibarra H, Kirby J. Women are overmentored (but undersponsored). HBR Idea Cast transcript, August 26, 2010. Harv Bus Rev. http://blogs.hbr.org/ideacast/ 2010/08/women-are-over-mentored-but-un.html. Accessed January 21, 2021.
- [18] Marshall AL, Dversdal RK, Murphy M, Prill DM, Zhang T, Jain S. WOMENtorship: The #WomenInMedicine perspective. Med Teach 2020;42 (2):228–30.
- [19] Sambunjak D. Understanding wider environmental influences on mentoring: Towards an ecological model of mentoring in academic medicine. Acta Med Acad 2015;44(1):47–57.
- [20] Roy B, Gottlieb AS. The career advising program: A strategy to achieve gender equity in academic medicine. J Gen Intern Med 2017;32(6):601–2.
- [21] Farkas AH, Bonifacino E, Turner R, Tilstra SA, Corbelli JA. Mentorship of women in academic medicine: A systematic review. J Gen Intern Med 2019;34 (7):1322–9.
- [22] Sharma G, Narula N, Ansari-Ramandi MM, Mouyis K. The importance of mentorship and sponsorship. J Am Coll Cardiol Case Rep 2019;1(2):232-4.
- [23] Lewiss RE, Silver JK, Bernstein CA, Mills AM, Overholser B, Spector ND. Is academic medicine making mid-career women physicians invisible? J Womens Health (Larchmt) 2020;29(2):187–92.
- [24] Hewlett SA, Sherbin L, Sumberg K. The sponsor effect: Breaking through the last glass ceiling. Harv Bus Rev 2010.