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Defining a Supportive Teaching Climate for Clinical Supervisors in Residency Training

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Abstract

Purpose

This study aimed to develop a broad and contextualized understanding of what clinical supervisors require to optimally fulfill their teaching roles by operationalizing the newly formed theoretical construct of the teaching climate.

Method

From September 2022 to March 2024, the authors conducted individual interviews and focus group discussions with program directors and clinical supervisors in postgraduate medical education from various specialties in multiple teaching hospitals in the Netherlands. The authors followed a constructivist interpretative phenomenological approach, studying the phenomenon of the teaching climate through iterative and axial data coding.

Results

Twelve individual interviews, 8 with (deputy) program directors and 4 with clinical supervisors, were conducted. Sixteen additional participants attended the subsequent 2 focus groups, with 8 participants in each group. In total, 16 program directors and 12 nondirectors participated, of whom 17 were women. The authors identified 6 themes encompassing the needs of clinical supervisors: (1) social cohesion, (2) resources for individual clinical supervisors, (3) a dialogue with residents, (4) a strong teaching team, (5) administrative support and facilities in residency training, and (6) support in balancing residency training and patient care. A seventh theme described the specific resources for program directors. Social cohesion not only represented a

separate need but also served as an intermediary among themes 2, 3, 4, and 7, characterizing clinical supervisors' needs in predominantly social interactions, and themes 5 and 6, representing context requirements influencing the work of clinical supervisors in an organizational sense.

Conclusions

This study describes the needs of clinical supervisors in their work environment. A collective effort of all stakeholders involved in residency training is deemed crucial to providing high-quality guidance to residents, requiring organizational acknowledgment of educational efforts and social cohesion. Use of the teaching climate construct might help in the design of more actionable approaches to support clinical supervisors.

High-quality postgraduate medical education (PGME) is important for providing excellent patient care and overcoming challenges in health care.[1] Both program directors and clinical supervisors are responsible for various educational tasks, such as providing residents with effective bedside teaching, career counseling, personal advice, constructive performance feedback, and assessment. Multiple complex factors often impede these efforts.[2] In a health care system in which time and resources are increasingly limited, today's clinical supervisors face more responsibilities and higher expectations in residency training.[3,4] Scientific progress has culminated in higher complexity of patient care, increasing clinical supervisors' workloads while diminishing time for residency training.[5,6] Concurrently, implementing competency-based education has raised the standards and the administrative burden for clinical supervisors.[7-9] Moreover, social and societal changes, such as resident work-hour restrictions or the attention to work-life imbalance, have added to the responsibilities and challenges of supervisors in PGME.[10,11]

To continue to provide residents with sufficient-quality training while they are facing these challenges, both program directors and clinical supervisors in PGME need a supportive work environment that is specific and conducive to their needs. We propose to call this particular environment the *teaching climate,* a theoretical construct encompassing the physical working environment of clinical supervisors and program directors and the prevailing implicit and explicit standards, moods, and attitudes toward residency training in this specific environment. Understanding what makes a supportive teaching climate is important because research has shown that working and learning climates can significantly influence the success of residency training programs[12,13] and the professional performance and overall well-being of faculty and

residents.[14-16] The residents' learning climate is thoroughly researched, resulting in the development of various learning environment measurement instruments.[17-20] Conversely, what constitutes a supportive teaching climate in PGME is unknown, and the specific needs of clinical supervisors have yet to be studied.

Clinical supervisors' and program directors' descriptions of an ideal teaching climate could help initiate conversations about local teaching climates and form a starting point for addressing the numerous challenges clinical supervisors face. Therefore, the main aim of this study was to develop a broad and contextualized understanding of what clinical supervisors require to optimally fulfill their teaching roles by operationalizing the theoretical construct of the teaching climate through in-depth interviews with program directors and clinical supervisors in PGME.

Method

In this qualitative study, from September 2022 to March 2024, we conducted individual interviews and focus group discussions with program directors and clinical supervisors from various specialties and teaching hospitals in the Netherlands, primarily focusing on their experienced needs, wishes, wants, and desires. In Dutch, the umbrella term *behoeften* may encompass any of these experiences. For readability purposes, we will use the English word *needs* hereinafter, despite not conveying the whole meaning of the Dutch word *behoeften*. In the Netherlands, clinical supervisors provide daily supervision to residents. Program directors are clinical supervisors formally appointed by the Medical Registration Council, which is held accountable for the residency training program's overall conduct, quality, and organization.

Clinical supervisors and program directors are jointly responsible for the residency training program, forming a clinical teaching team. Since 2011, the Directive of the Central College of Medical Specialists has mandated that teaching hospitals have a hospital-wide education committee (HEC) responsible for monitoring and promoting the quality of residency training.[21]

The institutional review board of the Academic Medical Center of the University of Amsterdam provided a waiver of ethical approval. After being informed beforehand about the study procedure in an informational letter, all participants gave informed consent to participate in the study and to be tape-recorded or audio-recorded. Confidentiality was guaranteed in the invitation and at the start of each interview and focus group session. Additionally, we asked the focus group participants to verbally state their consent on the record before the session started. No participants dropped out or retracted their informed consent.

Study design and research paradigm

We followed the constructivist paradigm, acknowledging that all experience is subjective and dynamic and does not lay claim to a single observable truth.[22] We aimed to gain insight into deciding elements of a supportive teaching climate, using the interpretive phenomenological approach to identify the essence or core commonality and structure of the teaching climate as experienced by the clinical supervisors.[23] This approach fits our primary intention of illuminating physicians' experiences of the teaching climate rather than defining it. We followed the Consolidated Criteria for Reporting Qualitative Research Guidelines (COREQ).[24]

Semistructured interviews

We used a purposive sampling method for participant selection for the semistructured interviews, aiming at a maximum variation of participants regarding gender, experience as an educator, specialty, and types of hospital settings (e.g., university medical centers and nonacademic hospitals).[25] In July 2022, we approached HECs of multiple hospitals nationwide, requesting their help in inviting possible candidates for our study. We continued enrollment until all research team members agreed that theoretical sufficiency had been reached.[26] All one-on-one, in-depth interviews were conducted in Dutch at the participants' primary working location. P.v.S. conducted 10 interviews, and A.W.v.G. conducted the remainder. The interviews were audio-recorded, pseudonymized, and transcribed verbatim. We shared transcripts with the participants, allowing for potential elaborations or corrections. We received no comments on the transcripts.

We based the primary interview guide on earlier research on elements of supportive work environments and the research team's previous experience studying medical education. We intentionally kept guiding questions brief and general, focusing on extracting the specific needs for a supportive teaching climate. Before starting formal data collection, we conducted one pilot interview in June 2022 and subsequently refined the primary interview guide (see Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B717). We halted recruitment every 3 to 5 interviews to facilitate iterative analysis and adaptation of the interview template to cover any knowledge gaps.

Focus group discussions

Informed by the preliminary findings from the individual interviews, we selected topics that merited further exploration. These topics were subsequently discussed (in Dutch) in 2 online focus groups using Microsoft Teams, version 25044.2208.3471.2155 (Microsoft Corp., Redmond, Washington) in February 2024 to explore whether the preliminary themes resonated with a broader target population. We recruited participants through the HECs from multiple hospitals and through the individual researchers' networks. One focus group consisted solely of (deputy) program directors in PGME. The second group consisted of both program directors and supervisors, whom we asked to specifically focus on the clinical supervisor role. The sessions focused on topics specific to the respective populations, as explained in the focus group guide (see Supplemental Digital Appendix 2 at http://links.lww.com/ACADMED/B717). The online sessions were audio- and video-recorded. Both sessions were moderated by J.W.V.d.B. and observed by A.W.v.G. and K.M.J.M.H.L. During recruitment we did not offer incentives for participating in interviews or focus group discussions.

Data analysis

Data analysis started with open coding, meaning we added descriptive codes to quotations in the transcript, using MaxQDA, version 22.0.1 (Verbi GmbH, Berlin, Germany). Subsequently, we used axial and selective coding to cluster overarching codes. Coding was performed independently by P.v.S., A.W.v.G., and J.W.V.d.B., after which differences in coding were discussed with the whole research team to reach consensus on individual codes or themes. We also discussed existing literature concerning the emerging themes, actively searching for existing overarching constructs

that might aid the theory-building process. All interviews were analyzed anew after each revision of the axial coding system, abiding by the practice of iterative analysis. The coding process was performed on the Dutch transcripts, and the transcripts were not translated in full. Only the specific quotations in the Results section were translated into English by A.W.v.G.

During analysis, it became apparent that program directors addressed needs specific to their role, in addition to those voiced by clinical supervisors. Therefore, we decided to distinguish between clinical supervisors and the subgroup of program directors in consecutive recruitment and analyses. Another early finding was that participants often mentioned time and money as needs. Although acknowledging the importance of these factors, they are nonspecific, possibly representing myriad needs. Therefore, when participants mentioned time or money in subsequent interviews, we probed for reflection on the underlying need represented by these terms.

Reflexivity

Using the interpretive phenomenological approach, we acknowledge that researchers have an inextricable role in interpreting and constructing results, making reflexivity crucial.[27] P.v.S. is a sociologist, initially unfamiliar with the working environment in PGME. This outsider view provided an open attitude toward the teaching climate and the medical profession in general but may have resulted in taking participants' subjective experiences at face value instead of weighing them more analytically. Although familiarity with the context allowed A.W.v.G. (a physician and neurology resident) to pick up on subtle cues provided by the candidates, it may also have

fostered preconceived ideas about the teaching climate. J.W.V.d.B. is an active participant in the teaching climate, meaning his opinions might have pervaded the interpretation of participants' answers during the focus group sessions.

K.M.J.M.H.L. (professor in professional performance) and S.E.G. (professor in internal medicine, former program director, and vice-dean of education and training of the University of Amsterdam) have extensive experience with both the practical and scientific sides of medical education. Although their preconceptions of the requirements of clinical educators aided in the identification of possible omissions or need for data clarification, they might have influenced the interpretation of results. The effects of implicit biases mentioned above were reduced by choosing an open coding strategy and regularly discussing findings and experiences with the research team. The interviewers also kept reflective journals and recorded field notes during the individual interview phase.

Results

We conducted 12 individual interviews, 8 with (deputy) program directors and 4 with clinical supervisors. Sixteen additional participants attended the subsequent 2 focus groups, with 8 participants in each group. In total, 16 program directors and 12 nondirectors participated, of whom 17 were women. Sixteen participants worked in medical specialties, 7 in surgical specialties, and 5 in supporting or diagnostic specialties. Supplemental Digital Appendix 3 (at http://links.lww.com/ACADMED/B717) describes the participant details. All participants were

given fictionalized names throughout the article to ensure anonymity and facilitate ease of reading.

Overall, we found that participants had difficulty describing their perception of an ideal teaching climate, instead regularly pointing out the challenges they experienced during their work as clinical teachers. Identifying the underlying needs that would prevent or solve these problems required the interviewer to pose follow-up questions. Probing questions often led to elaborate reports of workarounds or adaptations to enduring problems in their clinical teaching role.

We identified the following needs of the clinical supervisor: (1) social cohesion, (2) resources for the individual clinical supervisor, (3) a dialogue with residents, (4) a strong teaching team, (5) administrative support and facilities in residency training, and (6) support in balancing residency training and patient care. A seventh theme describes the specific resources for (deputy) program directors on top of their needs as clinical supervisors. Although theme 1, social cohesion, represents a need in itself, it also serves as an intermediary among themes 2, 3, 4, and 7, all characterizing clinical supervisors' needs in predominantly social interactions, and themes 5 and 6, representing overarching context requirements influencing the work of supervisors organizationally. Figure 1 visualizes all needs for a supportive teaching climate, which will be described in further detail below. We used data from all the interviews and focus group sessions during analyses, but the citations do not include statements from all participants.

Social cohesion

Clinical supervisors describe needing a work environment where solidarity, reciprocity, and trust are the prevailing values. Although not literally mentioned by participants, this constellation of values is also known as the overarching construct of social cohesion. Supervisors describe these organizational values and social behaviors as equally crucial to the different stakeholder groups in residency training and as a foundation for all interpersonal relationships and collaborations within PGME.

Clinical supervisors described needing a sense of solidarity, the feeling of "doing it together," or as Gemma (program director) put it, "Well, it is a huge help if the team sees the work as a joint responsibility. So that you have an eager team of medical specialists, and eager residents as well, right?…So that it really feels like a joint effort." Taking a personal interest in colleagues and receiving that attention and collegiality in return helped supervisors feel enabled to seek and get support when confronted with personal or workplace difficulties. Like the need for solidarity, supervisors described mutual trust as indispensable for a supportive teaching climate. Zoe (clinical supervisor) explained this: "…and maybe you also just need to trust each other.…That people can express concerns when things do not go their way or when there are problems in the workplace, that you can entrust this to each other."

Clinical supervisors also mentioned a need for reciprocity, which they understood as exchanging ideas or actions for mutual benefit by all partners in PGME. For example, Helen (program director) mentioned, "'But it is also necessary for the residents to understand us. To understand where we

are coming from." When asked to reflect on underlying requirements to ensure reciprocity and trust in teams, she said, "To make sure that people feel free to speak their mind.…So the residency program really benefits from an accessible culture." Helen and various other participants discussed how a functional hierarchy that facilitates dialogue among all partners in PGME ensures reciprocity by enabling everybody, irrespective of rank or position, to contribute to improving the residency training program.

Resources for individual clinical supervisors

Clinical supervisors expressed needing to be able to tailor the local teaching environment to their individual needs and strengths, identifying multiple requirements to achieve this goal. First, clinical supervisors described needing regular feedback on their teaching abilities from both residents and colleagues. Feedback could be given informally or in a more traditional format by using questionnaires or other grading tools. Charles (clinical supervisor) elaborated on receiving feedback through standardized questionnaires: "Yes, I do like it because that way I get to hear problems some people might encounter when dealing with me, without me realizing it."

Second, clinical supervisors expressed the need for institutional financial and practical facilitation of faculty teaching development. Diego (program director) described that courses were perceived as especially helpful when they were directly applicable to daily practice, tailor-made, and aimed at collective efforts and results: "We will do this with the whole department, all clinical supervisors…, and we'll do a special program, together with the residents, in which we will define the residency training program – the joint training program." Finally, clinical educators described

feeling better equipped for their teaching duties when working in an environment that encourages authenticity and autonomy, as illustrated by Xandra (clinical supervisor): “What I need is just freedom. Without us saying, okay…, in this group we work in this specific way…because there is so much knowledge, so a little creativity should be valued – in fact, stimulated!”

Modern apprenticeship: dialogue with residents

This theme focuses on the interactions between supervisors and residents that influence the teaching climate. Clinical supervisors reported that excellent residency training requires strong professional relationships between clinical supervisors and residents to adequately adapt to the resident’s level of training and their strengths and weaknesses. Beatrice (clinical supervisor) explained this need for connection with residents by saying, “If you know someone, if you know their learning goals, their level, or learning style, you can, you know, give them better guidance. And sometimes it helps if you just know something about their personal situation.”

Clinical supervisors in large residency training programs reported that infrequent and inconsistent interactions with the residents could negatively impact this essential dialogue with residents. They also explained how these problems could be mitigated through internal organizational structures, such as regular meetings of the program director with a small delegation of residents, serving as a proxy for a dialogue with every individual resident. Furthermore, supervisors pointed out that grading systems, such as the Entrustable Professional Activities system, could provide them with insight into the residents’ learning trajectories when direct interaction was impossible.

However, these solutions were considered second best and not a substitute for the preferred dialogue with residents.

To further enhance clinical supervisor and resident interaction, clinical supervisors said they needed residents to share their learning goals and training needs explicitly. Additionally, a supervisor-resident partnership and shared responsibility for the overarching residency training program was thought to be an important aspect of a supportive teaching climate. Ingrid (program director) illustrated this by saying,

> And they think: you will tell me what to do. No, you are going to tell me what you are going to do today. You want to be trained, so what do you want to do?…Ultimately, I want the responsibility for the residency training program to be with them.

Finding strength in teaching teams

In addition to the implicit social norms and values described as social cohesion, clinical supervisors voiced 3 needs related to the teaching team. They described needing to work in a teaching team with shared goals, values, and attitudes toward residency training. Supervisors emphasized a need for unity when communicating decisions made by the teaching team, even when agreement had been reached after an initial dispute. Frederick (clinical supervisor) explained this by saying, "So at some point, it is like: this is the decision. Is there any compelling reason not to do it? Yes, then we have to discuss it again. But otherwise, this is the decision, and then that's it."

In addition, clinical supervisors found it essential to allow for personal differences in affinity for residency training, meaning that not every supervisor in the teaching team should be obliged to

perform the same tasks within the residency training program. William (program director) explained this as follows: “One doctor leans slightly towards research, and another more towards education and residency training.…Not everyone has to become a professor, you can also spend your time on residency training.” Participants also voiced a need for recognition of clinical teaching performance, stating that individuals with exemplary educational qualities should be valued accordingly by departmental or institutional leadership. William explained this as follows:

> One of our older colleagues has never published a single article or anything but is just a very good specialist and an amazing doctor that treats patients very well, and then I think, well: why is he not in the educational committee? Because when residents perceive him as a role model, why not?

Administrative support and facilities in residency training

Clinical supervisors must often use educational systems, such as resident portfolios or competency tracking systems. Participants perceived these systems as instrumental to high-quality residency training when implemented as a supportive system. Eleazar (clinical supervisor) explained this by saying, “That may help residency training: a well-structured grading system that is as lean as possible.” However, when clinical supervisors perceived an excessive institutional emphasis on educational systems in residency training, they experienced a debilitating administrative burden, often negatively affecting the teaching climate. Lisa (program director) illustrated this, “And yes, it is a lot of administration. Sometimes it feels like administrating for the sake of administrating.”

Finally, clinical supervisors described needing physical spaces and areas accommodating several educational activities. For example, they need rooms that provide enough privacy to facilitate personal conversations with residents or to discuss patient cases without too many distractions. Ingrid (program director) explained this as follows: “So, the workplace…that focus, that could be better. And also regarding privacy, because sometimes you just…you would want to give more feedback, but then you are in an open room.…That can sometimes be a bit confrontational.” Anticipating these needs can prevent unnecessary expenditure of time and energy in finding suitable physical workplaces.

Support in balancing residency training and patient care

Clinical supervisors reported performing a balancing act when providing residency training while serving patients simultaneously, as Eleazar (clinical supervisor) explained, “We have a hospital where we treat patients, and within that context, we have to teach people.” Supervisors reported the importance of recognizing learning opportunities in daily practice. Helen (program director) described this as follows: “A resident works as a resident. And they have to learn from daily practice. We provide practical training.…So I think that every case you discuss with them is, in fact, a learning opportunity.” Therefore, supervisors stated they need support in effectively integrating their educational tasks with daily patient care, naming 3 influencing factors: the amount of patient care, the complexity of patient care, and workforce shortages.

Clinical supervisors experienced the balancing act both on a practical level and as an internal and emotional conflict, feeling forced to choose between the quality of residency training and patient

care. For example, when asked to reflect on training residents in the operating room with the added pressure of long patient waiting lists, Eleazar said, “If possible, you let the resident do it, but then you can sometimes feel your blood pressure rising, and you think: maybe we will not be able to operate on that last patient!” Supervisors felt a similar conflict when the complexity of teaching cases was deemed too high or too low compared with the residents’ skills. Eleazar pointed out that good patient care should always come first: “The goal of surgery is not to train a resident. The goal is to make the patient better.”

Participants named staffing decisions and the allocation of resources by institutional management as important factors in balancing patient care with residency training. Anna (program director) explained how the predominant scarcity model in health care could create a dependency of the teaching team on departmental or institutional management, ultimately influencing the residency training program:

> If the staffing is inadequate, the residency training program will be inadequate.…But my boss can only spend the money once. So, I am dependent on him.…So it will remain a tension between what I want and what he thinks I need.

Eleazar explained how high workloads due to the scarcity model also influence the well-being of the individual supervisor: “So we are constantly stressed.…Not enough rooms, not enough employees, no Nurse Practitioners.” Contrasting this, other participants explained how sufficient staffing and good institutional leadership supported the proper integration of patient care and residency training, suggesting that local settings impact the potential for supervisors to balance these 2 pillars.

Specific resources for program directors

Although (deputy) program directors' needs for a supporting teaching climate did not fundamentally differ from clinical supervisors' needs, program directors described additional needs in their specific role. First, the previously described need for recognition of excellence in medical education was more acutely felt by program directors, both in the context of the teaching team and on a larger organizational scale. As Marion (program director) explained, "If that role of program directors is deemed just as essential as that of a researcher or a clinician, then you are enabled to fulfill your duties as an educator." This quotation emphasizes that program directors need sufficient mandate and support from institutional or departmental leadership for a supportive teaching climate for themselves and the whole teaching team.

Program directors described that central educational bodies, such as HECs, are pivotal in gaining this support and recognition. They also reported that HECs were necessary for facilitating interaction among program directors of different departments. They described this interaction as instrumental to shared problem-solving, as explained by Quincy (program director): "Because I think it is an important task of the hospital-wide education committee to bring different residency training programs together to share both problems and positives so that they can learn from each other."

Another critical need voiced by program directors was the opportunity for adequate preparation before starting in this position. They reported needing enough time to learn the formal responsibilities and tasks of the role. They also mentioned a desire for readily available

information about managing residency training at the start of their role as program directors. More so than clinical supervisors, program directors mentioned role models and mentors as valuable sources of information.

Lastly, although clinical supervisors mentioned the burden of administrative tasks in residency training, only program directors described a specific need for administrative support. They found that a secretary dedicated to the residency training program or assistance from HECs could meet this need. Program directors argued that, without this support, the administrative burden of residency training programs prevented them from spending time on the task most meaningful to them: interacting with the residents. Aaron, a clinical supervisor with a former wish of becoming a program director, summarized this: “The formal residency training programs have become such an administrative challenge that I no longer want to become a program director anymore. Because I want to educate people, I do not want to become the program director.”

Discussion

The main aim of our study was to develop a broad and contextualized understanding of clinical supervisors’ needs in their teaching roles in PGME, using the lens of the newly formed theoretical construct of the teaching climate. We identified 7 needs that determine a supportive teaching climate in the eyes of clinical supervisors and program directors in PGME. Interestingly, participants found it difficult to envision the optimal teaching climate, instead describing how they solved problems in their local setting. We hypothesize that the enduring challenges faced by clinical supervisors in the current health care system formed a culture emphasizing direct

problem-solving to mitigate external pressures on the teaching climate. Therefore, decision-making bodies, such as HECs and hospital directors, should reflect on whether they sufficiently focus on the requirements of clinical supervisors when governing larger-scale hospital systems.

A key finding of our study is the reported need for solidarity, reciprocity, and trust, concepts that can be described using the overarching concept of social cohesion. This concept can be defined as the strengths of social bonds, which constitute the very fabric of society, or as Durkheim puts it, "the glue that holds it together."[28,29] The finding that clinical supervisors need social cohesion is backed by previous research showing that interpersonal relationships strongly influence job satisfaction in medical professions.[30,31] Additionally, research has shown that educational discussions with peers nurture work engagement in clinical supervisors.[32,33] The wish program directors in our study expressed for HECs to connect them with other program directors is a finding not explicitly reported in previous research on clinical supervisors' opinions of these committees.[34]

The importance of social cohesion is also reflected in the finding that residents impact the teaching climate of clinical supervisors, just as the performance of supervisors impacts the learning climate of residents.[17] To our knowledge, this was not found in previous research, although it mirrors the suggestion that social and interpersonal factors sustain job satisfaction in program directors.[35] Participants also addressed the earlier researched discrepancy between residents and clinical supervisors in beliefs about what is educational and valuable in patient care, feeling that residents do not always recognize learning opportunities.[36,37]

Our study suggests that successive changes in the structure and requirements of residency training, such as the Entrustable Professional Activities system or competency-based training, potentially threaten the supervisors' need for direct interaction with residents. Program directors in particular described how the administrative burden of continuous assessment prevented them from spending valuable time on "real" interactions with residents, a finding consistent with earlier research.[9,38] However, they also highlighted the supportive potential of systematic assessments and evaluations for executing the supervisory role. When structural residency training requirements are implemented as assisting tools rather than a means to an end, clinical supervisors feel supported in their daily interactions with residents. Therefore, in a constructive teaching climate, the underlying need for direct personal interaction with residents voiced by clinical supervisors should always be paramount when implementing future innovations in residency training.

Our study reproduced earlier findings indicating that appreciation for educational efforts can be shown through providing sufficient resources and support**,** adequate workspace,[39] and opportunities for personal development.[40] However, we also found that clinical supervisors in a healthy teaching climate experienced recognition of the importance of education by management, thereby acknowledging that residency training is as important to patient care as, for example, research. Unfortunately, our study adds to a large body of literature stressing that recognition and acknowledgment of clinical supervisors' efforts in residency training are often lacking despite the espoused values of teaching hospitals.[32,37,41,42] Previous research has debated whether it is a logical fallacy to speak of a balancing act between education and service, stating

that education and patient care are always intertwined and, therefore, not mutually exclusive.[43,44] Nonetheless, participants in our study reported feeling conflicted when providing both patient care and residency training, as substantiated by various other studies.[37,45] A shared commitment to educating the future workforce, for example, by including clinical supervisors and program directors in decision-making bodies of clinical departments, might help integrate residency training with the increasing challenges of daily patient care and improve the teaching climate.[46]

Limitations and future research

We conducted this study among clinical supervisors in residency training programs in the Netherlands. We recognize the wide variance in residency training programs worldwide. For example, residency training in the Netherlands is comparatively nonhierarchical, with a long tradition of residents providing feedback to superiors, which is uncommon in many other countries. This cultural lens may have potentially affected the transferability of our results. However, our findings also describe overarching values and challenges recognized in many health care systems worldwide, regardless of the specific structures of residency training programs.

This study offers insight into the essential building blocks for a supportive teaching climate in PGME, which policymakers can readily use to ensure proper accommodation of clinical supervisors and program directors. Teaching teams can use the defined building blocks to evaluate their teaching climate through team discussions, empowering them to identify potential improvements in their teaching climate. To better facilitate these processes locally, future research could focus on developing measurement instruments to evaluate and monitor the

experienced quality of the teaching climate. On a macro level, this study addresses the intriguing possibility of researching focused interventions on specific aspects of the teaching climate. For example, use of the teaching climate theoretical construct could facilitate research on the effect of systemic health care phenomena on clinical supervisors in PGME. Research on the effects of high demands on program directors deserves special attention because recent research has already shown that this subgroup is at high risk for burnout, depression, and anxiety.[38] Additionally, studying similarities and distinctions between (aspects of) teaching and learning climates in PGME could be interesting.

Conclusions

This study attempted to define the crucial elements of a supportive teaching climate for clinical supervisors in PGME by studying their expressed needs. The presented insights may be instrumental for teaching teams and institutions to reflect on current arrangements, structures, and cultures to optimally support clinical supervisors in providing high-quality care. Use of the teaching climate construct in future research might help in the design of more actionable approaches to addressing the numerous challenges encountered by clinical supervisors. Such research may benefit clinical supervisors' fulfillment, well-being, and teaching experience, thereby contributing to higher-quality residency training programs and patient care.

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Figure Legend

Figure 1

This illustration summarizes (the underlying relationship of) the needs of clinical supervisors for a supportive teaching climate, derived from semistructured interviews and focus groups with 16 program directors and 12 clinical supervisors in postgraduate medical education in the Netherlands conducted from September 2022 to March 2024. The following themes were identified: (1) social cohesion, (2) resources for individual clinical supervisors, (3) a dialogue with residents, (4) a strong teaching team, (5) administrative support and facilities, (6) support in balancing residency training and patient care, and (7) specific resources for program directors. Social cohesion not only represents a need in itself but also serves as an intermediary among themes 2, 3, 4, and 7, characterizing needs in predominantly social interactions, and themes 5 and 6, representing context requirements influencing the work of clinical supervisors in an organizational sense.

Figure 1