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Gender and Race/Ethnicity dynamics in anesthesiology mentorship: results of a European survey

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Abstract

Background Mentorship is crucial to career advancement, medical education, and psychosocial support, especially for women and minorities. Although anesthesia mentoring programs have shown promise, there are no survey data regarding mentor-mentee relationship dynamics. This study aimed to explore the dynamics of the anesthesia mentor/mentee relationship.

Methods A open cross-sectional web-based survey was distributed by the European Society of Anesthesiology and Intensive Care and European Society of Regional Anesthesia to European anesthesiologists. Participation was anonymous and consent was obtained. The study evaluated responses relating to preferences, facilitators, and barriers to mentorship relationships along with sociodemographic information.

Results In total, 543 anesthesiologists responded to the survey, and 406 (111 mentees, 49 mentors, 193 both, 53 neither) responded to questions regarding mentorship. 184 anesthesiologists identified as woman and 22 as other genders (non-binary, transgender, gender-fluid, and self-described gender). Moreover, 250 anesthesiologists identified as white. Both mentors and mentees indicated that personal compatibility was the most important factor for successful mentorship. Barriers to mentorship included time consumption and perceived lack of interest from the mentor and mentee. Both mentors and mentees benefited from this relationship. The former reported feeling helpful, and the latter supported the development of clinical skills. The mentors indicated that their participation was important for protecting against burnout/exhaustion and impostor syndrome. Participants reported a preference for mentorship programs organized at the departmental level, offered at the start of the anesthesiology education curricula. Women were more likely to feel a 'lack of interest' in mentoring them as a barrier (OR = 2.49, $P = 0.033$). Gender was a barrier for mentors of other genders (OR = 23.9, $P = 0.0027$) and ethnicity (OR = 48.0, $P = 0.0023$). White mentees found gender (OR = 0.14, $P = 0.021$) and ethnicity (OR = 0.11, $P = 0.048$) to be less important barriers to successful mentorship relationship.

Conclusion When possible, programs should prioritize matching mentors and mentees based on personal compatibility and experience in the mentee's area of interest. Addressing the perceived lack of interest in mentoring

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is essential for promoting diversity, equality, and inclusion within anesthesiology, as well as and uplifting women and minorities.

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Keywords Mentorship, Anesthesia, Education, Gender, Ethnicity

Background

Mentorship is increasingly acknowledged as a fundamental element of career progression, medical education, and psychosocial support [1]. It entails a dynamic relationship between a mentor and a mentee, wherein both parties drive benefits and actively engage with each other. A mentor is typically an experienced and trusted advisor who imparts knowledge, guidance, and support to a developing colleague known as the mentee [1–3]. Like a protégé, the mentee receives various advantages from the mentor, including guidance, sponsorship, exposure, and transmission of professional ethics [1, 4]. A mentorship relationship can also offer psychosocial support, fostering the mentee's sense of identity, competence, and role effectiveness, thereby mitigating issues such as burnout [5]. Given that the needs of medical mentees evolve throughout their career trajectory, from trainees to consultants, it is common for mentees to have multiple mentors to address diverse aspects of their professional development.

Effective mentoring has been linked to free choice rather than automatic assignment [1, 6]. Unfortunately, free choice may enhance inequities in mentorship, such as a lack of representation, social connections, or unpredicted opportunities to find the right mentor. Gender inequities in mentorship have been reported and may affect job satisfaction and career advancement [7]. When establishing mentorship, it is important to foster trust. Even though free choice has been reported as essential, some mentoring programs endorsed by societies, such as the European Society of Anaesthesiology and Intensive Care (ESAIC), have been successfully implemented in anesthesia departments [8].

Our understanding of mentorship in anesthesiology remains limited, particularly regarding how gender and ethnic disparities influence achieving successful mentorship [2]. An anesthesia-specific survey conducted in the USA that investigated mentorship practices during residency from the perspective of program directors found that mentorship is essential for developing a career curriculum [9]. A survey of mentorship among Canadian anesthesiology trainees reported numerous barriers to successful mentorship, including time constraints, personal or professional incompatibility, and lack of trainee choice in mentor selection [3]. A qualitative study of mentorship among women and underrepresented minorities showed that access to mentorship plays a significant

role in career development, concluding that mentors with shared race and gender may provide an irreplaceable source of support for mentees [10].

To the best of our knowledge, there has been no survey investigation into the cultivation of mentor-mentee relationships among European anesthesiologists from the perspectives of both mentors and mentees. There is also a paucity of evidence regarding their preferences for structured mentorship programs versus voluntary arrangements.

Additionally, data regarding sociodemographic factors, such as gender and ethnicity, in mentorship programs are missing.

Objectives

The objectives of this study were to examine mentorship relationship dynamics and to gain insight into the selection process between mentors and mentees within the field of anesthesiology. Concurrently, this study also investigated key sociodemographic factors associated with selecting mentor-mentee pairs, as well as barriers encountered in establishing mentorship relationships. We hypothesized that mentorship might be affected by demographics, such as gender, age, ethnicity, country of residence, level of experience, academic involvement, and subspecialty.

Methods

We conducted a cross-sectional open web-based survey on mentorship in anesthesiology. The survey was exempted from ethical committee approval (AZ Sint-Jan Brugge Oostende AV Commissie voor Ethiek; chairperson: Prof. Dr. Ludo Vanopdenbosch; N° SJ2023068; July 17, 2023). The study also adhered to the Ethical Principles for Medical Research Involving Human Subjects outlined in the Declaration of Helsinki and amended by the World Medical Association [11]. The remote, ubiquitous, and secure web-based survey, administered via SurveyMonkey [12], was endorsed by the European Society of Anaesthesiology and Intensive (ESAIC) and the European Society of Regional Anaesthesia (ESRA). SurveyMonkey builds the “Health Insurance Portability and Accountability Act” [13] and “General Data Protection Regulation” [14]-compliant surveys that follow strict rules regarding the protection of health information. The data gathered from the questionnaires were stored safely in the SurveyMonkey database. Access to the result database

was provided by a password only available to authors who analyzed the data collected at the end of the survey period. Only one survey was allowed per IP address and no cookies were used. Participation in the survey was voluntary and anonymous, and individual consent was implied by willingness to complete the survey. All participants were informed about the study's objectives, conduct, confidentiality guarantees, and publication of results. Incentives were not offered. The survey was developed based on a comprehensive literature review and input from subject matter experts. To ensure content validity, a panel of five experts reviewed the survey items for relevance and clarity. A pilot study was conducted with 10 mentors and mentees not involved in the study design, and their feedback was used to refine the survey items and test technical functionality [15]. The ESAIC and ESRA societies also reviewed the survey questions.

An email invitation was sent by ESAIC and ESRA to invite anesthesiologists to participate in October 2023. While it was not promoted, the participants could forward the email to colleagues. The survey was open for two consecutive months. The current ESAIC and ESRA survey policies do not allow for recall emails.

Survey questionnaire

The survey consisted of two parts. First, anesthesiologists were asked to provide demographic information, including age, gender, marital status, family status, country of residence, type of hospital at which they worked, qualifications, level of additional professional studies, years of practice, and everyday workload. Second, questions were asked about mentorship related to the mentee's opinion on mentorship. Finally, the questions sought the

mentors' opinions on mentees and the mentorship process. The survey was developed by the authors for the present study and an English version can be found in the supplementary material (see additional file 1). The set of questions on mentors and mentees was available only for mentees and mentors, respectively. The participants could be a mentor and a mentee and answer both set of questions. A total of 24 questions over 4 pages of the questionnaire were sent. No randomization of the questions was used. A review step was available and a completeness check was performed after the survey was submitted.

Statistical methods

Incomplete questionnaires were not analyzed. The results were mainly descriptive and expressed as frequencies (%) of the responses to each questionnaire item. The approximate mean and standard deviation (SD) were calculated from age categories. Group frequencies were compared using the chi-square test, and mean values were compared by one-way analysis of variance. Logistic regression was used to assess the relationship between the binary responses and a set of covariates. The results were considered significant at the 5% level ($P < 0.05$). Calculations were performed using the SAS software (version 9.4).

Results

Five hundred and forty-three individuals participated, with 406 (74.8%) responding to questions about mentorship ("having a mentor / mentee") (Fig. 1). Responders were classified in 4 groups accordingly: "Not Mentor and Mentee ($n=53$)", "Mentee only ($n=111$)", "Mentor only ($n=49$)", and "Mentor and Mentee ($n=193$)".

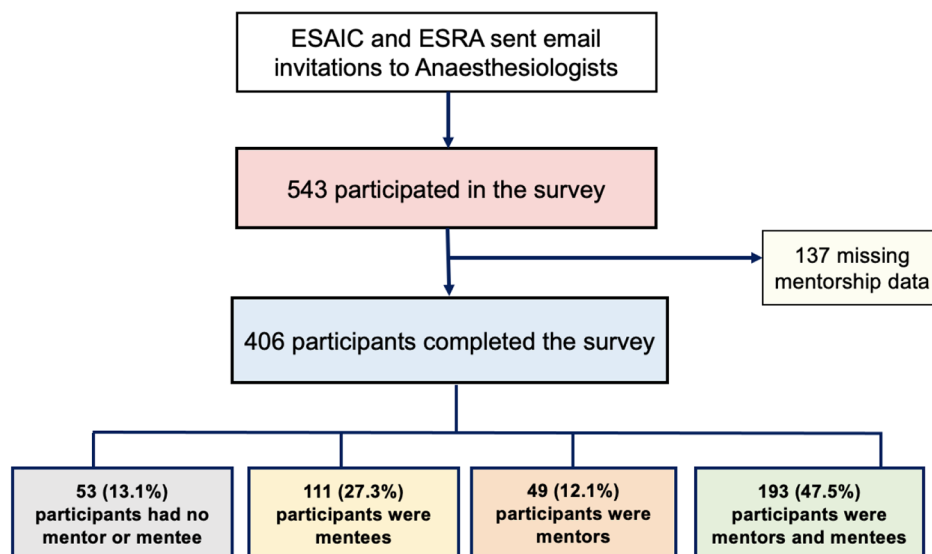


Fig. 1 Participation by groups

Demographics

The demographic characteristics of the 406 participants displayed in Table 1 show that subjects were equally distributed according to ESAIC and ESRA, and according to male/female gender. The respondents were predominantly white (63.9%). Mentors were significantly older and had more experience than mentees and responders in the first group ($P < 0.0001$). No differences were noted between the groups according to anesthesiology, country of residence, ethnicity, and gender.

Study of Mentees

Among the 304 mentees, there was no marked difference between the 111 mentees only and 193 mentees who later became mentors. More than half (57.9%) had mentors assigned by a program or institution, most often during residency training (75.2%), and a majority (80.3%) had more than one mentor. The salient characteristics when choosing a mentor were personal compatibility (80.2%), mentor's previous experience/curriculum vitae (69.0%), and, to a lesser extent, geographic location (40.6%). Gender (5.9%), ethnicity (4.3%), and age (14.6%) were not significant. These aspects were confirmed by the barriers when picking a mentor, namely, personal compatibility (48.7%) and a perceived lack of interest from potential mentors (46.1%). The latter, however, was reported significantly less frequently by mentees who later became mentors than by mentees only (39.4% vs. 57.7%, $P = 0.0027$). As for the most significant gains when having a mentor, "development of clinical skills" (58.3%) and "feeling supported" (54.3%) were indicated.

Study of mentors

Among the 241 mentors, the 49 mentors did not differ globally from the 193 mentors who were mentees before. The majority (59.8%) had their mentees assigned by a program or institution. When choosing a mentee, personal compatibility (66.3%) was highlighted by the survey, while gender (4.2%), ethnicity (1.7%), and age (7.6%) were not highlighted. Personal compatibility was also seen as a barrier (48.8%), but significantly more so by mentors who were mentees than by mentors only (54.9% vs. 24.5%, $P = 0.0002$) and likewise for "time consuming" (46.6% vs. 22.4%, $P = 0.0021$). As for the most significant gain when having a mentee, 69.0% emphasized "feeling helpful." Most responders found that mentorship was important for protecting against burnout and feelings of exhaustion (76.3%), but also for imposter syndrome (70.2%) and helping increase representation (55.8%).

Ethnic/race differences

When choosing mentors, sex was less important for white mentees (OR=0.55, $P = 0.030$), whereas having mentors at the same geographic location was more

important (OR=2.05, $P = 0.0015$). White mentees also found gender (OR=0.14, $P = 0.021$) and ethnicity (OR=0.11, $P = 0.048$) to be less important barriers to successful mentorship relationship. For non-white mentees, self-confidence was the most significant gain (OR=7.25, $P = 0.016$) from the mentorship relationship. White mentees valued mentorship less to protecting against burnout (OR=0.40, $P = 0.017$) and imposter syndrome (OR=0.26, $P = 0.0004$) and felt that mentorship was less important to increase representation (OR=0.53, $P = 0.029$) compared with non-white people. The former mentors were more likely to prefer 'free choice' over mentorship programs. (OR=3.77, $P = 0.038$)

Gender differences

When choosing a mentor, previous experience (OR=1.68, $P = 0.044$) and status in the anesthetic community were more important for women (OR=1.68, $P = 0.021$). Women were more likely to feel a 'lack of interest' in mentoring them as a barrier (OR=2.49, $P = 0.033$). They also believed that mentorship could help increase representation in underrepresented medical groups (OR=2.94, $P = 0.0001$). Women were also more likely to believe that mentorship can protect against imposter syndromes (OR=2.96, $P = 0.0008$). Gender was a barrier for mentors of other genders (non-binary, transgender, gender-fluid, and self-described gender) (OR=23.9, $P = 0.0027$) and ethnicity (OR=48.0, $P = 0.0023$). Concerning the most significant gain from the relationship with mentees, career advancement was highlighted by mentors of other sexes (OR=5.81, $P = 0.041$).

Discussion

Main findings

This ESAIC / ESRA distributed survey identified several facilitators and barriers to mentorship in anesthesiology and preferred routes for mentorship opportunities.

From the perspective of mentees, the primary benefits derived from mentorship were identified as "feeling supported" and the "development of clinical skills." This suggests that mentees greatly value the emotional and professional support provided by mentors as well as opportunities for skill enhancement and growth in their clinical practice. Likewise, a Canadian survey on mentorship in residents reported that mentorship was helpful in developing clinical skills, increasing self-confidence, and realizing personal goals [3]. This could signify that training and residency still failed to fill this gap. Perhaps it is time to focus on these broader aspects of anesthesiologists' careers, as our survey highlights a lack of experience in this area.

Mentors perceived their biggest gain from mentorship as "feeling helpful." This indicates that mentors derive satisfaction from contributing to the development and

Table 1 Distribution of participants according to their demographic characteristics globally and in each group (n = 406)

Characteristic	Total (n = 406)	Neither Mentor nor Mentee (n = 53)	Mentee (n = 111)	Mentor (n = 49)	Mentor/ Mentee (N = 193)
Society					
ESRA	184 (45.3)	21 (39.6)	45 (40.5)	21 (42.9)	97 (50.3)
ESAIC	149 (36.7)	23 (43.4)	37 (33.3)	20 (40.8)	69 (35.7)
Colleague*	73 (18)	9 (17.0)	29 (26.1)	8 (16.3)	27 (14.0)
Continent					
Europe	274 (71)	39 (81.3)	77 (72.0)	36 (73.5)	122 (67.0)
Other	112 (29)	9 (18.7)	13 (28.0)	60 (26.5)	112 (33.0)
Gender					
Man	182 (46.9)	18 (38.3)	54 (50.5)	20 (41.7)	90 (48.4)
Woman	184 (47.4)	25 (53.2)	47 (43.9)	23 (47.9)	89 (47.9)
Non-binary	2 (0.5)	0 (0.0)	0 (0.0)	2 (4.2)	0 (0.0)
Transgender	2 (0.5)	0 (0.0)	1 (0.9)	1 (2.1)	0 (0.0)
Gender fluid	4 (1.0)	2 (4.3)	0 (0.0)	0 (0.0)	2 (1.1)
I prefer to self-describe	14 (3.6)	2 (4.3)	5 (4.7)	2 (4.2)	5 (2.7)
Age, years (SD)	42.7 (10.7)	38.2 (9.9)	38.0 (9.3)	48.7 (10.3)	45.0 (10.3)
Ethnicity					
White	250 (63.9)	32 (66.7)	63 (58.3)	33 (67.4)	122 (65.6)
Other	141 (36.1)	16 (33.3)	45 (41.7)	16 (32.7)	64 (34.4)
Experience					
Junior trainee /resident (0–2 years)	23 (5.9)	6 (12.5)	13 (12.0)	1 (2.0)	3 (1.6)
Senior trainee / resident (3 or more years)	59 (15.1)	16 (33.3)	25 (23.2)	5 (10.2)	13 (7.0)
Fellow or postgraduate trainee	16 (4.1)	0 (0.0)	9 (8.3)	1 (2.0)	6 (3.2)
Board-certified/practicing anaesthesiologist (0–2 years)	30 (7.7)	4 (8.3)	12 (11.1)	2 (4.1)	12 (6.4)
Board-certified/practicing anaesthesiologist (3–6 years)	44 (11.2)	7 (14.6)	15 (13.9)	2 (4.1)	20 (10.7)
Board-certified/practicing anaesthesiologist (7–10 years)	44 (11.2)	4 (8.3)	13 (12.0)	6 (12.2)	21 (11.2)
Board-certified/practicing anaesthesiologist (> 10 years)	174 (44.4)	11 (22.9)	21 (19.4)	32 (65.3)	110 (58.8)
Retired anaesthesiologist	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.1)
Speciality					
Intensive care unit	31 (7.9)	2 (4.2)	7 (6.5)	3 (6.1)	19 (10.2)
Emergency department / Prehospital	3 (0.8)	0 (0.0)	0 (0.0)	3 (6.1)	0 (0.0)
Pain medicine	27 (6.9)	2 (4.2)	8 (7.4)	3 (6.1)	14 (7.5)
General anaesthesia	120 (30.6)	17 (35.4)	34 (31.5)	12 (24.5)	57 (30.5)
Regional / Orthopaedics	86 (21.9)	4 (8.3)	24 (22.2)	11 (22.5)	47 (25.1)
Cardiothoracic	15 (3.8)	3 (6.3)	2 (1.9)	3 (6.1)	7 (3.7)
Paediatrics	25 (6.4)	4 (8.3)	3 (2.8)	4 (8.2)	14 (7.5)
Neuroanaesthesia	11 (2.8)	1 (2.1)	3 (2.8)	3 (6.1)	4 (2.1)
Obstetric anaesthesia	21 (5.4)	4 (8.3)	1 (0.9)	3 (6.1)	13 (7.0)
Transplant	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.1)
I am still in training	51 (13.0)	11 (22.9)	26 (24.1)	4 (8.2)	10 (5.4)
Number of papers by year					
0–1	291 (74.8)	41 (89.1)	90 (84.1)	36 (73.5)	124 (66.3)
2–3	66 (17)	4 (8.7)	13 (12.2)	7 (14.3)	42 (22.5)
More than 3 papers	32 (8.2)	1 (2.2)	4 (3.7)	6 (12.2)	21 (11.2)
Academic work					
Currently in a PhD program	43 (11.1)	4 (8.5)	18 (16.8)	4 (8.3)	17 (9.2)
Hold a PhD degree	64 (16.6)	4 (8.5)	8 (7.5)	7 (14.6)	45 (24.5)
Hold an extra master's degree	84 (21.8)	9 (19.2)	24 (22.4)	11 (22.9)	40 (21.7)
None of these	195 (50.5)	30 (63.8)	57 (53.3)	26 (54.2)	82 (44.6)

Table 1 (continued)

Characteristic	Total (n = 406)	Neither Mentor nor Mentee (n = 53)	Mentee (n = 111)	Mentor (n = 49)	Mentor/ Mentee (N = 193)
Health care					
Academic hospital or tertiary centre (Type A)	253 (64.5)	29 (60.4)	82 (75.9)	31 (63.3)	111 (59.4)
Secondary hospital or district hospital (Type B or C)	73 (18.6)	11 (22.9)	16 (14.8)	9 (18.4)	37 (19.8)
Private practice	24 (6.1)	3 (6.3)	4 (3.7)	3 (6.1)	14 (7.5)
Mix (Shared time between private and public hospitals)	13 (3.3)	0 (0.0)	2 (1.9)	2 (4.1)	9 (4.8)
Mixed practice (both private and public hospital (integrated care)	29 (7.4)	5 (10.4)	4 (3.7)	4 (8.2)	16 (8.6)

ESRA=European Society of Regional Anaesthesia; ESAIC=European Society of Anaesthesiology and Intensive Care. Results are presented as number of participants (%)

*ESRA or ESAIC members could send the survey to a colleague for participation

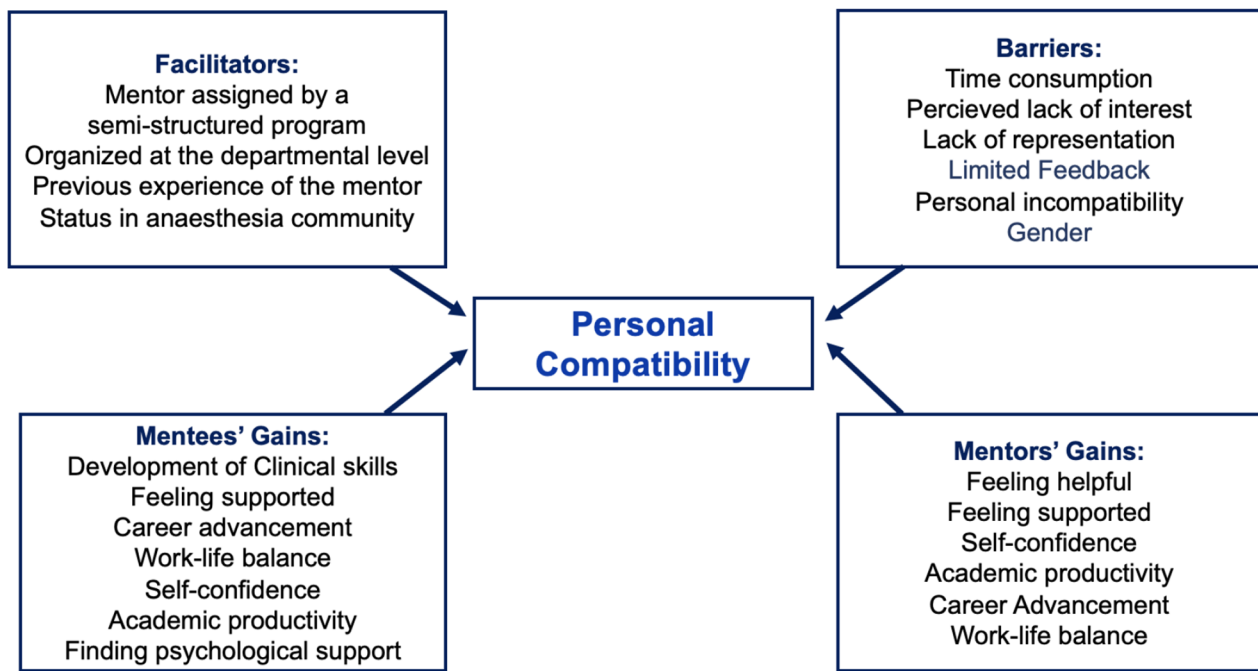


Fig. 2 Mentorship relationship dynamics; gains with facilitators and barriers

success of their mentees, highlighting a sense of fulfillment that positively impacts their professional growth. Previously reported mentors' advantages include having a positive influence on their mentees and a feeling of returning to their profession [5]. This is extremely interesting as it could reduce boreouts and incentivize older colleagues to stay connected to the next generation of anesthetists, promoting satisfaction in what they otherwise might perceive as routine jobs. Regarding barriers to mentorship, mentors identified 'time consumption' and 'personal incompatibility' as significant challenges (see Fig. 2). The time-intensive nature of mentorship commitments can pose difficulties to mentors who already have demanding schedules. It seems logical that busy schedules are more of a problem for mentors, as they usually have extra non-clinical tasks due to their seniority. An American survey focusing on academic anesthesia also

emphasized the importance of sufficient time dedicated to the construction of the mentorship relationship and compensation for the work and time spent [16]. Additionally, personal incompatibility between mentors and mentees may hinder effective communication and collaboration, thereby impeding the establishment of productive mentorship relationships. Previous studies have reported personal and professional incompatibility as barriers and shared values as essential for the mentor-mentee relationship [3, 16]. A successful relationship also depends on reciprocity and mutual respect [16]. An age-old quote springs to mind "Do not take criticism from someone you would not take advice from". Fruitful relationships between incompatible people are unlikely to flourish.

From the perspective of mentees, the significant factors hindering mentorship were a perceived "lack of

interest” from potential mentors, “personal incompatibility,” and “limited feedback.” These challenges suggest that mentees may need to find suitable mentors who are genuinely interested in their development. Juniors, being more invested in advancing their clinical skills, are naturally more inclined to seek constructive feedback essential for their personal growth. Regarding the dynamics of mentorship relationships, three-quarters of the mentees reported having more than one mentor throughout their careers, indicating a dynamic evolution of needs over time. Different mentors may also help with various aspects of career development, from clinical skills to academia, to non-portfolio career elements. This finding underscores the dynamic nature of mentorship needs and suggests that mentees may seek different mentors at various stages of their careers to address evolving professional challenges and goals [17, 18].

Mentoring framework

Although anesthesia societies have effectively implemented certain mentor-matching programs, participants believed that mentorship initiatives should be organized at the departmental level, pairing mentors and mentees at the outset of their anesthesiology training. Semi-structured mentorship programs for medical students pursuing surgical careers have been proven to be effective [19]. As personal compatibility seems to be core to the building of successful relationships and previous literature reports have shown that shared values and personal connections are required, semi-structured programs with a possibility of choice for mentees could prove interesting [16, 20]. Surprisingly, research on the incorporation of personality traits into mentor-matching initiatives is limited. However, a study examining Personality Compatibility Within Faculty Mentoring Dyads found that aligning certain personality traits, such as neuroticism, measured by the Big Five personality inventory, was associated with perceived success in the mentor-mentee relationship, particularly concerning career advancement [21, 22]. Including a personality assessment tool such as the Big Five or the Myers-Briggs Type Indicator (MBTI) in future research endeavors focused on mentorship within anesthesiology could potentially enhance the effectiveness of mentorship programmes and improve overall success rates [22, 23]. However, it is essential to note that while personality matching can be a helpful tool, it should not be the sole factor in pairing mentors and mentees. Other factors, such as goals, interests, expertise, and compatibility in terms of learning and communication styles, should also be considered [24].

A scoping review of mentor training programs in medicine based on 68 articles highlighted the importance of mentor training in helping novice mentors provide effective mentoring [25]. Being a mentor was not innate.

Future efforts for mentorship in anesthesia need to be directed at implementing and improving mentoring programs and capabilities. Coaching new mentors is essential to enhance mentorship as effective communication and adequate commitment has been reported as the key to success [17, 18].

Race/ ethnic disparities

In the field of anesthesia, as in many other professions, race/ ethnic disparities can unfortunately influence the ability to find mentorship. These disparities can stem from various factors including implicit biases, systemic barriers, and cultural differences. Our survey highlighted that white individuals exhibit distinct preferences in mentorship compared to other ethnicities, showing a preference for free choice over structured programs and placing greater emphasis on geographic proximity for mentorship arrangements. This preference may stem from a wider availability of mentorship and support opportunities, higher levels of self-confidence, and less impostor syndrome among white people compared to their non-white counterparts [1, 5]. Likewise, white mentors tend to assign less importance to mentorship when guarding against burnout and impostor syndrome. Non-white mentees often cite enhanced self-confidence as the primary benefit of mentorship relationships.

One significant challenge is the lack of representation of certain ethnic groups within anesthesia [26]. When aspiring anesthesiologists do not see individuals who look like them or share similar cultural backgrounds in leadership roles, it can be difficult to envision themselves succeeding in the field [27]. This lack of representation can contribute to feelings of isolation and hinder mentorship opportunities, especially if free choice is preferred over a program. Moreover, implicit biases may unconsciously influence mentorship opportunities [28]. Research has shown that individuals from underrepresented ethnic groups may face stereotypes or prejudices that affect how mentors perceive their potential [29]. Research by Bonifacio et al. underscores the challenges minority physicians face in accessing mentorship networks, which are crucial for career advancement and professional development [30]. These biases can result in unequal access to mentorship and professional development opportunities.

Cultural differences can also play a role in mentorship dynamics. People from different ethnic backgrounds may have varying communication styles, expectations, and approaches to networking and career advancement [29]. These differences can create misunderstandings or barriers that impede the development of effective mentor-mentee relationships. Addressing ethnic disparities in mentorship during anesthesia requires proactive efforts from both individuals and institutions. Mentors and mentees can work to bridge cultural gaps, foster

understanding, and build supportive relationships based on mutual respect and trust. Initiatives such as mentorship programs tailored to the needs of minority trainees, diversity training for mentors, and the proactive recruitment of underrepresented faculty members can help bridge the gap in mentorship access. By fostering a more inclusive and supportive mentorship environment in anesthesiology, we can empower trainees from all backgrounds to succeed and meaningfully contribute to the specialty.

Gender dynamics

Women and “Other genders” perceive a lack of interest in mentoring as a notable barrier to accessing mentorship opportunities. Likewise, female mentees, in particular, emphasize the protective role of mentorship against impostor syndrome and advocate for increased representation of underrepresented medical groups. Existing literature on mentorship within anaesthesia underscores the disproportionate challenges faced by women and underrepresented minorities in securing adequate mentorship, exacerbated by their underrepresentation in academic settings. [2, 6, 31–34]. Surveys in the US reveal a low number of female mentors and limited mentorship beyond the assistant professor rank, despite recognizing its importance for career success [23]. The strategies proposed to address these challenges include mentorship programs and cultural shifts aimed at mitigating implicit biases among female physicians, with the potential to alleviate impostor syndrome and burnout [35–37]. Addressing the perceived lack of interest in mentoring is essential for promoting diversity, equality, and inclusion (EDI) within the field of anesthesiology. Providing mentors to individuals with protected characteristics is key to enhancing EDI in our communities, especially given the demonstrated benefits. By implementing inclusive mentorship programs and actively supporting individuals from diverse backgrounds, the profession can foster a more equitable and supportive environment that benefits minorities by leveling up differential attainment. Mentors of “other genders” have highlighted a lack of personal interest and gender-related concerns as barriers to selecting mentees. However, they recognize that career advancement benefits are linked to mentorship. Given their primary concern about gender representation in mentorship, it is crucial to offer careful support to help mentors connect with mentees who resonate with their experiences.

Limitations

This survey had important limitations that influenced the reliability and generalizability of the results. It was sent only once to ESRA members, limiting the participation rate and contributing to sampling, response, and

non-response bias. The participation rate cannot be assessed because members of the ESRA overlap. Our survey analyzed only preset covariates and overlooked some, such as personalities or people with disabilities. We decided to stick to a small number to decrease the length of the survey and increase the likelihood of a response. Selection bias cannot be assessed because the demographics of the societies are not publicly available. As such, non-respondent population characteristics could not be assessed. To reduce information bias, mentorship was defined at the beginning of the survey. The interpretation bias was decreased by testing and externally validating the questionnaire. Confirmation bias was avoided by asking the participants questions. Participants responded anonymously to decrease social desirability and acquiescence bias. Recall bias was avoided by analyzing the data of mentees and mentors who were previously mentees.

Conclusions

Ideally, mentorship programs should be organized at the departmental level (at the start of training). Programs should carefully match mentors/mentees based on personal compatibility and previous experience of the mentor in the area of interest to the mentee. It is important to exercise caution to prevent a “perceived lack of interest” from women mentees in the field of anesthesiology.

Abbreviations

ESAIC European Society of Anaesthesiology and Intensive Care
ESRA European Society of Regional Anaesthesia and Pain Therapy

Supplementary Information

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Supplementary Material 1

Supplementary Material 2

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Author contributions

MG and SS conceptualized the survey and wrote the first draft of the manuscript. AA and LS performed the statistical analysis. All authors participated in the survey design as well as read, reviewed, and accepted the final manuscript.

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Data availability

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

Declarations

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Ethics approval and consent to participate

The survey was exempted from ethical committee approval (AZ Sint-Jan Brugge Oostende AV Commissie voor Ethiek; chairperson: Prof. Dr. Ludo Vanopdenbosch; N° SJ2023068; July 17, 2023. Informed consent was obtained from all subjects.

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