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Navigating Clinical Decision Support Systems in Emergency Medical Services: Balancing Professional Judgment and Technological Integration

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Abstract

This article illustrates how clinical decision support systems (CDSS) are integrated into *clinical reasoning* and affect decision-making processes in emergency medical services (EMS). CDSS aims to assist clinical reasoning with relevant patient information and medical knowledge, facilitating decision-making. As CDSS become increasingly significant in Swedish healthcare, understanding their implementation is critical, particularly as technological innovations may reshape clinical reasoning and professionals' decision-making. The study draws on empirical data from observations and interviews with registered nurses (RNs) in a simulation project. Findings illustrate how clinical reasoning is a collective process among colleagues and how emotions and tacit knowledge are central to professional judgment. Although RNs express confidence in technical systems assisting clinical reasoning, they remain skeptical in situations requiring compromises to their judgment based on CDSS outputs. Finally, the article problematizes the effects on RNs when working with unsynchronized or insufficiently functioning technical systems.

Keywords

Professional logic, clinical reasoning, CDSS, decision-making, community of practice

Introduction

In the early 2000s comedy series *Little Britain*, a hospital receptionist always responds to clients' questions with "Computer says no." The term became popular because it visualizes the criticism of organizations and professions that blindly rely on computer-generated information for decision-making. However, it also touches on more profound concerns about how welfare institutions and professionals are increasingly bound by preprogrammed decision-making systems that are unable to empathize with or consider personal conditions.

In contemporary Western healthcare, clinical decision support systems (CDSS) have become more important as technological innovations and organizational changes toward explicit standards have become central to professionals' work (Johansson et al., 2015; Simonet, 2011). CDSS refers to health information technology designed to improve healthcare decisions by providing person-specific health information (Berner & La Lande, 2007). The primary purpose is to assist professionals' *clinical reasoning* with relevant patient data and medical knowledge, thereby improving decision-making (Sim et al., 2001). CDSS includes tools like clinical alerts, guidelines, reminders, and triage support systems that evaluate vital parameters for normal versus risk values (Sutton et al., 2020). In EMS, where time is crucial, various CDSS can accelerate and refine decision-making.

However, there is significant variation in guidelines and systems supporting decision-making. The most common are paper-based guidelines for triage or reminder and those related to clinical pathways for specific conditions. There is also a significant variation in computerized decision support systems that aid various functions from medication dosages to assessing skin changes. Based on recent research, the systems differ in design, usability, and updates. (Sutton et al., 2020). Broadly, CDSS can be grouped into two types based on how they incorporate new knowledge. The first type uses immediate patient data to generate practice-based evidence in real time, while the second relies on experts to update the system with new algorithms based on practice-based evidence (Ostropolets et al., 2020).

The 1980s marked a paradigm shift regarding the use of CDSS in decision-making processes in healthcare (Sutton et al., 2020). Despite the rapid development of CDSS in clinical decision-making processes, uncertainties remain regarding various effects on professionals, patients, and expenses. There are both optimistic interpretations and concerns about using CDSS as a means of decision-making in healthcare (Andersson Hagiwara et al., 2019). On the one hand, automated decision-making like CDSS can provide rigor and efficiency when an excessive amount of information needs to be processed and/or in stressful environments. Rather than arriving at a specific diagnosis, CDSS in EMS advises on whether a condition needs urgent

treatment. Hence, an important objective of CDSS is to assist decision-making by sorting patients toward either a "fast track" for specialist treatment or admission to a ward. A study by Hagiwara Andersson et al. (2012) shows that digital decision support in EMS can increase adherence to guidelines when compared with paper-based guidelines. However, EMS guidelines are often based on desirable outcomes that are defined by the hospital organization, making it difficult to adapt to actual situations (Andersson et al., 2019; Timmerman & Epstein, 2010). Another matter of concern is sorting the amount of so-called alerts, a consequence of the high quantity of systems in use in today's healthcare, all of which produce various warnings. Besides the apparent annoyance that a high quantity of warnings can create for professionals, a backlash may be what scholars call "alert fatigue," meaning that professionals simply pay less attention to them (Khalifa & Zabani, 2016).

While CDSS likely possesses a greater ability to integrate multiple variables to optimize medical outcomes, their use can challenge patient autonomy. The reliability of CDSS might unintentionally reduce the opportunity for patients to actively participate in their own care decisions (Berg, 1997). This tension highlights a critical balance: while CDSS can support improved decision-making, it may also introduce unintended consequences. Moreover, the expectation that CDSS can reduce biased reasoning among healthcare professionals depends heavily on the algorithms that control these systems and the quality of the information entered by professionals. Consequently, there is a risk of reproducing biased reasoning based on the program's input (Timmermans & Epstein, 2010). Additionally, while CDSS provides suggestions, healthcare professionals ultimately make the final decision.

The institutional setting also impacts the motifs of implementing CDSS (cf. Freidson, 2001). New technologies can become a tool for management to control or limit practitioners' work and autonomy. A downside of organizational reforms such as new public management (NPM), which is widely applied in Swedish healthcare, is that they reduce the scope and jurisdiction for professional decision-making (Brante et al., 2015; Gadolin, 2018). Hence, the implementation of CDSS in healthcare can also be seen as part of a general trend in Western societies toward an increase in evidence-based methods, standardization, and uniformity in professional assessments and interventions. In this sense, CDSS may reduce or rationalize professional considerations of patients' personal circumstances. This is particularly evident in EMS, where CDSS is assumed to increase equality in the assessment and treatment of patients (Andersson Hagiwara et al., 2019). Finally, CDSS can also be viewed as a means of creating more cost-effective healthcare (Lessard et al., 2010). Indeed, the objectives of improving efficiency and reducing costs have led to a decrease in the number of patients transported to hospitals, exemplifying how organizational considerations can affect patient assessment (Andersson et al., 2024; cf. Ebben et al., 2017). The use of CDSS today is more directed at sorting patients to other care services or being "home cared," hence reducing emergency admissions. As such, cost savings rather than clinical objectives are also a goal when implementing CDSS.

This article aims to examine how registered nurses (RNs) integrate CDSS into their clinical reasoning and how this integration affects decision-making processes in ambulance healthcare. The guiding questions of the study are: (1) How is CDSS integrated into work processes? (2) How does CDSS influence decision-making among RNs? The empirical material consists of observations and interviews with RNs collected during a simulation project aimed at developing and evaluating a CDSS for a prehospital estimation of sepsis risk.

Clinical reasoning as a professional logic in decision-making

Decision-making is a complex process, and professionals actively shape and reformulate the contexts in which CDSS is used (Bergquist & Rolandsson, 2022). Professionals have significant space to manage uncertainty, and their deliberations are based on experience and interaction within the staff group (Noordegraaf, 2020).

In EMS, "clinical reasoning" refers to the process of gathering, evaluating, and applying available information to make informed decisions in patient encounters (Andersson et al., 2019). This reasoning is anchored in the staff's professional judgment, guiding each step of the clinical process. In the EMS context, the complexity of clinical reasoning is heightened, as staff must navigate unpredictable and often high-stakes situations. Clinical reasoning begins before direct patient contact, based on preliminary information received before an emergency response. Throughout the encounter, staff must adapt swiftly, continuously managing and anticipating unforeseen challenges that may arise (Andersson et al., 2022; Andersson et al., 2019; Ostropolets et al., 2020). This ongoing adaptation underscores the importance of flexibility and experience in supporting effective decision-making under pressure in the EMS setting.

Although clinical reasoning is mainly conceptualized in medicine and health sciences, the research area is not unique. For example, there is extensive research on decision-making in economics, psychology and sociology. Depending on the focus, there are also focally different interpretations of decision-making, which can be summarized as either a normative approach based on guiding choices and decisions in a desirable direction or a more descriptive approach that focuses on how decisions actually take place (Puaca, 2013; Berg, 1997). Unifying the different traditions is the issue of uncertainty that characterizes decisions because of incomplete information and people's (limited) ability to evaluate information and estimate possible outcomes. In other words, uncertainty is fundamental to decision-making and raises epistemological questions about how people's deliberations are always shaped by their circumstances (Daoud & Puaca, 2011; Sayer, 2010; cf. Wacquant, 2005). This becomes explicit in emergency care, where ambulance personnel lack the opportunity to deliberate their decisions over a longer period. Instead, many times, life-threatening decisions must be made based on incomplete information and under time pressure. Under these circumstances, experience within professional groups and relationships with other professions is critical for managing uncertainties.

Professional reasoning and decisions are also closely related to organizational frameworks, such as resources and management (Freidson, 2001). Accordingly, clinical reasoning can be seen in a wider social context where professional action is embedded in bureaucratic logic and requires judgment beyond an instrumental or technocratic rationale. Professional judgment involves interpreting situations and placing them in a broader context that benefits citizens (Brante et al., 2019). This involves understanding bureaucratic order and knowing what action is possible. It involves reasoning shaped by the actors' experiences and external expectations within a specific context, forming a *community of practice* (CoP). A CoP represents a form of situated learning that occurs within professional settings, where individuals engage meaningfully with one another to develop shared knowledge and practices (Wenger, 1998). Within a CoP, knowledge is distributed across its members and functions as a form of "decision support," guiding what the group considers reasonable and appropriate (Lave & Wenger, 1991). This continuous interaction fosters the establishment and reinforcement of collective norms, values, and professional standards. Consequently, certain ideals and practices become more prominent, shaping how learning is embedded in the profession. Learning within a CoP is facilitated by a shared repertoire of concepts, routines, and practices that reflect the group's collective knowledge. Clinical reasoning and professional learning, as inherently social processes, are deeply rooted in specific contexts and shaped by the shared experiences of colleagues (Andersson et al., 2019; Koufidis et al., 2020). For instance, assessing complex situations often involves observing and emulating practices through informal learning opportunities (Eraut, 2004). Such informal learning relies heavily on tacit knowledge, which is developed through skill-based practice rather than formal routines (Gonzalez & Burwood, 2003). This interplay between formal and informal learning underscores the dynamic nature of professional development within a CoP.

CDSS—Harmonizing technology within an organizational logic

Conclusively, clinical reasoning is embedded in the context where practice takes place and where actors engage with preconceived understandings and assumptions (Trowler & Knight, 2000). However, bureaucratic organizations can limit professional discretion and reduce trust between employees and patients or clients (Johansson et al., 2015). As Evetts (2003, 2011) illustrates, this is an ongoing process where control and judgment of professional practice shift from professionals to management and administrative procedures following standardization of activities. The evaluation of work is becoming increasingly systematic, focusing on the administrative organizational structure rather than professional judgment. Accordingly it limits professional judgment, action, and legitimacy.

Like teachers and social workers, RNs can be described as welfare professions because they, in a Swedish context, generally operate in organizations of public service (Linde & Svensson, 2021). A characteristic of RNs' profession is that they exhibit some features usually attributed to traditional professions (Brante et al., 2019). For example, nurses have specialized

knowledge but may not have the same degree of autonomy or authority as doctors. Therefore, the actual ability to exercise discretion is essential for understanding RNs' professional work. Discretion is an essential decision-making mechanism when general rules are not directly applicable (cf. Bovens & Zouridis, 2002; Liljegren & Parding, 2010). However, discretion is used not only in the absence of rules but also in interpreting and tailoring broad principles to address the nuances of individual cases. It enables the adaptation of general knowledge to specific contexts. The exercise of discretion goes beyond personal judgment; it is influenced by broader social and organizational factors, shaped by the internalization of professional norms, values, and common sense (Ponnert & Svensson, 2015). This situates discretion as a dynamic process, deeply embedded within the workplace environment, specifically within a CoP, and essentially shaped by values internalized by its members. Following this, discretion is exercised collectively, with "common sense" becoming a product of the social interactions and professional learning within the community (Wenger, 1998). This perspective shifts discretion from purely personal judgment to a social, collaborative process influenced by the community's collective expertise and ethical standards. To ensure CDSS aligns with this collaborative nature, its integration into CoP requires harmonizing technology, work organization, and professional practices.

Method

The "Prehospital Decision Support for Identification of Sepsis Risk" (PreSISe-1) project (Vinnova) developed and evaluated an AI-based CDSS for early prehospital identification of sepsis risk. The project included privacy, clinical, regulatory, and legal issues. The present study is based on clinical observations of RNs specializing in ambulance care, conducted during full-scale simulations, along with group interviews held with the RNs following the simulations.[1] Four observation sessions, each lasting about 20 minutes, and two group interviews, approximately 40 minutes each, were conducted in the spring of 2021. During the simulations, the RNs were divided into pairs with their regular colleagues. One group had 10 or more years of experience, while the other had around five years. The inclusion criteria specified RNs employed in an ambulance service district in southwest Sweden who were willing to participate. In Sweden, ambulance services are part of the healthcare system and are primarily organized by the regional districts, which are responsible for both funding and operations. Each district is responsible for ambulance services within its geographical area. Both simulations and interviews were recorded, and the interviews were transcribed.

[1] The study is based on the Swedish Research Council's guidelines for good research practice (Vetenskapsrådet, 2017) and principles in the Helsinki Declaration (World Medical Association, 2017). Each participant gave consent and was informed about the study and their right to withdraw from the study without explanation. Other ethical issues related to data protection and security were addressed by adhering to the Swedish Data Protection Act (Sveriges Riksdag, 2018). No information about participants' identity or location has been included.

Based on observations and interviews, the study design provides insights into when and how decision-making takes place in a clinical setting. Choosing observations and group interviews enabled a blend of insights and targeted discussion, capturing both behaviors and nuanced, reflective responses in a controlled setting. Even though all observations are inherently influenced by the observer's framing and context, the simulation setting allows researchers to directly observe practitioner behaviors and address questions about clinical practice by analyzing real-time data in practice-like environments (Asakura et al., 2021). It also helps reduce ethical dilemmas in research, such as those in EMR settings. However, there are limitations to the insights gained through simulations, as they cannot fully replicate the complexity and unpredictability of real clinical encounters with actual patients. Simulations, while valuable for practicing technical skills and decision-making in controlled environments, often lack the nuanced dynamics of human interaction, such as emotional responses, cultural considerations, and patient-specific variability (Asakura et al., 2021). These missing elements can lead to an incomplete understanding of how clinical decisions unfold in real-world settings, where time pressures, interpersonal communication, and unforeseen complications frequently play critical roles. Using follow-up group interviews allowed us to understand not only what the RNs did but also how they thought and reasoned during decision-making. Group interviews highlighted the dynamics preceding decision-making, which were also visible during observations. Interviewing RNs alongside their daily colleagues facilitated the exploration of each other's views, thus enhancing the group dynamics crucial to decision-making in this context. This setting enabled RNs to discuss decision-making "as it happened" in emergency care, reflecting on it as a collective team process (Gibbs, 2021). Hence, a more complete understanding can be achieved regarding clinical reasoning in interactions between colleagues and how CDSS shapes the space for professional action. The approach is close to a participant-oriented approach, where experiences may impact strategies and practices after the study.

The purpose of the observations was to gain insights into what happened during the simulations. The observations were video recorded so that the material could be analyzed in more detail afterward. An observation scheme with general themes of *information exchange, the work process, dialogue*, and *managing the unexpected* guided the observations, and field notes were taken. Observing ongoing simulations enabled the mapping of subtle aspects of social interaction in patient encounters and between colleagues, such as mimicry, body language, eye contact, and verbal communication.

The structure of the interviews was thematically open, allowing the participants to start from their own concepts and providing a deeper understanding of their reflections on decision-making. The analysis began with open coding to identify all possible meaning-making elements in the material. As central categories crystallized, coding shifted to a more selective approach (Glaser, 1978) to generate meaningful categories indicating themes and patterns.

This process initially involved developing a comprehensive number of categories, which were later refined into a few central categories of *trust, relations, organization of wor*k, and *professional judgment*. The study was based on specifically selected theoretical concepts regarding clinical decision-making, and our analysis in this respect was thematically driven. We aimed to achieve a balance between a theoretically driven process for analyzing the interview transcripts and the flexibility to generate new meaningful categories based on the identified patterns (Charmaz, 2014). These patterns could explain our case and ultimately generate a revised theoretical framework for the conditions of clinical reasoning.

Our thematic analysis involved three main steps, beginning with the exploration of individual categories. From there, we created patterns between categories aimed at elucidating our specific case and constructing theoretical concepts. Through this methodological lens, we sought not only to understand the relationships between categories but also to generate deeper insights into the underlying dynamics of our research.

Results

Trust and distrust in the integration of CDSS in clinical reasoning

A key finding in the results is how various considerations of trust and distrust in CDSS are expressed in RNs' clinical reasoning. RNs' trust in CDSS is linked to the perceived benefits and whether it complements rather than hinders professional practice. When CDSS does not add value, trust in the system decreases. In time-sensitive environments, systems must support rather than obstruct patient-focused care.

> It's absolutely crucial […] if you're going to use it with the patient or in the car, then you won't do it if it takes too much focus or requires too much thought. You'll end up filling it in afterward.

There is also a fundamental distrust apparent that systems do not have the equivalent clinical overview that RNs feel they possess. The RNs exhibit strong confidence in their and other colleagues' professional judgment regarding sorting and creating meaning from a complexity of impressions, and that their capacity exceeds that of technology. Since professional judgment is perceived as more nuanced and can weigh more parameters, there is a clear sense of distrust that CDSS may "take over" and/or replace the RNs' professional judgment.

> It's a delicate matter. What provides guidance, and what provides blocking? Maybe it's something completely different, but all of a sudden, you get sepsis, and then you're completely on that track instead, and maybe, you miss the fact that the patient is incompensated or that it's heart failure or even STEMI [ST-elevation myocardial infarction]. So, it's dangerous to lock yourself in one direction, really.

However, the material also shows a belief that different systems can assist clinical reasoning that precedes decision-making. Clinical reasoning involves gathering and evaluating a substantial amount of information during patient encounters with various CDSS, complementing professional judgment. More specifically, RNs express trust in the capacity of CDSS to sort and store large quantities of information.

> I have become [positive]. I wasn't before. But I think I actually am. […] So, I think you can get quite far with different types of prediction models and cognitive support that complement your clinical assessment. Our job is too complex to think that you can have in your head to assess all types of different patients that we meet.

The role of RNs in EMS is to identify and treat symptoms but not diagnose. However, the respondents say that they still form a "diagnosis"—a working hypothesis—directing the treatment strategy. Here, RNs' clinical reasoning is supported by trust in the CDSS's capacity to analyze various clinical parameters, which, combined with the RNs' observations, forms a foundation for decision-making. This process may involve ruling out potential diagnoses. As one RN noted: "You may not have diagnosed what it is, but you have at least diagnosed what you don't think it is."

The ambivalence of integrating technical knowledge into clinical reasoning

CDSS both aids and disrupts professional judgment. RNs find interpreting CDSS indicators confusing, and it is not always clear how to consistently signal or interpret different indicators. As one respondent puts it: "The system says there is a high risk of sepsis with a low statistical probability. Ah, but what does that mean?" The interviews and observations show that it is not always obvious what the "right" way to signal or interpret various indicators is. There is also uncertainty about whether all indicators are equally interpreted and understood. Conclusively, professional judgment includes *technical knowledge,* and RNs must increasingly understand the technology behind CDSS, such as how risk grading is structured.

> [I]t was difficult, but that's because I'm not familiar with it. I usually compare this to emptying the dishwasher. At home, you do it in your sleep. Then, you come to the exact same dishwasher in someone else's kitchen. It's impossible because you don't know where something is supposed to be. And it's kind of the same thing when you work in this.

The ability to quickly decode technology, along with general technical knowledge, becomes a key skill in a professional setting that increasingly relies on CDSS. Therefore, understanding and mastering a form of *technical reasoning* is essential for professional judgment. An essential aspect that disrupts decision-making is the complexity of managing systems that do not work properly and/or are synchronized. The clarity and user-friendliness of systems are critical, and a lack of this creates confusion and uncertainty in decision-making situations. Frustration is also expressed when information generated by the systems is ambiguous and when

systems require extensive documentation. In both cases, it is perceived as time-consuming and hindering professional performance.

> Then, I think it was a bit confusing that there was so much that was double. I mean, you have this sort of […] For me to enter whether breathing is affected or unaffected and then enter numbers at the same time; it's unnecessary.

However, CDSS can extend judgment by providing support for second opinions or long-distance consultations, like video link consultations with doctors. Another example is when CDSS serves as a warning or basis for a second assessment, or when used to triangulate the RNs' own assessment.

> [I]t was a huge obstacle that kept jumping all the time, that you never got on with anything. So, unfortunately, it's a bit difficult to evaluate. But as I said, there is a small heads-up, high risk of sepsis. Yes, absolutely.

One's subjectivity in decision-making can also be both supportive and disruptive. RNs note how subjectivity may override professional judgment, causing important parameters to be overlooked. CDSS helps broaden the assessment spectrum by balancing subjectivity with vital parameters and helps to triangulate RNs' assessment with vital parameters.

> The advantage of this kind of support is [that it] complements the subjective assessment because it's so easy to go into performance. We could just as easily have gone into John (simulation patient) with the thought, "Ah, but this is a young guy, it's not so bad." And being a little feverish and a little fast pulse, well he can tolerate it. If you go in with that idea, it's easy to interpret the whole situation. You're kind of looking for confirmatory findings for that thesis. "Ah, but look here, there were no red parameters. It wasn't so bad." But if you then have decision support that complements your own subjective one, you get a broader assessment […]. You have your […] vital parameters; you have decision support; and you sort of try to triangulate your assessment.

From patient focus to system focus

The observations show that RNs focus a lot on the computer tablet at the expense of patient contact. When inquiring into the patient's symptoms and condition and documenting information, the RNs' gaze is fixed on the tablet rather than the patients, and they rarely visually supervise the patient's condition. During the interviews, the participants reflected on the risk of shifting focus from patient to system, that is, technology getting attention rather than the patient.

> I think the danger with all these systems is when the focus is shifted from patient care to a system when you try [...]. I think everyone tries in some way to automate care and make it completely similar; it's impossible. Individuals meet individuals, and

> there's something there. So to completely micromanage it, it's impossible and there are some risks with that.

In the long run, the respondents see risks with CDSS becoming governing instead of supportive. Technology may come to define what should be in focus and possibly affect professional judgment and assessment ability. Thus, technical reasoning may take over the clinical.

> [I]t is easy to lose focus from the patient, instead of just having lots of values and [...] We have so many systems right now, telling us what to do, and are very controlled by that, too.

The patients in prehospital contexts are often in a vulnerable situation, so mutual respect and trust in RNs is central for the collaboration needed in the process of mapping symptoms. In addition to a clinical focus, patients also need attention as human beings, and CDSS can hinder the relational dimension of the patient meeting, affecting the professional self-image of the RN.

> Speaker 1: Sometimes you feel you have to apologize to the patient because all you've done is sit on the phone and try to reconnect cables and stuff to make things work, technically speaking. Or it could be that you don't get an answer to the number you're supposed to call, and you have to call the switchboard, that kind of technical hassle.
>
> Speaker 2: The ambulance nurse, "he just sat and played computer games all the way in."
>
> Speaker 1: Exactly. Ah, but some people don't realize that we write our journal with the screen, you know. They think you sit and surf, you know. And then it's an obstacle. Then, you haven't conveyed a very good picture.

The physical and social interactions between patient and RN are emphasized as central to professional assessment, and the importance of "seeing" the patient in a wider meaning recurs in the interview material. Indeed, the observations show that this interaction is limited because of the RNs' focus on the tablet during simulations.

Professional judgment—A collective process based on tacit knowledge

The RNs express confidence in their professional judgment shaped by experience. This entails relying on embodied knowledge that involves "seeing" patients more holistically, with tacit knowledge guiding intuition or "gut feelings."

> Well, my perception of ambulance staff is that a lot of them have a great deal of confidence in their own clinical ability; that it's almost the other way around, that they, "I don't need aid, I don't need support. I know this; I see this. I feel a heart attack when

> I see it," as it were. […] I think the risk is quite small that you will be disturbed by the technology because you are still so proud and in tune with your own clinical judgment.

Professional judgment for RNs is also about accentuating the importance of safety and interpreting a complex whole. CDSS can indicate individual parameters, but not all, and they cannot coordinate these to the complex whole that a patient constitutes. Hence, a professional challenge is making assessments that sometimes go against what various parameters indicate, meaning that clinical reasoning involves more than summing various indicators individually.

> I have no scruples whatsoever about feeling that a patient may have green vital signs; everything may appear to be as stable as possible, but is there anything that tells me that this patient is going to crash soon? I'm going to call in that patient. I'm not going to have more to say than that.

The RNs find it difficult to pinpoint exactly what constitutes professional judgment, but emotions are involved, and the term "gut feeling" is used to describe its characteristics. This type of tacit knowledge is central to decision-making and can be about something "not feeling good" or "feeling wrong."Professional judgment also involves the courage to trust your feelings and act on them, and requires a focus on the whole patient.

> Everyone who works in healthcare knows how complicated it is to examine a patient. There are so many variables. And in the end, maybe it all comes down to a gut feeling, and that gut feeling is usually right. You can't say what it is, but something here is not right.

Tacit knowledge is based on a network of feelings, sometimes contradictory. RNs may see something, have a suspicion, or not feel something that they should feel, given the situation. Tacit knowledge is strongly associated with years in the profession and experience-generated knowledge.

> [S]o the more clinical experience you have, the more information and knowledge you have to acquire and put in your backpack, and you have to take with you when you go out. Then, it may be that the person who comes out with more experience may catch this sepsis because of their clinical eye, while the person who is completely new does not. I don't know.

Tacit knowledge also involves confidence in colleagues, a trustst built and reinforced over time. Crucial to a well-functioning collegial relationship is the recognition of each other's reactions and behavior patterns. Thus, professional judgment is intertwined both with people (relationships) and professional skills (professionalism). It is described as understanding each other's unique working methods and reaction patterns, meaning that certain communication

becomes superfluous between colleagues. Also, a communication style that is concentrated yet clear—something particularly evident during the observations.

> [A]nd me and [XX] had worked for 20 years together, together. He sees what this is, I know he sees this, I see this, and if I do that, I get the syringe in my hand. You don't talk too much. It's like the optimal cardiac arrest, you don't talk. It's just [Gestures]. It just flows.

RNs' reasoning highlights the importance of tacit knowledge and gut feelings in decision-making. RNs rely on intuitive, experience-based insights to assess complex situations where clinical data may not provide clear answers. Together with confidence in colleagues, these elements are vital for professional judgment.

Clinical reasoning and contradictory routines

Decisions are also influenced by the organization of healthcare, which is subject to the continuous implementation of new procedures and technical systems. The implementation of CDSS in healthcare aims to standardize processes and increase quality and patient safety. However, the impact of technology on professionals tends to promote standardization, which in turn limits the autonomy of professional groups (Petrakaki & Kornelakis, 2016). The downside expressed by the respondents is the vulnerability to technology. Healthcare is expressed as having "painted itself into a corner," and the dependency on technology for decision-making is considered problematic. Resources are also needed for further staff training to strengthen professional judgment.

> I'm a little worried about the whole development in healthcare, where things are very much moving toward standardization. [A]n incredible amount of resources are spent on quality assurance of care using assistive technology, but I think far too few resources are spent on actually training staff and promoting continuing education. Because I find it so difficult to see that the future is that we will have computers that do everything for us [...]. Everyone who works in healthcare knows how complicated it is to examine a patient. There are so many variables. And in the end, maybe it all comes down to a gut feeling, and that gut feeling is usually right. You can't say what it is, but something here is not right.

What also becomes clear are conflicts between various CDSSs and how these are embedded in the organization, creating different routines between hospitals, and negatively affecting clinical reasoning. Many and various routines also increase complexity, and when assessing, paramedics sort through a wide range of impressions and information that goes beyond CDSS and are based on professional experience and a sense of wholeness. Technical reasoning sometimes overshadows the clinical, and the RNs find it difficult to argue against a procedure or routine.

> But from the emergency department, there are very clear requests that you can only call this phone if it is a patient who has an ongoing ST-elevation myocardial infarction. And then, they send deviations to our organization, which passes them on, and sends it out as a request to, ah, only call on patients who have ST infarctions. At the same time, we still have our own routines. And that's how it is with so many routines right now; that it's just a roundabout way of doing things.

The standardization through CDSS conflicts with RNs' need for individualized patient care, thereby limiting or structuring their discretion. This becomes evident when RNs come to a different conclusion than the CDSS indicates, and the complexity of decision-making becomes vivid when difficulties integrating technical and clinical reasoning occur.

> This is a patient who needs to seek care, but our assessment on-site is that we may not need to take this patient to the emergency room. We are left with that feeling, while we have a system that says we have to take this patient to the emergency room [...]. But there is the system [...]. Or the organization has chosen to use the system in a way that, no, we can't do that, and if you do it, you do it on your own. And I don't like that development. Because then, you completely take away our clinical view. You take away [...]. Although we have long, long routines for how an abdomen should be examined, we do the entire examination, and in the end, it's the little line of text that decides. And I don't agree with that. I don't understand the patient benefit of it.

While the technical aspects of healthcare, such as the use of technology, are important, they are often embedded within a bureaucratic framework. The challenge for RNs lies in the need to integrate both technical knowledge and clinical reasoning into their professional practice, which adds complexity to their work. While technology can impact care, the most significant issue is the overload of systems, tools, and routines that RNs must navigate. Rather than supporting decision-making, this often creates barriers and obstructs timely and informed decisions (cf. Timmermans & Epstein, 2010).

There is skepticism among the respondents as to whether CDSS can "reason" as RNs can. Technology requires learning and a collective acceptance to fully integrate into work processes. That is, collectively shared professional dispositions—essentially a CoP—that govern what is considered valuable knowledge, what earns recognition, and which processes are deemed legitimate within the profession. Here, a conflict can arise between CDSS and professional judgment. This becomes particularly obvious when RNs need to compromise their professional values based on what the systems indicate.

Discussion

Clinical reasoning, as shown in our results, is challenging due to conflicting technical systems, guidelines, and routines. Although CDSS ideally offers flawless assessment, RNs must adapt these assessments to an imperfect context. Our findings demonstrate that the integration of

CDSS into clinical reasoning hinges on professional *discretion, trust,* and embeddedness in a *CoP*.

Discretion and trust

Various systems and routines can sometimes override professional decision-making. Instead of supporting clinical reasoning, this type of standardization creates frustration and confusion among RNs (cf. Khalifa & Zabani, 2016). Yet, RNs' discretion remains critical in situations that require a professional "gaze" and the ability to make decisions based on their judgment, regardless of systems or routines. The issue of tacit knowledge has gained significant attention in professional research, and our study highlights its importance in trusting one's judgment, professional experience, and knowledge generated from practice (cf. Trowler & Knight, 2000). Moreover, trust is crucial in ensuring that technology does not overshadow professional judgment, allowing RNs the discretion to make decisions based on their experience, knowledge, and understanding of a broader context.

Emotions are also central aspects of how CDSS relates to professional discretion and trust. Emotions are components of RNs' tacit knowledge, based on a network of feelings, sometimes conflicting ones. RNs may have a suspicion or a feeling that guides clinical reasoning. This can be seen in light of professional dispositions regarding what is seen as valuable knowledge, and which processes receive recognition and legitimacy (cf. Wacquant, 2005). Professional decisions arise from actors' practical reasoning and have a reflexive side; hence, actors do not act solely on their dispositions. Andrew Sayer (2010) points out that we constantly evaluate what we attribute meaning to in terms of ethical dimensions. Professional or clinical reasoning, in other words, involves ethical positions based on emotions. Therefore, the impact of emotions on judgment and how to trust CDSS is crucial in understanding the embedding of technology in clinical reasoning.

Trust becomes the link between one's own and other professionals' skills and is built up over time by working together. Trust also relates to organizational jurisdictions, because trust in the professional judgment of RNs is related to the knowledge and trust that colleagues in other organizational departments have in them. This illustrates a negotiation strategy and that the effects of decision-making are influenced by how we trust each other's professional judgment ability when cooperating.

Community of practice

Decision-making is in focal parts a collective process, relying on subtle and deeply ingrained mechanisms of mutual understanding among colleagues. Over time, team members develop an ability to "see" and "recognize" each other's work patterns and intentions without the need for explicit communication. Key interactions often take place through quick glances, affirming nods, or brief, highly efficient exchanges, where lengthy verbal explanations are un-

necessary. This seamless coordination is a manifestation of shared tacit knowledge, characteristic of a CoP, where members share a common understanding built through sustained collaboration and experience.

A CoP does not operate independently; rather the ability for discretion and judgment is dependent on the organizational preconditions that involve technical reasoning. Evetts (2011) highlights that a new professionalism is emerging in which there is decreasing professional autonomy and increasing control bodies. These are apparent in our study regarding how RNs are expected to accept, incorporate, and conduct their work based on organizational ideals of decision-making. However, new strategies and practices develop as professions adapt to new challenges and opportunities (cf. Bergquist & Rolandsson, 2022; Noordegraaf, 2020). The conditions for RNs to establish their work on the cognitive base of their profession are highly reflexive and responsive in relation to the organizational context and work tasks.

A common conception is that humans will always make mistakes no matter what; it is simply in our nature (Patterson & Hoffman, 2012). Deficiencies in human decision-making have also led to perceptions that we have not yet managed to create systems that humans can fully understand. Conversely, reducing the influence of human judgment in favor of technical reasoning is problematic, as it limits our understanding of how human decision-making functions in various situations (cf. Bovens et al., 2002). However, as Patterson and Hoffman (2012) highlight, decision-making involves more than just avoiding mistakes; it also requires achieving "sense-making" of the information available in each situation. This process enables individuals to make decisions that, while not always perfect or optimal, are "good enough" to address immediate problems (cf. Klein, 1998).

Conclusion

The study highlights the complexity of integrating CDSS into clinical reasoning for RNs. While CDSS aims to enhance decision-making, it can conflict with the professional judgment of RNs, who rely on discretion, experience, and tacit knowledge. The tension between standardized technical systems and the nuanced, context-based reasoning of RNs creates frustration and challenges in maintaining autonomy. Trust, both in one's own judgment and in colleagues, plays a pivotal role in navigating these complexities, emphasizing the need for collaboration and mutual understanding within a CoP. Moreover, the study underscores the ethical dimensions of clinical reasoning, showing that emotions and professional experience significantly influence decision-making processes. Balancing technical reasoning with human judgment remains crucial for maintaining the integrity of clinical reasoning.

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Interprofessional Collaboration in Health Care: Clinical Pharmacists' Brokering Activities in Medication Reviews

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Abstract

In hospitals, several professions collaborate on patients' medication treatment. We explore clinical pharmacists' work and ask *what opportunities and challenges arise when clinical pharmacists participate in interprofessional medication reviews*. Findings from observations and interviews in two hospitals reveal that medications were discussed in greater depth in pre-rounds where clinical pharmacists were present as they negotiated medication treatment, leading to collaboration with physicians and boosting nurses' engagement. Clinical pharmacists' brokering activities created knowledge-sharing opportunities and aligned perspectives across professional boundaries. However, clinical pharmacists also experienced challenges being heard by physicians, highlighting professional conflicts regarding jurisdictional claims to medication decisions. This challenge was accentuated by a lack of adaptation for clinical pharmacists' occupational role on a structural level. We argue for consistent adaptation for clinical pharmacists' occupational roles to support their professional jurisdiction and utilise comprehensive work practices in medication treatment.

Keywords

Interprofessional collaboration, professional boundaries, boundary object, broker, jurisdiction, medication review

Interprofessional collaboration and clinical pharmacists

Interprofessional collaboration in healthcare can be defined as processes in which multiple healthcare professionals from different disciplinary backgrounds participate to achieve better or optimal patient care (Green & Johnson, 2015; Lakin et al., 2019). Processes of interprofessional collaboration are social in nature and, amongst other things, consist of negotiating work tasks (Edwards & Kinti, 2010), where building and using common knowledge are important features of the relational expertise required for working on complex tasks across practice boundaries (Edwards, 2011). Interprofessional collaboration enhances the potential for knowledge sharing and learning between professions, focusing on how learning enactments are framed by existing "practice architectures" (Thörne et al., 2014), how knowledge emerges and is shared between professionals in health care (Falk et al., 2017) and that collaboration augments and develops health workers professional repertoires (Christiansen et al., 2017). These studies illustrate how professional work supports existing practices and utilises the potential of existing interprofessional collaboration. Here, we expand on this knowledge by exploring how a profession develops strategies to break established patterns for interprofessional collaboration.

In this article, we present an ethnographic case study exploring interprofessional collaboration in medication reviews among clinical pharmacists, physicians and nurses as they engage in collective evaluation of patients' medication treatment. We ask *what opportunities and challenges arise when clinical pharmacists participate in interprofessional medication reviews*. Hereby, we reveal how clinical pharmacists open new possibilities for interprofessional knowledge sharing while they simultaneously experience challenges related to both interprofessional collaboration and their professional role.

In health care, interdisciplinarity is expected to contribute to comprehensive patient treatment (Norwegian Ministry of Health and Care Services, 2009). Accordingly, clinical pharmacists have been included in clinical settings to provide advice and guidance for physicians and nurses in medication-related questions (Norwegian Ministry of Health and Care Services, 2020) since the mid-1990s (Blix, 2017). Clinical pharmacists aim to contribute to quality-assured medication use by drawing upon their pharmacological expertise to identify, prevent, and solve medication-related problems (Viktil, 2017a). Within hospitals, clinical pharmacists' work tasks include medication reconciliation, communication with patients, ensuring the transfer of correct and updated medication information to relevant levels of care, and performing medication reviews (Viktil, 2017a). A medication review is a structured method

whereby health professionals—traditionally physicians—critically evaluate a patient's medication treatment (Frandsen et al., 2022). In this study, clinical pharmacists participate in these medication reviews in collaboration with physicians and nurses.

Studies of clinical pharmacists in medication reviews largely focus on their effects on costs (Robinson et al., 2023) and medication-related problems (Halvorsen et al., 2019; Johansen et al., 2022). Researchers have found that pharmacist interventions in hospitals can reduce the number of hospital readmissions and visits to emergency departments (Ravn-Nielsen et al., 2018); that patients who received pharmacist-led interventions are more satisfied with received medication information during their hospital stay (Garcia & Aag, 2023); and that pharmacist-led interprofessional medication reviews improved pharmacotherapy for patients (Granås et al., 2019). Focusing on perceptions of clinical pharmacists, health professionals are satisfied with collaboration (Gillespie et al., 2012), and see them as valuable, competent, and supportive in interprofessional medication reviews, specifically (Lee et al., 2023). Others reveal challenges in interprofessional collaboration in medication reviews, such as a lack of knowledge of other professions' competencies and roles (Halvorsrud et al., 2017), where a lack of role clarity might challenge interprofessional collaboration between clinical pharmacists, physicians, and nurses (Halvorsen et al., 2011; Makowsky et al., 2009).

When health professionals begin performing work tasks that previously belonged to other health professions, they may experience challenges when defining their occupational roles within the existing work practices (Folkman et al., 2017; Folkman et al., 2020), for example, related to hierarchy. The health care system has a hierarchical structure where physicians hold the overall responsibility for patient treatment. Power distance is a value that differentiates individuals, groups and organisations, based on the degree to which inequalities are accepted as either unavoidable or functional (Daniels & Greguras, 2014). In contrast with other studies, we investigate how professionals break down hierarchical boundaries, which is defined as an underdeveloped topic (Daniel & Greguras, 2014). Hereby, we contribute to the research on professions and professionalism.

Boundary crossings and jurisdiction

When exploring clinical pharmacists' participation in interprofessional medication reviews, we use the theoretical concepts of boundaries, boundary crossings, -brokers, and -objects to investigate social situations in medication reviews. A practice can be defined as "doing in a historical and social context that gives structure and meaning to what we do" and includes, amongst other things, language, tools, documents, roles, underlying assumptions and world views (Wenger, 1998, p. 47). Professions' different backgrounds and practices constitute their boundaries (Wenger, 1998), defined as "sociocultural difference(es), leading to discontinuity in action and interaction" (Akkerman & Bakker, 2011, p. 133). In healthcare, boundaries often crystallise through medical specialisation (Kerosuo, 2008). Physicians, nurses, and clinical pharmacists have different disciplinary backgrounds that shape their knowledge, work goals,

and hence their work practice. While clinical pharmacists seek to ensure optimal medication treatment, nurses might focus on patient care, and physicians might focus more on the specific condition for which a patient was admitted.

Professional boundaries meet at boundary crossings (Akkerman, 2011; Wenger, 1998), which are the "movement across or a co-location of" practices (Akkerman, 2011, p. 22). We identify work in medication reviews as a boundary-crossing activity where physicians, nurses, and clinical pharmacists collectively engage in the evaluation of medication treatment. In boundary crossings, *brokers* and *boundary objects* are crucial to ensure collaboration (Wenger, 1998). Brokers are individuals with membership in several practices who connect these practices by facilitating the transfer of elements of one practice into another and, by doing so, "open(ing) new possibilities for meaning" (Wenger, 1998, p. 109). Brokering is a complex process of translating, coordinating, and aligning different perspectives across boundaries (Wenger, 1998). Clinical pharmacists might engage in brokering activities when they bring their pharmacological knowledge into the somatic sphere of hospital wards.

Boundary objects are artefacts that cross boundaries and, like brokers, enable the bridging of separate practices through mediation (Star, 1989; Star & Griesemer, 1989) and coordination of different perspectives (Akkerman & Bakker, 2011). Boundary objects are structured in a way that satisfies all the social worlds to which they belong: they hold different meanings in different contexts, but their structure is common enough for them to be useful in several contexts (Star & Griesemer, 1989). In this study, medication charts—physical or electronic documents providing information about patients' medications—are analysed as the boundary objects that mediate collaboration between physicians, nurses, and clinical pharmacists.

While the boundary approach focuses on opportunities to enable collaboration, professional conflicts may arise. Abbott (1988) claims that professions hold control over different work tasks due to various kinds of jurisdictions, which can give a single profession full or partial control of a work task. Professions develop when responsibility over a work task changes, for example, if another profession loses jurisdiction over an area of work (Abbott, 1988). The introduction of clinical pharmacists into interprofessional medication reviews, previously the sole preserve of physicians, can be interpreted as physicians losing jurisdiction over this activity. As jurisdictions are scarce goods, interprofessional relations are characterised by competition, with each profession trying to win control of various work tasks by drawing upon professional power, namely, "the ability to retain jurisdiction when system forces imply that a profession ought to have lost it" (Abbott, 1988, p. 151). "Joint participation in common worksites" (Abbott, 1988, p. 145), or boundary crossings between professions, both connect different professions and create a foundation for interprofessional conflict.

In boundary crossings, the division of labour is established through workplace negotiation, potentially resulting in conflicts where a hierarchically lower group must defend its profes-

sional status to the professional group which is exercising power over it (Abbott, 1988). Bringing the concept of humility to this approach, we focus on how individuals in work contexts support involvement, appreciate the strengths of others and acknowledge their own personal limitations (Chandler et al., 2023; Owens et al., 2013), breaking down hierarchical structures and hereby affecting collaboration.

The concept of boundaries helps analyse the social situation in pre-rounds on a micro-level with a focus on opportunities and challenges when sharing knowledge in work practices. However, Abbott's theory can be used to lift the analysis by explaining how societal and organisational change might create conflicts and power struggles when clinical pharmacists take on a work task that previously belonged to physicians alone. The concept of leadership humility sheds light on how professionals navigate workplace activities by employing various interpersonal characteristics in interprofessional collaboration to protect their professional jurisdiction.

Research setting

We investigated medication reviews in pre-rounds in two Norwegian hospitals. Pre-rounds are interprofessional meetings without patients present that are held before physicians' ward rounds, where physicians, nurses, and other relevant health professionals, for example, junior doctors, discuss patients' conditions and clinical issues (Kleiven et al., 2022), such as medication treatment. Nurses inform physicians of their patient observations, clinical pharmacists address medication-related problems and possible solutions, and the physician makes medication decisions accordingly (Viktil, 2017b). One of the studied hospitals had implemented electronic medication charts as a collaborative tool, while the other still used paper-based ones.

The first permanent position in clinical pharmacy in Norway was established in 1996 (Blix, 2017). Compared to physicians and nurses, clinical pharmacists are newcomers to hospital wards. Both of the hospitals that were studied introduced clinical pharmacy services less than ten years ago. There is no official overview of how many clinical pharmacists exist in Norway, but only five clinical pharmacists in total worked in the two studied hospitals: in one, two part-time clinical pharmacists, both of whom participated, split one and a half full-time equivalents among three hospital departments; in the other, three clinical pharmacists worked in three hospital wards with approximately one half-time position each. Two of these three clinical pharmacists participated in this study, while the third was unable to.

When the clinical pharmacists were not working in hospital wards, they worked in the hospital pharmacies on work tasks such as educating health professionals, assisting in clinical drug trials, conducting inspections, and offering information and counselling in medication-related problems (Nordal et al., 2006). Thus, the studied clinical pharmacists had multi-memberships in two different work practices and moved between hospital pharmacies and hospital wards.

Data collection

Between May and December 2023, the first author observed a total of 50 hours of medication-related work in hospital wards over two weeks to gain an understanding of collaboration in medication reviews. Observations were scheduled based on informants' preferences, with some lasting full workdays and others half. Only work during the daytime was observed, as the clinical pharmacists did not work night shifts. The first author began by observing medication-related work more generally before looking specifically at medication reviews in pre-rounds. When the researcher coincidentally observed the first pre-round in which a clinical pharmacist participated, the difference between the two settings (nurses and physicians vs. nurses, physicians and clinical pharmacists) made the unique input of clinical pharmacists evident. Focusing on clinical pharmacists' roles in hospital wards, we have selected observational and interview data gathered from following four clinical pharmacists, with an employment tenure of 3 years on average, in their participation in interprofessional medication reviews at two Norwegian hospitals.

Observations provide insight into "interactions, processes and behaviours that go beyond the understanding conveyed in verbal accounts" and are fitting when complex interactions are investigated (Nicholls et al., 2014, p. 245). In total, 10 pre-rounds were observed: four without and six with a clinical pharmacist. To gain a contextual overview of clinical pharmacists' work, their individual work before and after the six pre-rounds was also observed, during which the first author asked questions. The observations were recorded as detailed field notes (Nicholls et al., 2014). During observations, the first author jotted down locations, times, professions present and what she saw and heard. The jottings were mostly descriptive but also contained sporadic analytic thoughts (recorded in a separate column to ensure reliability) and were later processed into full field notes in Word.

Semi-structured interviews lasting 45-110 minutes were conducted with the four clinical pharmacists to supplement and validate the observational data. Qualitative interviews offer rich data on individuals' accounts of their everyday lives (Silverman, 2020). The participants were questioned about their work practices before, in, and after pre-rounds—what they did, how they did it, which tools they used, and which challenges and opportunities they experienced, especially as regards interprofessional collaboration. Observed situations in pre-rounds were also discussed. The interviews were anonymised and transcribed verbatim before analysis.

Data analysis

Thematic Analysis, a method for "systematically identifying, organising, and offering insights into patterns of meanings (themes) across a data set" (Braun & Clarke, 2012, p. 57) was used for data analysis. Both interviews and observations were analysed in text form in NVivo 14. The first author coded inductively but was interested in workplace interactions between professions. See Table 1 for an example of the coding process. Through coding and thematisation,

we found three main themes: (1) *interprofessional knowledge sharing*, (2) *hierarchy in interprofessional collaboration,* and (3) *lack of adaptation for clinical pharmacists' occupational roles*. The themes address how the clinical pharmacists created opportunities for knowledge sharing in pre-rounds, experienced relational challenges in interprofessional collaboration, and experienced structural challenges, such as lack of continuity, uniforms, and access to updated medication information. Relevant theories were discussed with the second author during the analysis. Hence, interprofessional collaboration and relevant theoretical constructs, such as boundaries, negotiation, hierarchy and power, influenced the coding process in the later stages. However, the specific theoretical analysis was empirically driven and mainly conducted during the reporting stage of the thematic analysis.

Table 1

Example of the Coding Process

Text excerpt	Code	Theme
The clinical pharmacist points out that a patient's cholesterol levels have increased in recent months and that the medication for this issue has not been collected. The physician seems interested.	The clinical pharmacist alerts the physician to medication-related problems	Interprofessional knowledge sharing

Findings

Our findings provide insights into the challenges and opportunities faced by clinical pharmacists when collaborating in medication reviews.

Interprofessional knowledge sharing

The clinical pharmacists facilitated knowledge sharing across professional boundaries by negotiating patients' medication treatment. To highlight the contrast, we explore pre-rounds without clinical pharmacists and those where clinical pharmacists were present.

In pre-rounds where only nurses and physicians were present, chief physicians and junior doctors discussed patients' medication treatment with little involvement from the nurses, for example, what types of antibiotics to use, whether dosages were too high, if the patient used too many medications, and whether certain medications should be discontinued. The nurses assisted physicians by locating and providing patient information, for example, alerting them to discrepancies in the medication charts. Nurses served as information sources for physicians' decision-making, sometimes asking questions to confirm physicians' medication decisions but not participating actively in discussions of medication treatment. In a few instances, nurses suggested changes in patients' medication treatment that physicians did not agree with:

> A physician, a junior doctor, and a nurse are present in the pre-round […] The nurse asks why the patient should use the medications the chief physician recommends. The chief physician responds with a question: "Do you remember that patient we had, and what happened?". He does not explain further but concludes: "It did not go well." The nurse responds that he was just wondering why. The chief physician does not respond and continues the review of patients. (Field notes, pre-round 4)

Physicians and nurses met in the observed pre-rounds, but physicians rejected nurses' suggestions and thus excluded them from decisions regarding medication treatment. In theoretical terms, the physicians protected their jurisdiction over the evaluation of patients' medication treatment by drawing upon professional power.

The task at hand, evaluating patients' treatment, was the same when clinical pharmacists were present. However, discussions of patients' medications involved not only physicians but also clinical pharmacists and nurses; indeed, the clinical pharmacists were the main initiative takers. Issues such as impeded absorption of medications due to interactions and the forms in which medications should be taken were raised by the clinical pharmacists and discussed in plenum. All three professions actively participated in discussions, addressing issues and asking questions to clarify the situation:

> A chief physician, a junior doctor, two nurses, and a medicine student are present in the pre-round, in addition to the clinical pharmacist. The chief physician and the junior doctor discuss an elderly patient's pain relief medications. The clinical pharmacist says: "We should review the patient's medications and see if they can discontinue some of them, so the patient does not have to swallow so many pills." The chief physician agrees. The clinical pharmacist suggests three medications that may be removed. The chief physician says that she completely agrees and discontinues them by crossing them off the medication chart […]. The nurse asks if a patient will experience symptoms if they discontinue certain medications. The chief physician explains that the patient already has these challenges anyway and that the medications are not helping. (Field notes, pre-round 10)

Clinical pharmacists brought up important pharmacological issues with physicians and nurses and suggested appropriate changes in medication treatment. Physicians seemed more open to input, and nurses appeared more engaged. In other words, clinical pharmacists enabled interprofessional collaboration through brokering by coordinating and aligning perspectives across professional boundaries. In the example of brokering below, clinical pharmacists shared their knowledge with physicians, and a new, common meaning was established:

> A junior doctor, a chief physician, a nurse, and a clinical pharmacist are present in the pre-round. […] The clinical pharmacist […] says that two medications must be given a few hours apart because of inhibition of absorption. The chief physician asks a few

> questions about this and how much it can inhibit absorption […]. The clinical pharmacist investigates for the chief physician, "Approximately 30 %." "Oh, okay, alright," says the chief physician. She turns back to the junior doctor and continues working on the medication chart. (Field notes, pre-round 9)

Clinical pharmacists utilised their pharmacological expertise to share knowledge with physicians, facilitated transactions across professional boundaries and aligned perspectives between themselves and physicians. This boundary-crossing knowledge exchange was two-way: the clinical pharmacists explained that they could also gain insights into physicians' knowledge and reasonings if there were disagreements:

> It might happen from time to time that you bring up suggestions which are not considered [by physicians]. When you speak with the physicians, then[…] they explain […] that the patient is not like that, or[…] there are other conditions of the patient which leads to [physicians] not wanting to change the medication. (Interview, clinical pharmacist 2)

The potential of interprofessional collaboration is not only that clinical pharmacists can aid physicians in medication reviews but also that the two professions may exchange expert knowledge of medications' properties and somatic considerations.

Hierarchy in interprofessional collaboration

Even though clinical pharmacists changed interactions in pre-rounds by brokering—whether of physicians who played a central role in the activity with little involvement from nurses or of knowledge sharing across all three professions—they still faced some challenges when collaborating with physicians, mainly in being heard:

> Sometimes, one can straight-up disagree. […] There have been instances where I have interjected with, for example, "there's an interaction which leads to the patient not benefiting from this medication because the effect is nullified by the other medication […]." But then, the physician, "Yeah, but they can just use that medication because they have been using it for a while, and it looks like it's okay." […] So, in certain instances, I have experienced not gaining acceptance for a suggestion which I think is obvious. (Interview, clinical pharmacist 4)

In medication reviews, physicians have the responsibility and authority to make changes in medication treatment. This formal hierarchy ensures a clear division of labour. While hierarchy holds a function, it also creates barriers to interprofessional collaboration when physicians do not properly consider clinical pharmacists' advice. Clinical pharmacists' negotiations are not always enough to align the different professions' perspectives, possibly due to physicians protecting their jurisdiction by drawing upon their professional power and formal claim to authority in medication-related decisions, thus limiting clinical pharmacists' latitude in pre-rounds.

Several of the clinical pharmacists had developed strategies for being heard in negotiations with physicians. Observations of pre-rounds showed clinical pharmacists bringing up the same medication-related issue multiple times before changes in medication treatments were eventually made. In one instance, the clinical pharmacist asked if a patient needed the prescribed vitamin supplements, as she had seen that the blood tests showed elevated levels of this supplement. The chief physician agreed that the calcium levels were too high but did not necessarily see it as an issue and wanted to monitor it instead of making changes immediately. The clinical pharmacist did not oppose this but decided to bring up the same issue the next day:

> A chief physician, a junior doctor, a nurse and a medicine student are present in pre-round, in addition to a clinical pharmacist […] Today, everyone agrees with the clinical pharmacist regarding discontinuing vitamin supplements. The chief physician removes the supplements from the medication chart […]. "Well observed! We should have seen that. I have been puzzled all along by the elevated values," says a junior doctor. (Field notes, pre-round 8)

After the pre-round, the clinical pharmacist elaborated on this situation:

> […] it happens that the clinical pharmacist must address issues several times before [the physicians] change the medication list. […]. Sometimes, she must find the junior doctors after the pre-rounds and explain why a change in the medication list should be made. Then they might understand better. Sometimes the clinical pharmacist feels as though they have not listened […]. (Field notes, after pre-round 8)

This excerpt illustrates what Abbott (1988) refers to as a conflict between clinical pharmacists and physicians regarding the division of labour. Clinical pharmacists defended their jurisdiction to participate in medication reviews to physicians either—as seen above, by bringing up issues several times or by developing strategies to negotiate medication-related problems:

> I don't always speak up because one must feel the dynamic, and when it's appropriate to say these things in relation to, yes, that the collaboration should be good […]. That you are a bit humble […]. I think that is the key […]. That you are a bit humble and curious and ask instead of saying, "I'm right." (Interview, clinical pharmacist 3)

Clinical pharmacists adapted how they addressed medication-related problems by consciously downplaying their expertise or utilising humility to appeal to physicians, thus enabling knowledge sharing and negotiating the division of labour. In turn, doing so might have strengthened their jurisdiction to participate in medication decisions. Approaching humility, the clinical pharmacists break down the power structure in interprofessional pre-rounds by acknowledging their limitations while appreciating and supporting physicians' involvement in medication reviews as a strategy to ensure approval from physicians regarding their suggestions to solve medication-related problems.

Other challenges of being heard were revealed through observations. In a pre-round, the clinical pharmacist gave physicians possible explanations for a patient's symptoms and suggested medication changes but was not heard until a physician suggested the same:

> The clinical pharmacist addresses an issue, […] that [the medication] might be causing a lot of the symptoms that the patient experiences. A junior doctor says that the patient also has a fever. "Oh, okay, I did not see that," said the clinical pharmacist. They do not discuss this further. […] [Another chief physician] enters the room after visiting [the same patient]. He says that he thinks the patient should not use [the medication] as the symptoms may be masked side effects—he has seen this before. In addition, he wants to start a cure to deal with the fever in case there is an infection. Everyone agrees, and the medication chart is edited. (Field notes, pre-round 8)

This example shows that it matters not only how something is said but also who says it. The clinical pharmacist essentially suggested the same medication changes as the chief physician who entered the room but was dismissed by the physicians, who, by contrast, instantly trusted the chief physician. This situation highlights additional barriers that clinical pharmacists encounter in interprofessional collaboration, but physicians do not and is another example of physicians protecting their jurisdiction to make medication-related decisions. A clinical pharmacist challenges physicians' jurisdiction by intervening, while a physician does not. Physicians protecting their jurisdiction has further implications for clinical pharmacists' professional role in interprofessional medication reviews:

> A chief physician, a junior doctor, a nurse and a clinical pharmacist are present in the pre-round […] The clinical pharmacist tells the physicians of the side effects of a medication. The chief physician briefly responds, "Yes, I'm aware of that". The clinical pharmacist continues to explain the side effects. The chief physician and the junior doctor start speaking to each other before the clinical pharmacist has finished her sentence. […] The clinical pharmacist asks if a patient should take preventive medications for [a condition]. The junior doctor starts speaking to the chief physician, interrupting the clinical pharmacist. […] She does not get a response. […] The clinical pharmacist addresses a concern regarding the medications of a patient. The junior doctor interrupts her again. The chief physician turns around and looks at her but does not give her a clear response […]. The clinical pharmacist adds that it's not that important right now. (Field notes, pre-round 9)

When clinical pharmacists are not heard by physicians in negotiations, they might adapt to physicians' work practices. This might be explained by physicians negotiating the division of labour in pre-rounds by exercising power over clinical pharmacists, excluding them from the activity. In this process, clinical pharmacists devalue what they deem important as physicians might disagree:

> The physicians have busy days, so you must kind of think about "what should I spend their time on?" That I bring up relevant issues. (Interview, clinical pharmacist 4)

Challenges experienced by clinical pharmacists in terms of not being heard might make them adapt to physicians' preferred division of labour and established work practices, both in terms of how and when clinical pharmacists address medication-related problems and what kinds of issues they bring up. In these situations, physicians are successful in protecting their jurisdiction at the expense of clinical pharmacists' jurisdiction to actively participate in pre-rounds.

Lack of adaptation for clinical pharmacists' occupational role

Our findings revealed both the experience of having undefined roles among clinical pharmacists and potential reasons for their undefined roles on a structural level. A recurring topic in the interviews was how the informants struggled to navigate their occupational roles within existing work practices in the hospital wards. Most of the clinical pharmacists had the feeling of being forgotten or, as stated above, having to deploy various negotiation strategies to be acknowledged by physicians, which was experienced as challenging:

> That [my role as a clinical pharmacist] was a bit more defined, that is perhaps what I would wish for the most. And that it was a bit clearer that I existed, in a way. (Interview, clinical pharmacist 3)

The analysis revealed several potential reasons for clinical pharmacists' struggles to be heard and acknowledged. One was the lack of continuity in clinical pharmacy services. None of the studied hospital wards had a clinical pharmacist present in pre-rounds every day. Some wards had counselling from clinical pharmacists every other week or so, while others had counselling two days a week. The informants found this lack of continuity challenging:

> They are used to having a pharmacist [in pre-rounds], but because it's only two days a week, then it's kind of […] you are maybe a bit forgotten from time to time. (Interview, clinical pharmacist 1)

The lack of continuity made it difficult for clinical pharmacists to find their place in pre-rounds: they had jurisdiction to participate but still faced challenges when trying to do so. One of the clinical pharmacists elaborated on why this lack of continuity was perceived as challenging:

> If it's someone I have never met before, then I have to kind of work my way in, […], because then it is often a bit like, "Yeah, who are you?" […]. Sometimes they have not really placed me and might think I am a nurse who is just very preoccupied with medications. […] while other times, they have worked with clinical pharmacists before and are kind of used to it […]. It varies a lot with the suggestions I bring up, how it is received, and if they see it as relevant or if I am just someone who is a bit bothersome with these medications. (Interview, clinical pharmacist 4)

Lack of continuity in clinical pharmacy services is challenging as one is sometimes not recognised as a clinical pharmacist by other professionals, particularly in the hospital where clinical pharmacists wear nursing uniforms rather than designated uniforms. Furthermore, the pre-rounds had no designated seating for physicians, nurses, or clinical pharmacists. In several instances, the chief physicians sat at a desk in front of a computer and the medication charts with the junior doctor(s) on one side and the nurse on the other, while the clinical pharmacist sat behind them. The clinical pharmacists expressed challenges in addressing issues in patients' medication charts:

> When should I say this, kind of? When in the communication does it fit in? Because it's often the nurse and the physician who are talking with each other. Where I am not a natural piece of what is being talked about […]. So, then I [say]: "Hello!" […] Sometimes I do that. (Interview, clinical pharmacist 3)

While physicians and nurses had an established overlap in their work practice where roles were clearly defined, clinical pharmacists struggled to find their place in this overlap, particularly because of the lack of adaptation for clinical pharmacists' work practices. Although they had a formal, jurisdictional claim to participate in medication reviews, they were not fully integrated into the work practice. In contrast, nurses and physicians were present every day in pre-rounds and wore designated uniforms that symbolised their occupational roles in the activity, underlining their jurisdiction to participate in pre-rounds.

The lack of adaptation for clinical pharmacists was further accentuated when it came to difficulties accessing updated medication information. In one of the hospitals, there was no digital version of the medication chart. Upon admission, physicians added relevant medication information to the admission report in the local electronic health record system; thereafter, medication information was mainly updated on paper charts, of which there was only one version. Every morning, nurses used these paper charts when they handed out medications to patients. Hence, when clinical pharmacists performed the medication reviews, the only source of updated medication information was unavailable, and they had to use the dated medication list in the admission report instead. During pre-rounds and ward rounds, the paper charts were designated to the physician. The clinical pharmacist was last in line and could only obtain the updated paper charts around lunchtime, leading to problems in pre-rounds:

> The clinical pharmacist addresses issues in a patient's medication list and says that this issue might explain why the patient is feeling ill. […]. The chief physician says that he has already discontinued a few of these medications. (Field notes, pre-round 9)

The clinical pharmacist suggested changes to medications that had already been discontinued without the clinical pharmacist's knowledge because updated medication information was not available. This observation was validated in a later interview with the same clinical pharmacist:

> I probably quite often suggest things that have already been considered or tried out […]. The more you know, the better foundation you have to give advice. (Interview, clinical pharmacist 4)

The medication chart, as a mediating boundary object whose function is to bridge professional boundaries and enable collaboration by mediating medication information, was unavailable to clinical pharmacists for most of the workday, posing challenges to interprofessional collaboration in pre-rounds. Moreover, clinical pharmacists had to redo medication reviews when they obtained the updated medication chart. In contrast, challenges regarding access to medication information were not raised in the other hospital, where medication charts are digitalised. Updated, available medication information might enable better use of clinical pharmacists' work and expertise.

Discussion

We investigated opportunities and challenges when clinical pharmacists participated in interprofessional medication reviews with physicians and nurses. The clinical pharmacists functioned as boundary brokers in pre-rounds, addressing medication-related issues and suggesting solutions to these. Clinical pharmacists facilitated knowledge sharing by translating (i.e. explaining their reasonings), coordinating (i.e. drawing upon negotiation strategies), and hereby aligning perspectives and opening new possibilities for common meaning across professional boundaries.

Physicians' jurisdiction over medication evaluations was challenged by the introduction of clinical pharmacists into medication reviews, which created power struggles between physicians and clinical pharmacists. Physicians might experience it as challenging for their self-esteem when pharmacists question their medication decisions (Halvorsen et al., 2011), and the uncertainty of clinical pharmacists' roles could create barriers to interprofessional collaboration (Makowsky et al., 2009). Clearly defined roles in interprofessional medication reviews might ease clinical pharmacists' challenges of being heard by physicians.

The clinical pharmacists only worked part-time in hospital wards, which they experienced as challenging. Garcia and Aag (2023) found similar tendencies regarding continuity, where a clinical pharmacist working in several teams did not feel included in the work practice. The solution to this problem was to reduce the number of teams the clinical pharmacist participated in. Continuity of staff promotes possibilities for interprofessional learning among health professionals (Kleiven et al., 2022), underlining the need for continuity of clinical pharmacy services in hospital wards. Additionally, clinical pharmacists used nursing uniforms as they did not have designated uniforms that symbolised their profession. Nursing uniforms symbolise professional identity, status and power (Pearson et al., 2001), and a lack of such symbolism specifically for clinical pharmacists might have played a part in their struggles to be heard by physicians.

The absence of shared electronic medication information is a challenge for health professionals (Manskow & Kristiansen, 2021). We analysed medication charts as a mediating boundary object that health professionals depended upon as a fundamental part of medication reviews. Medication charts as boundary objects should enable the coordination of perspectives and bridge practices and professions. We found that it was partially able to, but a lack of electronic access to the shared object created a break in collaboration in medication reviews. The planned digitalisation of medication charts (Norwegian Ministry of Health and Care Services, 2020) might solve some of the clinical pharmacists' issues in collaboration with physicians and enhance their jurisdiction to partake in medication reviews.

Clinical pharmacists' work task is, amongst other things, to provide advice and guidance for physicians and nurses (Norwegian Ministry of Health and Care Services, 2020), drawing upon their pharmacological expertise. Nonetheless, we found that clinical pharmacists must navigate relational conflicts regarding jurisdiction in medication reviews to successfully perform their work tasks. Other studies have found that health professionals must negotiate their professional roles when entering professional territory which previously belonged to another health profession (Folkman et al., 2020) and might conform to established work practices instead of utilising their profession-specific knowledge in interprofessional collaboration (Folkman et al., 2017). The clinical pharmacists in our study also adapted to physicians' work practices to some degree, for example in what kind of medication-related problems were considered important while at the same time deploying various negotiation strategies as part of their quest to claim their professional jurisdiction in medication reviews.

Our findings illustrate how clinical pharmacists' boundary work challenged established dynamics and power structures in work practices. Christiansen et al. (2017) exemplify the learning potential when boundaries between professions open in overlapping collaboration, augmenting and developing health workers' professional repertoire. We elaborate on this, challenging the traditional top-down structure and illuminating the clinical pharmacists' utilisation of humility strategies. The clinical pharmacists sought to take control of activities in interprofessional collaboration by drawing upon strategies for leadership and, by doing so, challenged established power structures in medication reviews. In other words, they did not fully accept the established hierarchy in the workplace and expressed lower levels of power distance (Daniels & Greguras, 2014). This is a new theoretical insight which applies not only to clinical pharmacists' work practices but might also apply to other professional contexts.

Interprofessional collaboration provides a potential for knowledge sharing between professions (Christiansen et al., 2017; Edwards, 2011; Falk et al., 2017; Thörne et al., 2014). Bringing interprofessional collaboration into medication reviews demands change at both individual and organisational levels (Halvorsrud et al., 2017). If health authorities and organisations are to reap the benefits of clinical pharmacy services, they must ensure that clinical pharmacists are fully integrated into established work practices with clearly defined occupational roles,

including continuity in clinical pharmacy services, pharmacist-specific uniforms and (electronic) access to updated medication information, to utilise comprehensive work practices in medication treatment.

Conclusion

Clinical pharmacists were analysed as boundary brokers in medication reviews in pre-rounds, who provided opportunities for knowledge sharing and the development of new, common meanings among clinical pharmacists, physicians, and nurses. However, clinical pharmacists also experienced challenges in interprofessional collaborative work. Relationally, they struggled to be heard by physicians and developed negotiation strategies to overcome this challenge. Structurally, there was a lack of adaptation for clinical pharmacists' occupational roles. Clinical pharmacists experienced challenges due to the lack of continuity in their work practice, uniforms, designated placement, and access to updated medication information.

By exploring clinical pharmacists' work and collaboration with physicians and nurses in medication reviews, we produced new knowledge of how professionals utilised their expertise and developed negotiation strategies, for example, that of humility, to break down hierarchical structures and enable knowledge sharing in interprofessional collaboration. Studies often investigate how interprofessional collaboration does or does not function. However, how professionals deploy negotiation strategies to claim professional jurisdiction is understudied. We found that clinical pharmacists, despite not being the leader of medication reviews, utilised humility as a strategy to ensure acceptance of their suggested solutions to medication-related problems. Hence, our finding of clinical pharmacists' utilisation of humility leadership is a theoretical contribution to the field of professions and professionalism.

A limitation of this study is the lack of physicians' and nurses' perspectives. While our study provided an in-depth exploration of clinical pharmacists' work, our sample was limited despite successfully recruiting four out of five possible informants across the two hospitals. Future research might benefit from investigating interprofessional collaboration in medication reviews by including several professions and hospitals.

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Exploring Professional Commitment and Passion Among Norwegian High School Teachers

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Abstract

High school teachers' professional commitment and passion are about being dedicated and unwavering in their pursuit of teaching excellence. This study aims to explore the antecedents of Norwegian high school teachers' professional passion. We investigated three factors—relational trust, teachers' affective commitment to the school organisation, and teachers' instructional self-efficacy—by conducting a survey of 246 Norwegian high school teachers and using structural equation modelling. Our findings reveal a positive relationship between teachers' self-efficacy and teachers' professional passion, as well as a positive relationship between trust among teachers and their passion. Further, affective commitment to the school organisation is indirectly related to teacher passion via relational trust between teachers. We thus conclude that both teacher efficacy and trust between teachers are directly related to teachers' passion, while teachers' affective commitment to the school is indirectly related via relational trust. Implications for practice and further research are discussed.

Keywords

High school teachers; professional commitment; passion; relational trust; affective commitment in school; teacher efficacy; Norway.

Understanding the professionalism of teaching

One factor noted in Hattie's 2008 book *Visible Learning* "[…] was passion—the joy, the thrill, and the infectious nature of the teacher to cause students to experience learning. […] *There are still too few studies on the power of passion* [emphasis added], but it remains a visible feature of many classrooms" (Hattie, 2023, p. 7–8).

We begin with this quote from Hattie to situate and legitimise our study, which focuses on teachers' professional commitment and passion for teaching in Norwegian urban high schools. Although Hattie's league tables of the impact of different teaching methods have been controversial in many ways (Wescott, 2022), they highlight important characteristics such as teachers' deep sense of responsibility for and dedication to their students' learning outcomes. We call this phenomenon teacher passion. Teacher passion typically refers to the intense enthusiasm, enjoyment, and intrinsic motivation that teachers feel towards their profession (Day, 2004). It is often associated with a love for teaching, a strong interest in the subject matter, or an interest in the teaching process itself. Passionate teachers are energized by their work and inspire their students through their excitement and deep engagement with the content or the act of teaching (Day, 2009).

Teacher professional commitment to the school, on the other hand, entails a broader range of professional behaviours and attitudes (Somech & Bogler, 2002). Commitment to the school can encompass a teacher's dedication to their profession, their sense of responsibility toward student learning outcomes, their willingness to pursue ongoing professional development, and their determination to persevere in teaching despite challenges (Su et al., 2018; Türk & Korkmaz, 2022). Committed teachers are likely to invest time and effort into improving their practice and generally plan to remain in the profession for the long term (Firestone & Pennell, 1993).

Students and teachers share a mutual *interest* in students' education. Yet their *desires* may not always align: a student might seek ease and comfort in the classroom even while acknowledging that true comprehension of the material demands rigorous effort (Elstad, 2002). This is a paradox. A student may have a long-term goal, such as scoring well on a major exam, whose benefits are significant and long-lasting but also distant. This differs from immediate benefits such as relaxation, enjoyment, or stress avoidance that a student might gain by neglecting their studies in the present. In these cases, a teacher's capacity and commitment to encourage and challenge students can greatly enhance the quality of the learning experience.

The overarching analytical research question of this study is: How do relational trust, teachers' affective commitment to the school organisation, and their instructional self-efficacy interrelate to impact professional passion? This question aims to encapsulate the investigation into central factors and their complex relationships that contribute to the professional commitment of high school teachers in the Norwegian educational context.

High school teachers generally enjoy greater professional autonomy and have more decision-making responsibilities than elementary school teachers (Parker, 2015). They often engage in more autonomous planning and lesson delivery. High schools tend to have more intricate organisational structures, featuring larger faculties, multiple departments, and varied administrative roles (Bidwell, 2013). The dynamics of relationships and collaborative efforts among high school teachers can be complex. Understanding these aspects is crucial for enhancing the overall functioning of the educational institution (Bryk & Schneider, 2002).

Questions about teacher professional passion can be culturally sensitive, and the present study is rooted in a Norwegian social context. Learners in Norwegian high schools are 16–19 years old and thus in the process of becoming adults (Directorate of Education and Training, 2023). The typical emotional closeness that elementary school teachers can have with individual learners weakens in this age range (Gross & John, 1997; Kouhsari et al., 2023; Kunter et al., 2011; Santoro et al., 2012). However, even for teachers with learners who are approaching or have reached adulthood (age 18), their passion for student learning and success can easily interfere with their cognitions. They are often emotionally invested in helping students succeed (Perry et al., 1979; Phelps & Benson, 2012). It is not unreasonable to state that passion drives many, or even most, teachers' professionalism (Frenzel et al., 2013). Learners who are approaching adulthood can still appreciate teachers' pursuit of excellence in their instructional practices, but teachers' emotional role execution often becomes more distant (Brookfield, 2013).

Teachers with a high level of professional commitment often employ effective teaching strategies to capture students' interest (Killen & O'Toole, 2023). These teachers go the extra mile to make lessons relevant, relatable, and interactive, ensuring that students find the material engaging and meaningful. This approach may help combat boredom and encourage students to stay focused on and invested in their learning. Therefore, we believe that the attributes of commitment are critical components in the educational process that can have a profound impact on student learning. Generally, teachers with a high level of professional commitment are more motivated, effective, and resilient (Gu & Day, 2007); they have a stoic calm when trying to have a positive impact on student learning.

The power of teachers' impact on students' learning processes depends on how those learners relate to the teaching (Keller et al., 2013; Lazarides et al., 2021; Mart, 2013). When teachers present content in an exciting and dynamic way, learners are more likely to remember the information because it is associated with an emotional experience (Patrick et al., 2000). Teachers who teach with a sense of infectiousness and even thrill often employ active strategies that involve students in the learning process (Hattie, 2023). This allows learners to engage more deeply with the material through discussion, thought-provoking tasks, and hands-on activities. Teachers who show genuine passion and enthusiasm are often more approachable and relatable to learners, which can help build the strong teacher-learner relationships that are important for creating a supportive and effective learning environment. Research has

shown that teacher enthusiasm is positively related to learner achievement (Keller et al., 2013; 2016). When teachers are excited about teaching, they are more likely to go the extra mile, use innovative teaching strategies, and be effective in helping learners understand complex concepts (Waldbuesser et al., 2021). Moreover, enthusiastic teachers often experience greater personal happiness and well-being (Burić & Moè, 2020; Kouhsari et al., 2023). Additionally, teachers often perceive that their effectiveness is enhanced when they demonstrate enthusiasm in their teaching practices (Kunter, 2013). We believe that a deeply embedded emotional component in teachers' motivation to perform their job is important and thus seek to identify factors that, on a theoretical basis, may be related to what we call teachers' professional commitment and passion, which is the endogenous variable in this study.

Theoretical framework

In this section, we outline our theoretical framework, which combines teacher self-efficacy, teachers' commitment to the school organisation, trust among teachers, and teacher passion. These concepts have not yet been examined in concert, and the main contribution of our study is to deepen the understanding of aspects known to influence teachers' commitment and passion. Teachers' mind frames play a critical role in their teaching effectiveness and in shaping their learners' learning experiences (Hattie, 2023). The term "mind frames" refers to the underlying beliefs, attitudes, and perspectives that shape teachers' thoughts, actions, and decision-making processes in the classroom. A teacher's mind frame influences how they respond to learner performance (Hattie, 2023, p. 46). We believe that teachers' professional commitment to teaching originates in their mind frames and propose that teachers' professional commitment guides how they perceive and interpret information and approach teaching and learning (Gu & Day, 2007). By understanding and reflecting on their mind frames, teachers can continually grow and adapt their practices to better meet the needs of their learners and promote effective learning environments (Schaufeli et al., 2002). We believe that teachers' mind frames might influence their instructional decisions and their passion, enthusiasm, and perseverance in their teaching duties. One related aspect of teachers' mind frames is teacher self-efficacy.

Self-efficacy, as defined by psychologist Albert Bandura (1977), refers to individuals' belief in their own capability to organise and execute the actions necessary to achieve a specific goal or outcome. Teacher efficacy refers to a teacher's belief in their ability to provide high-quality education (Tschannen-Moran et al., 1998). Teacher passion plays a vital role in fostering and enhancing teacher efficacy because efficacy encompasses the confidence teachers have in their capacity to teach effectively: teachers' persistence, enthusiasm, commitment, and instructional behaviour (Tschannen-Moran & Hoy, 2001). Thus, teachers' instructional self-efficacy is assumed to have an impact on the effort a teacher puts into classroom work (Phelps & Benson, 2012). However, the relation between teacher efficacy and teachers' professional passion for teaching might be reciprocal (Keller et al., 2016): that is, the passion not only enhances learners' interest and motivation but also strengthens teachers' belief in their own

effectiveness, leading to higher levels of teacher efficacy. Experiencing the joy of teaching can further reinforce teachers' beliefs in their abilities, forming a positive cycle of self-efficacy and enthusiasm. Further, teachers' self-efficacy is related to instructional quality (Holzberger et al., 2013). When teachers are motivated, passionate, and enthusiastic, they are more likely to persevere through challenges (Fabelico & Afalla, 2020; Shao, 2023). Our first hypothesis (H1) is that teacher efficacy is positively related to teacher passion.

Moreover, teachers' work is carried out within a larger school organisation (Bryk & Schneider, 2002) in which relationships with colleagues are presumed to be important for a professional commitment to teaching. Affective commitment to the organisation often means that teachers align with their school's culture and values. A strong emotional involvement in the school community provides teachers with a sense of purpose and belonging, and affective commitment to the organisation is believed to be at the core of organisational commitment, which has important implications for both practitioners and researchers (Allen & Meyer, 1990; Huseyin, 2018; Mercurio, 2015). A school culture that values teamwork and provides opportunities for teachers to collaborate with their peers can increase job satisfaction and shared enthusiasm for teaching (Kouhsari et al., 2023). Our second hypothesis (H2) is that teachers' affective commitment to their organisation is positively related to teacher passion.

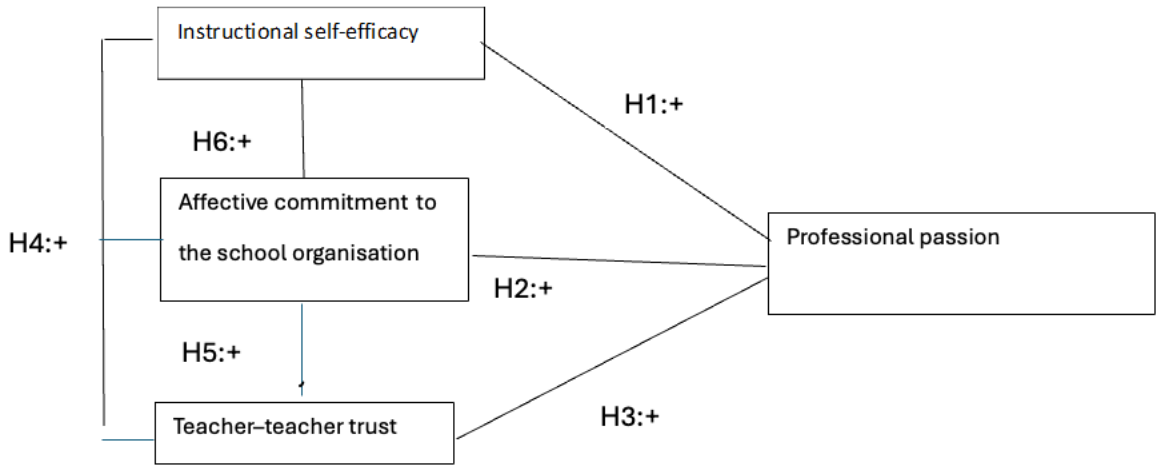
Further, we believe that recognising and appreciating teachers for their efforts and achievements can significantly impact their professional passion. Bryk and Schneider (2002) argue that schools characterised by strong relational trust are significantly more inclined to implement the types of changes that lead to improved learner achievement than those with weaker relationships: the functioning of schools relies heavily on the quality of social relationships within them. A trusting relationship between school leadership and teachers contributes to a positive school climate. When teachers feel trusted, they are more likely to exhibit high levels of job satisfaction, commitment, and motivation, which translates into better teaching. Bryk and Schneider (2002) document the importance of trust within school organisations and illustrate how a foundation of trust among school staff members serves as a crucial asset. However, it remains unclear in the existing literature whether relational trust between teaching colleagues influences their passion and the levels of energy and enthusiasm teachers display in their educational duties. Despite this uncertainty, we believe that trust between teachers is an essential element in building a collaborative, supportive, and effective school environment which promotes teachers' passion. Relational trust among teachers is not only a moral imperative but also a practical necessity for quality teaching. It lays the foundation for a professional community that values excellence in education. Further, schools with high levels of trust between teachers are more likely to retain effective educators (Bryk & Schneider, 2002). This leads us to ask whether the levels of relational trust affect teachers' professional passion for teaching. This is our third hypothesis (H3). We also explore the empirical relationships between the exogenous variables in the model and find it convincing to propose that there is a positive relationship between relational trust and teacher efficacy (H4; see Tschannen-

Moran, 2014), between relational trust and affective commitment (H5; see Meredith et al., 2023), and between teacher self-efficacy and affective commitment (H6; see Tschannen-Moran, 2014).

Our hypothesised model is depicted in Figure 1.

Figure 1

Hypothesised model



Materials and methods

Teachers in Norway work at various levels within the education system: elementary school, middle school, and high school (Directorate of Education and Training, 2023). There may be differences in motivational orientation and preferences among teachers at the various levels of a school (Han & Yin, 2016). We focus on high schools, which typically deal with more complex subject matter and specialised disciplines compared to elementary schools (Marston, 2010). High school teachers are expected to possess deeper subject-specific knowledge and often face greater challenges in aligning their teaching practices with curriculum guidelines. In Norway, becoming a high school teacher typically requires completing a five-year master's degree program. This extensive education process ensures that teachers are well-prepared and highly qualified. Investigating the factors that influence their professional commitment can yield valuable insights into navigating these complexities effectively.

To gather the most relevant data for our study, we carefully selected public high schools in Oslo, in late autumn 2023. We invited five high schools from various regions of the city to participate in the survey. These schools were chosen to reflect the wide diversity in socio-economic levels and ethnic backgrounds among students in Oslo. This diversity is evident in the admission scores and average grades of the students upon graduation. All the selected

schools offer academic programs, ensuring that our sample accurately represents the range of high schools in Oslo that prepare students for further academic studies.

The survey was conducted during a mandatory school meeting for school staff, where teachers were given paper-based questionnaires to complete. The survey was anonymous, and thus no participant had an incentive to provide false information. Although participation in the survey was voluntary, all teachers chose to participate. Participants were provided with information about the project and assured that they could withdraw from the study at any time without explanation. Observation determined that none of the 246 teachers failed to participate. However, some non-completed questionnaires were excluded from the sample for the present study.[1] Consequently, the response rate among teachers from the five schools was approximately 87% (*N* = 223). It should be noted that teachers who were absent are not represented in the data. We are unaware of any systematic absence in the participating schools, which could represent potential bias, and we are confident that the sample used for the survey effectively represents the diversity of teachers in high schools in Oslo that offer academic programs.

By employing structural equation modelling (SEM) in a research study regarding the factors related to professional commitment and passion, we can gain insights into the connections among variables (Kline, 2023). In this context, factors refer to the variables that may impact high school teachers' professional commitment. The variables are used to comprehend and elucidate differences in the endogenous variable; however, we cannot ignore the fact that the causal directions can go more than one way.

As a statistical approach, SEM enables researchers to analyse intricate relationships between observable and latent variables. It considers the presence of measurement errors, providing more precise estimations of the associations between variables. This is particularly crucial when working with survey data, which may be susceptible to such inaccuracies.

The survey items were derived in part from indicators found in previous scholarly research conducted by Bryk and Schneider (2002), Skaalvik and Skaalvik (2014), and Allen and Meyer (1990), while others were newly developed indicators. We followed the recommendations in Haladyna and Rodriguez (2013). Our items and descriptive statistics are presented below in Table 1.

[1] In one educational institution, a subject section comprised of five individuals conducted a distinct gathering to collect data. Unfortunately, four questionnaires were disregarded since the participating teachers selected the "neither agree nor disagree" option for all questions. Additionally, four questionnaires were excluded due to respondents omitting answers to multiple questions. Furthermore, two individuals completed their questionnaires quickly enough to suggest limited contemplation of the prompts, leading to their exclusion from the sample. In our data set, we found some boxes that the teachers did not tick and disregarded these teachers as informants. These factors combine to explain the 87% response rate.

The concepts were assessed using two to three individual items. In the survey, teachers rated items on a five-point Likert-type scale, with three indicating a neutral midpoint. Generally, the Likert-type scale used was 1 = completely agree; 2 = somewhat agree; 3 = neither agree nor disagree; 4 = somewhat disagree; 5 = completely disagree. However, for items 86 and 87, the scale was adjusted to 1 = completely certain; 2 = fairly certain; 3 = neither certain nor uncertain; 4 = fairly uncertain; 5 = very uncertain. The descriptive statistics (Table 1) and measurement were analysed using IBM SPSS 29, and structural model (Figure 2) was analysed using IBM SPSS Amos 29.

Results

We calculated the mean *(M)* and the standard deviation *(SD)* for each item, as shown in Table 1. When we used three indicators, we have reported measures of internal consistency (Cronbach's alpha) and Pearson's *r* from when we have used two indicators. Cronbach's alpha of .68 and .65 for three indicators suggest moderate internal consistency, it might be acceptable in the specific context. A Pearson correlation coefficient of 0.48 ($p < 0.01$) between two indicators indicates a moderate positive relationship that is statistically significant. This suggests that the two indicators are related and measure somewhat similar constructs. A correlation coefficient *r* of .65 ($p < 0.01$) indicates a moderate to strong positive relationship between the two indicators. This suggests that there is a considerable degree of consistency between the indicators. A correlation of $r = .36$ ($p < 0.01$) between two indicators suggests a statistically significant but moderate relationship, indicating moderate internal consistency as a measure of reliability. Held together there is a considerable degree of consistency between the indicators, with higher scores on one indicator associated with higher scores on the other.

Table 1

Descriptive statistics

Latent variable	Name of variable	Wording of the item	Mean	SD	Range	Cronbach's alpha/ Pearson's r	References
Teachers' professional passion	JA70	I give absolutely everything when I teach, even if learners are not always mentally present.	1.9	0.8	1–5	α= 0.68	Developed for this study
	JA71	I work really hard to do as good a job as possible, even if I don't get good feedback from learners.	1.9	0.7	1–5		
	JA72	Even when learners think the subject is boring, I am full of energy when I teach.	2.2	0.9	1–5		

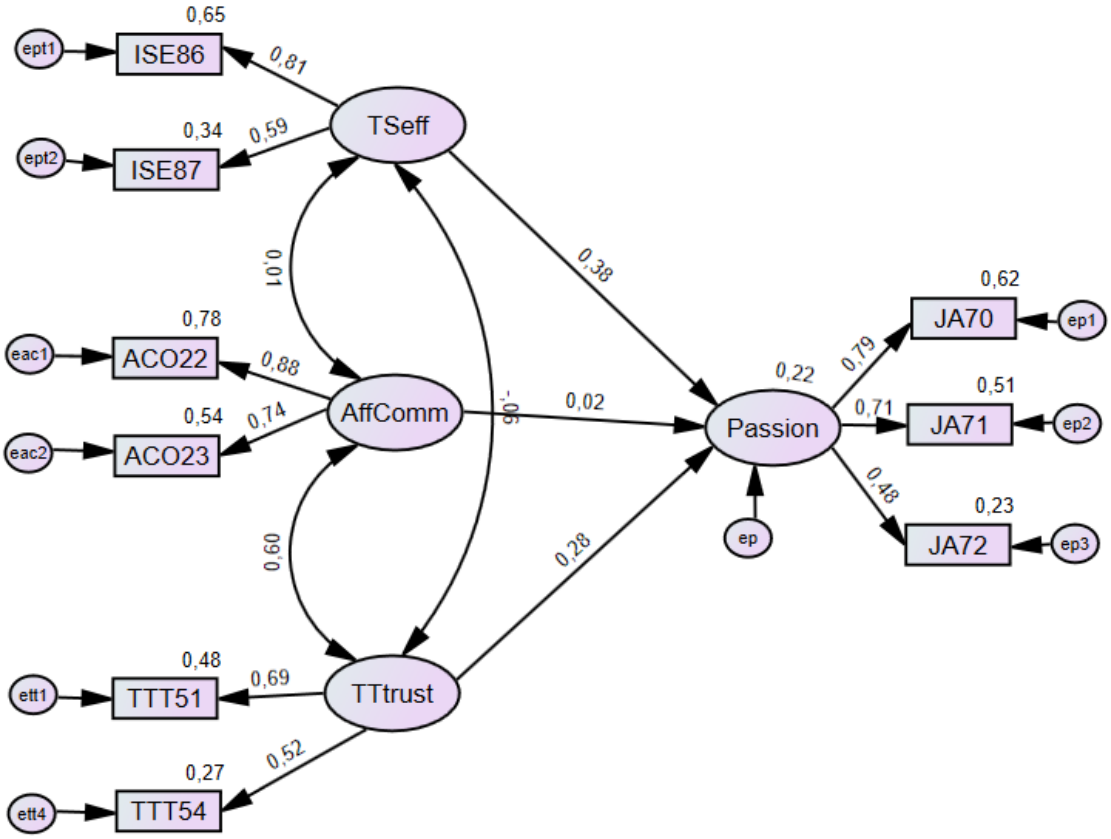
Table 1 (Continued)

Latent variable	Name of variable	Wording of the item	Mean	SD	Range	Cronbach's alpha/ Pearson's r	References
Teacher instructional self-efficacy	ISE86	How sure are you that you will be able to motivate learners who show little interest in schoolwork?	2.6	0.8	1–5	*r* = 0.48 *p*<0.01	Skaalvik & Skaalvik, 2014
	ISE87	How sure are you that you will be able to make learners believe that they can actually do well in school?	2.6	0.7	1–5		
Affective commitment	ACO22	I have a strong sense of belonging with the others who work at this school.	2.1	1.0	1–5	*r* = 0.65 *p*<0.01	Allen & Meyer, 1990
	ACO23	I am emotionally attached to this school.	2.0	1.0	1–5		
Teacher–teacher trust	TTT51	The teachers at the school trust one another.	1.7	0.8	1–5	*r* = 0.36 *p*<0.01	Bryk & Schneider, 2002
	TTT54	The teachers at this school really respect their colleagues who are skilled in their work.	1.7	1.0	1–5		

The results of the descriptive statistics shown in Table 1 indicate that the teachers report a high level of professional passion (*M* = 2.0, *SD* 0.8), a moderate to high level of instructional self-efficacy (*M* = 2.6, *SD* = 0.8), a high level of affective commitment (*M* = 2.0, *SD* = 1.0) and a high degree of teacher-teacher trust (*M* = 1.7, *SD* = 0.9).

In Figure 2, the ovals represent the latent variables, the rectangles represent the observed variables, and the circles represent the measurement errors. The pathways signify the strength and directions of the connections between the variables. These coefficients are standardized estimates, similar to beta weights in regression analyses, with values typically ranging from +1 to -1. A value above zero indicates a positive relationship; as one variable increases, so does the other. Meanwhile, a value below zero indicates a negative relationship: as one variable increases, the other decreases. In this context, we also assess the practical or substantive significance of the pathways, which involves evaluating whether the observed relationships have meaningful implications in real-world scenarios. Abbreviations are explained right under Figure 2, together with the interpretation of the results.

Figure 2 *SEM-model depicting teacher passion, self-efficacy, affective commitment, and teacher-teacher trust*



Standardized estimates
CHI = 25,942; DF = 21; P-CHI = ,209; RMSEA = ,033; CFI = ,987; TLI = ,978

Our SEM analysis indicated that the proposed model displayed a satisfactory fit with the data, as evidenced by the chi-square test, indicating a rejection of the null hypothesis. The comparative fit index (CFI) was acceptable, with a value of 0.987, suggesting that the model provides an accurate representation of the actual data structure. Additionally, the Tucker-Lewis index (TLI) indicated a good fit for the model, with a value of 0.978, and the root mean square error of approximation value (RMSEA) of 0.033 indicates a good fit (Kline, 2023), further affirming the model's adequacy. Taken together, these indices support the conclusion that our model fits the data well.

Table 2

Overview of the results

Hypothesis	Wording	Result
1	Teacher efficacy is positively related to teacher passion.	Supported
2	Teachers' affective commitment in their own organization is positively related to teacher passion.	Not supported
3	The level of trust among teachers affect their professional passion to teaching.	Supported
4	There is a positive relationship between relational trust and teacher efficacy.	Not supported
5	There is a positive relationship between relational trust and affective commitment.	Supported
6	There is a positive relationship between teacher self-efficacy and affective commitment.	Not supported

There is a clear pathway between teacher efficacy and professional passion: the coefficient is 0.38. With a cross-sectional approach in SEM, a path coefficient of 0.38 can be characterized as a moderately positive relationship between the two variables (Cohen et al., 2018). This means that for one standard deviation increase in the predictor variable, there is an expected 0.38 unit increase in the outcome variable. Further, the results demonstrate a modest pathway between trust among teachers and their professional passion: the path coefficient is 0.28. This is commonly characterized as a moderately positive relationship between the two variables (Cohen et al., 2018). The other pathways were lower in strength, but we can identify indirect pathways, which can be interpreted as one variable acting via another variable. Affective commitment is an effective pathway to teacher passion via relational trust. The strength of the connection between the trust that exists among teachers and their affective commitment involvement with the school organization is strong (b = 0.60). This strength is notable because we can distinguish on a theoretical basis between two clearly distinct concepts.

Discussion

The purpose of the present study was to explore the relationship between high school teacher's professional passion for delivering high-quality education and various factors associated with their work, including trust among colleagues, affective commitment to the school organization, and teachers' instructional self-efficacy. We found evidence to indicate that teachers with a high sense of self-efficacy are more likely to possess professional passion, and the converse is true for teachers with low self-efficacy. This mechanism might lead to increased enthusiasm for the profession (and to decreased enthusiasm for teachers with low self-efficacy), an insight that can help explain the strength of the path coefficient between these latent variables. In other words, we find evidence of a relationship between teacher efficacy and teachers' professional passion.

Further, we believe that instructional self-efficacy and teachers' passion form a dynamic, reciprocal relationship. Each attribute feeds and amplifies the other, making both essential elements in promoting effective teaching and fruitful learning outcomes (Bryk & Schneider, 2002). Teachers who believe in their abilities and approach their work with engagement and drive are more likely to thrive in their roles and inspire their learners to do the same (Burić & Moè, 2020).

Relational trust among teachers is a practical necessity for quality teaching (Bryk & Schneider, 2002). It lays the foundation for a professional community that values excellence in education, and schools with high levels of trust between teachers are more likely to retain effective educators. The pathway between trust among teachers and their professional passion is 0.28. This is a moderately positive relationship between the two variables (Cohen et al., 2018). We find the strength of this pathway meaningful because teachers are alone when they are in the classroom and thus have little contact with colleagues when performing their core duties (Lortie, 2020). However, the quality of the contact with colleagues seems to be related to how teachers develop a professional commitment to deliver good teaching. In other words, the question of how one is perceived by one's colleagues and the relationships one has with them could affect the energy teachers put into teaching. What we find here is not solid evidence for this possible connection, and we note that this finding should be followed up in further research to gain insight into a possible causal relationship.

The direct pathway between teachers' affective commitment to the school organization and their professional passion is notably weak. Similarly, the link between teachers' instructional efficacy and their affective commitment to the school organization is minimal, while the relationship between teacher efficacy and relational trust among teachers is surprisingly low. However, it is crucial to consider that this is an indirect effect influenced by another variable, which diminishes the expected impact between the two factors. In future research, it would be valuable to investigate these relationships, which we have found to be strikingly weak. Qualitative research, based on observations and interviews, could offer explanations of what

is happening in the relevant pathways (Cohen et al., 2018). It is also possible to include more variables in quantitative analyses to obtain a more nuanced picture of how meaningful variables are related (Kline, 2023).

There is an indirect relation between affective commitment to the school organisation via relational trust among teachers and teachers' professional passion for teaching. We interpret this as if the subjective experience of how colleagues perceive a teacher and the extent to which this perception fuels trust among colleagues will strongly fuel a highly valuable characteristic in employees: that they have an affective commitment to their organization. The research on affective commitment shows that this quality is important for the energy employees put into their work and, hence, their willingness to go the extra mile (e.g., Mercurio, 2015). This is important because teachers' actual work tasks are only specified to a modest extent in documents that explain their duties (Somech & Bogler, 2002). One possible interpretation is that the realization of a good school depends on teachers who are willing to do more than what can be considered the minimum effort required to retain their position.

Limitations

While a cross-sectional questionnaire study using SEM can yield valuable insights, it is important to consider its limitations. One significant issue is the inability to establish causality from cross-sectional data. Although SEM models often depict causal processes, it is challenging to draw definitive conclusions about cause-and-effect relationships without temporal precedence (Kline, 2023). Randomised controlled trials are the gold standard in studies of causal processes but are difficult to conduct in school settings (Berliner, 2002).

Another clear limitation is that this study is only valid for the context from which the sample was drawn. Although our sample captures the diversity among schools in Norway's capital well, we cannot claim that it is strictly representative; nor can we claim that it is representative of high schools across Norway, let alone other countries. Further, both school culture and age level can have an impact on how the factors that we have emphasised play out (Cohen et al., 2018). How they manifest themselves in different school contexts is a pressing matter for further research because we believe that teacher passion is a crucial attribute that has received relatively little attention in educational research.

It is also important to note that the quality of SEM results relies on the accuracy of the underlying theoretical model (Kline, 2023). If a model is incorrectly specified, the findings may reflect that error rather than depicting an accurate relationship between variables. Additionally, unmeasured variables can impact both exogenous and endogenous variables. Low-strength pathways may indicate the need to reassess the theoretical model. Therefore, it is crucial to interpret such pathways within the context of the overall model fit indices (RMSEA, CFI, and TLI) and the theoretical framework guiding the research. Despite these considerations, our structural model demonstrates good fit, allowing even weak paths to provide insights into the relationships examined, although they may not have as much influence as stronger paths. At

the same time, we acknowledge that our model may benefit from the inclusion of additional variables in future steps.

Self-reporting has obvious weaknesses (Cohen et al., 2018). Observations of teachers' visible behaviour could, in principle, be an interesting corrective to assess the veracity of the information teachers provide, but this would be very difficult to implement.

A combination of quantitative and qualitative data is an avenue for further research (Cohen et al., 2018). Therefore, a qualitative follow-up study would be an interesting opportunity to go behind the numbers to hear how the respondents perceive their own reality. This can provide valuable information to better understand the complex phenomena studied here. We believe that future studies, including the work of other researchers, will contribute to a more accurate understanding of the factors influencing teachers' professional commitment to teaching. Thus, our research serves as a starting point for further investigation.

Implications for practice and research

The implications for practice from this study include actionable insights for educational administrators, policymakers, and teachers themselves. Enhancing teacher self-efficacy involves investing in professional development programs that focus on boosting teachers' instructional self-efficacy. This can include workshops on effective teaching strategies, mentorship programs, and opportunities for teachers to reflect on and discuss their practices, as well as providing constructive feedback and recognizing teachers' efforts to help boost their confidence in their teaching abilities (Meredith et al., 2023). Building relational trust is also crucial, and schools should foster a culture of collaboration that cultivates trust among teachers. This can include regular team-building activities, collaborative teaching projects, and platforms for sharing successful practices (Bryk & Schneider, 2002). Encouraging open and honest communication among staff can help build mutual trust and respect (Tschannen-Moran, 2014). Promoting affective commitment entails creating a positive and supportive school climate that values teachers' contributions and involves recognizing and celebrating achievements and providing a supportive environment for professional growth (Bryk & Schneider, 2002). Allowing teachers more autonomy and involvement in decision-making processes can increase their sense of belonging and commitment to the school (Parker, 2015). Integration of these efforts should adopt a holistic approach, since affective commitment is indirectly related to teacher passion through relational trust; and efforts to build a strong, trustful community among teachers indirectly enhance their commitment to teaching. Implementing interconnected programs that simultaneously address self-efficacy, relational trust, and affective commitment can be more effective (Holzberger et al., 2013). Leveraging teacher passion could involve supporting initiatives that allow teachers to pursue projects they are passionate about, which may enhance their overall commitment to teaching (Mart, 2013). Focusing on teachers' well-being by reducing burnout and supporting their emotional needs can sustain their passion and enthusiasm for teaching (Skaalvik & Skaalvik, 2014).

Policy implications suggest that policymakers need to ensure that adequate resources are allocated for professional development and community-building activities within schools and that policies supporting teacher autonomy and professional growth can contribute to higher levels of professional passion among teachers (Hargreaves et al., 2013). Future research and practice integration could explore additional variables that may impact professional commitment and integrate qualitative studies to understand the detailed experiences and perceptions of teachers. Though the study is situated in the Norwegian context, these insights can be adapted and tested in different cultural settings to assess their universal applicability. By addressing these practical implications, educational institutions can better support teachers in developing strong professional commitment and passion, which ultimately enhances the quality of education and student outcomes.

One avenue for further research is to investigate how teacher self-efficacy, on the one hand, and teachers' professional passion, on the other, can lead to higher levels of learner engagement, improving student outcomes. This kind of research design will require a more comprehensive set of surveys that also include student data (Keller et al., 2016). This is not impossible to implement but will require extensive funding and adequate permissions. A more comprehensive sample could also help clarify how teachers' professional passion manifests itself in different teacher age groups and in different school subjects.

Conflict of interest

The authors declare that the research was conducted without any commercial or financial relationships that could be seen as a potential conflict of interest.

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How Peer Support Enables a More Sustainable Professional Medical Role: A Qualitative Study

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Abstract

Peer support services have been established in several professions to help individuals cope with challenging work and life situations. Using the medical profession as an example, we have qualitatively studied physicians' experiences of peer support. We conducted interviews with 12 physicians shortly after they had attended peer support and 12 months later. We analysed the interviews using systematic text condensation. We then reanalysed each pair of interviews (baseline and follow-up) using Schein's model to further deepen the analytical insights. The results show that the professional medical role can evolve. Peer support helped the individual physician to become aware of, acknowledge and adjust to how unwritten rules within the medical culture had formed a non-sustainable professional role. Peer support can facilitate changes at and outside work, as well as foster a willingness to seek treatment for self-care.

Keywords

Physician distress, professional distress, medical role, medical culture, peer support, qualitative, professional role, sustainable physician role

Introduction

The work in many professions implies meeting inherent and specific challenges related to professional norms and work environments, which can threaten their members' sustainable health and well-being. Thus, understanding and dealing with professional experiences are important for mitigating the risks of work-related stress and its consequences. To address these issues, peer support programmes have been established for different professions (Isaksson Rø & Aasland, 2016; Milliard, 2020; Sarros & Sarros, 1992). A peer supporter has the same basic professional education as the person seeking help and is, therefore, familiar with that person's work environment (Abrams, 2017; Isaksson Rø & Aasland, 2016). The benefits of peer support services for enhancing mental health and well-being are progressively gaining recognition (Lewis et al., 2020). Peer support services provide low-threshold support, with or without training for peer supporters, and a range of approaches are considered good practices (Khan & Vinson, 2020; Miguel et al., 2023). Studies have shown that physicians seek peer support for a wide range of reasons and that most find it beneficial (Abrams, 2017; Horne et al., 2021, 2023; Isaksson Rø et al., 2010), but knowledge is nevertheless lacking regarding how and why peer support helps professionals. An in-depth study of an archetypal profession, such as medicine (Freidson, 1970), could provide such knowledge while simultaneously being relevant to other professions.

Since the mid-1980s, studies have revealed high levels of physician burnout (Hiver et al., 2022), with consequences for individual physicians and the quality of patient care (Scheepers et al., 2015). Physician distress has largely been attributed to high expectations of individual performance, combined with an ethos in the medical professional culture of putting patients´ needs first, as well as the expectation that physicians should exhibit altruism, self-sacrifice, perfectionism, and conscientiousness (Collier, 2012). Medicine, like many other professions, has developed a unique culture characterised by strong socialisation during the education and training period, which transmits learned values that are preserved in the profession (Ginor & Becker, 2017). This professional culture fosters a sense of group belonging in medicine, which promotes high professional standards for patient care (Freidson, 1988). However, elements of the culture are also associated with a tendency to overwork and a perception that normal human limitations (sleeping, eating, being sick, etc.) do not apply to physicians since they are expected to "be immune to illness" (Fox et al., 2009, p.817). The professional values that increase the risk of overworking align with traits already prevalent in students admitted to medical schools—neuroticism and conscientiousness (Collier, 2012; van der Wal et al., 2016). They are also transmitted in educational and training settings by senior physi-

cians who continue to work despite being sick and do not allow themselves to react emotionally or take their own needs seriously (Torralba et al., 2020). This nonverbal transmission is called the "hidden curriculum" (Bennett et al., 2004, p.145), and it emphasises meeting professional demands and deprioritising self-care and personal relationships (Shanafelt et al., 2019). The lack of acknowledgement of these issues at the professional level can lead to physicians engaging in potentially destructive behaviour regarding their own health and well-being (Shanafelt et al., 2019).

Seeking support or admitting to needing help may often seem difficult or threatening because there is a risk of appearing weak, incompetent, or vulnerable (Gray et al., 2020), generating feelings of shame and embarrassment among physicians (Brooks et al., 2011). To lower the threshold for seeking help, peer support services for physicians have been developed in several countries, such as Denmark (Lægeforeningen, 2023), Great Britain (BMA, 2024; Shapiro et al., 2014), and the United States (Stanford Medicine, 2024). Peer support differs from treatment in offering collegial, confidential discussions, and it is therefore perceived as less evaluative (Zee & Bolger, 2019). Studies of physicians have shown that self-care and treatment-seeking (Abrams, 2017; Horne et al., 2023; Isaksson Rø et al., 2008) reduce levels of burnout, job stress, depressive symptoms, and anxiety for up to three years after subjects receive peer support (Isaksson Rø et al., 2008, 2010). To study how peer support can facilitate such changes, we used a model developed by Schein (2017) describing relationships between workplace organisation and organisational or professional culture (Schein, 2017). Some parts of a culture may act as barriers to change, although professionals' individual understanding of cultural values can be promoted to reduce or remove such barriers (Schein, 2017). Schein´s (2017) framework has been used to consider the medical profession's culture in relation to burnout and well-being (Shanafelt et al., 2019). Schein described elements of professional culture as unwritten rules (basic underlying taken-for-granted assumptions) that drive behaviour and are often so integrated into the culture that they are considered nondebatable—"cultural DNA" (Schein, 2017, p.7; Shanafelt et al., 2019). They are hard to see and even harder to change, but they can be revealed by studying discrepancies between what we say (which Schein (2017) called our espoused values) and what we do (which he referred to as artefacts). Gaining awareness of and acknowledging such discrepancies can enable individual professionals to question established perceptions and practices, which can facilitate changes in their values and, thus, in their behaviour.

In 1998, a peer support service, Villa Sana, was established for all physicians in Norway to "enhance health and life quality, strengthen professional awareness and identity and prevent burnout" (Modum Bad, 2023). A study of physicians who engaged with this peer support service reported various reasons for seeking support, from worries that the work situation over time would be too exhausting to serious symptoms of mental and somatic illness (Horne et al., 2021). Common to all physicians seeking help was the fear that acknowledging their own need for change, sick leave, or treatment would be perceived as professional weakness and

disloyalty to colleagues and patients. In this study, one year later, we reinterviewed the same physicians who had attended the peer support service to explore whether and how they perceived peer support as a means of fostering more sustainable physician roles, particularly in relation to self-care.

Aim

The aim of our study was to investigate how peer support can facilitate a more sustainable medical professional role and promote self-care.

Methods

We conducted semi-structured interviews with physicians shortly after they sought peer support and one year later. This enabled us to investigate beliefs, values, and changes over time, allowing us to explore the meanings of social phenomena as experienced by the individuals themselves (Malterud, 2017; Patton, 2014).

The National Peer Support Service, Villa Sana

We recruited physicians who had received peer support from the Norwegian national peer support service at Villa Sana (Modum Bad). This confidential counselling setting does not involve formal medical treatment or medical records for either a single-day one-to-one session (duration 6 hours) or a five-day on-site course. The one-to-one sessions provide an opportunity to identify areas of physicians' lives that require attention and modification. The handling of situations and the prioritisation of different needs are discussed in terms of the conditions that can hinder or facilitate necessary change. The courses accommodate nine physicians and include daily lectures about preventing burnout, opportunities, and restraints in working life, as well as professional identity. Furthermore, the courses help attendees practise mindfulness and physical activity, and attendees are offered individual peer counselling sessions. The counsellors are mostly physicians, but they also include some experienced psychologists. From a previous study (Isaksson Rø et al., 2010), we know that there are no significant differences in outcomes between doctors attending one-day counselling sessions or week-long courses.

Participants and sampling

Thirteen physicians attending the peer support service were interviewed in 2018. Twelve of them, seven who had attended the one-day session and five the course, were re-interviewed one year later. One withdrew from the study. This article is based on a longitudinal qualitative approach and analyses of the two sets of interviews (Audulv et al., 2022; Hermanowicz, 2013). We recruited eight women and four men, aged 25–70 years old, from diverse medical specialities (family medicine, surgical specialities, laboratory medicine, psychiatry, and internal medicine) and from different parts of Norway to ensure high information power (Malterud et al., 2016; see Table 1).

Table 1

Demographic Data 2019

Selected Participants' Characteristics (n = 12)	Participants (n)
Gender	
Male	4
Female	8
Age (average 46 years)	
20–30	1
30–40	4
40–50	2
50–60	2
60–75	3
Medical Speciality	
Family medicine	5
Surgical specialties	1
Laboratory medicine	2
Psychiatry	1
Internal medicine	3
Work Experience	
0–10 years	4
10–20 years	5
20–30 years	1
30+ years	2

Data collection

In the baseline semi-structured interviews conducted in 2018 (1–1½ hours each), shortly after they attended the peer support service, we explored why the physicians sought peer support (Horne et al., 2021). To explore what they had done to improve their situations, we conducted follow-up interviews (1–1½ hours each) one year later (± 30 days). Based on a qualitative longitudinal approach, we gathered data at multiple time points, focusing on changes in phenomena over time (Audulv et al., 2022). The participants signed written informed consent forms before each interview. The first and last authors conducted the interviews. Interviews were audiotaped and transcribed verbatim and complemented with notes taken during the interviews to aid in the discussion of perspectives and interpretations after each interview.

Data analysis

We analysed the follow-up interview transcripts using systematic text condensation (Malterud, 2017) to study how the participants had handled their situations in the year following peer support. Systematic text condensation involves four basic steps to achieve a descriptive and explorative analysis of data: 1) reading through the material to obtain an overall impression (i.e. moving from chaos to themes), 2) identifying and sorting meaning units (i.e. moving from themes to codes), 3) condensation (i.e. moving from codes to meaning), and 4)

synthesising (i.e. condensation to descriptions and concepts; Malterud, 2017). At least two authors read all the interview transcripts. The first and last authors, in parallel, analysed two follow-up interviews and discussed codes until they reached consensus. The first author then used the codes to analyse the remaining interviews. All four authors helped synthesise the results. To examine the participants' behaviour, mindsets, and values, we reanalysed both interview transcripts for each participant. We applied Schein´s framework as a theoretical lens to understand the associations between the changes reported by the participants and changes in the expectations of the professional role by examining statements regarding values in the medical culture that the participants made during the two interviews.

Results

In the results section, we present the participants' perceived importance of the peer support setting for fostering change, the changes they reported having made (artefacts) in their work situations and outside them, and the benefits of seeking treatment. In the following paragraphs, we illustrate the changes in the participants' perceptions regarding their professional medical roles and related self-care. Table 2 presents each interviewee's views on the importance of peer support for fostering change, the changes they reported, and key quotes reflecting their professional medical values in 2018 and 2019.

Table 2

Results

No.	Year	The Role of Peer Support (Quotation)	Reported Changes (Artefacts)	Year	Quotation	Espoused Value
1	2019	"*Taking responsibility for my own work health and actually attending this course—almost as if legitimising, both for myself and outwardly, that this is something I need—gave me a kind of platform to move forward.*"	Has obtained a new position with reduced working hours [part-time sick leave] and without direct patient contact. Attended psychotherapy. Engaged in continuing medical education. Has more contact with family, Prioritises physical activity.	2018	*"There is a feeling of shame because you actually drop out of working life and cannot tolerate stress. We are highly educated; we ought to know for ourselves what we can or cannot tolerate …. and what we should do about it."*	I must understand myself and what I can and cannot tolerate. I have nothing to complain about.
				2019	*"What was interesting was receiving confirmation of the seriousness of the matter—that I did the right thing by asking for help and that help was available."* *"I am allowed to say that I am human."*	I think it is right for me as a doctor and human to ask for help.

Table 2 (Continued)

No.			Artifact	Year	Quotation	Espoused Value
2	2019	*"I didn't get what I expected. Of course, it was an important part of my journey—knowing that even when I felt completely alone, somewhere in Norway, there was someone who had some of the same thoughts."*	Back at work, exempt from on-call work for a limited period. Now receives regular follow-up for a somatic illness. Attends psychotherapy.	2018	*"You have a duty to work. … So, I have not identified myself with any of my diagnoses."* *"I feel shame about getting sick—a strong feeling of guilt about the fact that I am out of work and experiencing grief related to my loss* of *identity, role, and career. I am no longer the super doctor that you are expected to be."*	As a doctor, I have a duty to work, no matter what.
				2019	*"I now feel that I see life and work differently, and I have plans to reduce my working hours to a 100% position."* *"Why do I feel like shit when I only work 100%? But that's how the medical profession is defined in a way; you are not 100% when you are 100%—you are 100% when you are 140% or something."* *"I really want to follow the Working Environment Act."*	It is the right thing to do, to take care of myself.
3	2019	*"Yes, it matters. It felt really good to have a place to go—it was the beginning of something."*	In the same position (a full-time job). Attends psychotherapy Receives compensation for overtime work and has postponed senior medical leave. Has opted for early retirement.	2018	*"If something is problematic, I assume that I'm to blame, and if it feels too difficult, then it's me who has to work harder, or something like that."*	It is my fault that I am treated the way I am at work, and the solution is to work even harder.
				2019	*"There is a workplace culture, you could almost say a distinctive feature of the profession, that expects most of us to … be able to work constantly at our tolerance limit."* *"I told them straight out that this hospital had ruined my health."*	There is nothing wrong with me—something is wrong with the workplace culture.

Table 2 (Continued)

No.			Artifact	Year	Quotation	Espoused Value
4	2019	*"I think it [peer support] started a chain of thoughts … that I shouldn't resign myself to enduring another year or five more years."* *"I think maybe it gave me a little push to do something."*	Same working conditions. Attends psychotherapy. Has made an appointment with the Family Welfare Office and a general practitioner [for the first time]. Took short-term sick leave.	2018	*"I have virtually no social life. I come home from work so that I can put the kids to bed, and then I'm completely exhausted. There is not much I say 'yes' to [socially], but at work I cannot say 'no'."*	I have to put up with the job and endure it.
				2019	*"I have been telling myself for many years now, 'It will probably get better by itself.' I think that it [peer support] was at least the start [of a different way of acting]."*	If I want change, I must act on it.
5	2019	*"It was a very helpful day at Villa Sana."* *"I had many 'aha!' moments that day about why I react the way I do."*	On maternity leave and returns to a 100% position when it ends.	2018	*"I demand a lot of myself. When I go around, I'm afraid of making mistakes and … of simply not being good enough."* *"Somehow, I have to perform well on every level."*	I must not make mistakes.
				2019	*"The requirements one feels and the fear of making mistakes… are perhaps special for this profession."*	I must not make mistakes.
6	2019	*"Just being there with the others [at the peer support service], talking to them and being in a setting where everyone had their stuff [difficulties], felt like a sanctuary where you could be yourself."* *"It helped, almost like a weight was lifted when I arrived home. It was important for me and made me more aware of what I struggle with, so that's a positive thing."*	Started a new medical specialty after a long period of sick leave.	2018	*"It's okay to have flu, but I should not be sick in the way I am now. When I hear myself saying that, I realise it's harsh, but that's how I feel."*	Having a mental illness is not compatible with the doctor's role.
				2019	*"With everything I've been through, I feel that I'm a little less concerned with the facade and with hiding things, so it feels a little better."*	I can be a doctor even if I suffer from a mental illness.

Table 2 (Continued)

No.			Artifact	Year	Quotation	Espoused Value
7	2019	*"I think the conversation [during peer support] came at a good time, when I was receptive to finding solutions and thinking about the way forward, and I believe I have used the input I received from the peer supporter."*	Works part time (50%). Has initiated regular exercise. Attends a metacognitive therapy course.	2018	*"I take personal responsibility until I become so … ill [mentally] that I have to give up."* *"There is less stigma … about going to a somatic doctor than to a psychiatrist."*	As a doctor, I should take responsibility for treating my own mental illness.
				2019	*"Actually, it is fairly obvious that I should work less, but … to realise it and then accept it and sort of lower my expectations … it takes some time."* *"Even though [physical activity] is not psychotherapy, it works as mental therapy all the same. I feel that I benefit from it."*	It is important for me to prioritise what I need and accept treatment when necessary.
8	2019	*"So, we talked about these things, and she [the peer supporter] was the one who recommended that I talk with the municipality [the employer], be honest, and say what I meant. Not long after that, I brought it up with the municipality. Maybe I needed someone to tell me that it was okay to speak up."* *"I simply gained the confidence to trust myself a lot more. I think it helped a lot."*	Has gained control over alcohol consumption. Has relocated and started working in a new specialty.	2018	*"It became easy to resort to alcohol when there was not much else to do. Then, I began experiencing a high level of stress at work and started losing control."* *"It's a bit stigmatising [seeking help], and I do not want a patient record."*	I cannot ask for help due to my alcohol problems.
				2019	*In relation to alcohol, complete abstinence was not necessary, but the therapist [peer supporter] suggested [abstaining for a while], and I decided to try it."* *"I think, in summary, I probably gained more confidence."*	I can and should ask for help when I need it.

Table 2 (Continued)

No.			Artifact	Year	Quotation	Espoused Value
9	2019	*"It was quite good, and it helped a lot. It really did."* *"It was really useful for me to talk and let it all out."*	Now works four days a week. Attended a mindfulness course. Attended psychotherapy. Has told several colleagues about the situation.	2018	*"I felt like a patient and … I felt completely emptied of medical knowledge."* *"As a doctor, I worked for far too long [before seeking help]. It is embarrassing because we are trained [to identify diseases."*	It is not possible to tell anyone that I am ill; as a doctor, I should know how to avoid mental illness.
				2019	*"We did not feel like doctors when we were there [on the peer support course]. We felt like patients."* *"I think the important thing was to get away from all my daily routines [by attending the course] ... It was relaxing, but at the same time, we had to face the reality of what we go through every day. So, in a way, we could see our lives from the outside when we were there."*	For me, as a doctor, it is acceptable to become sick and to talk to others about it.
10	2019	*"I feel like it untangled a knot."* *"I managed to get past that low point without it becoming more serious, and in those conversations, I was able to see more clearly what I was struggling with."*	Work and private situation unchanged.	2018	*"I actually felt that I was the one who managed to cope with everything."* *"It is always a struggle against a guilty conscience when you leave home early and come home late."*	I should always prioritise work.
				2019	*"I think it makes sense for me … to somehow strengthen [prioritise] myself and find a strategy for going forward. I've been thinking that I should find someone to talk to."*	It is not obvious that I should prioritise work.

Table 2 (Continued)

11	2019	*"I learned words and concepts for things that hadn't been clear to me before. … I think they will be very useful for the rest of my life."*	Works only in a clinical setting. Receives support from the occupational health service. Attends psychotherapy. Initiated regular exercising. Allocates days without scheduled activities as breathing spaces.	2018	*"I even told my residents, 'You have chosen a lifestyle.' … I belong to the generation that thinks it is a way of life, but not all resident doctors think that way."*	I chose the lifestyle that goes with being a doctor.
				2019	*"After being at your place [peer support] I was not certain that the residents agreed with me at all. I felt that it was completely natural for them … that this was a job. I believe that in healthcare, we can't have people thinking it [working as a physician] is a normal job, but I understand that it's not healthy … that it shouldn't occupy as much [of life] as I allowed it to do before, or as many doctors did before me and several doctors do today."*	I think it is unhealthy for life to be only work.
12	2019	*"It was useful to put things into words with another person present … someone who wasn't a partner or a friend or anything like that. I think many doctors could benefit from that."* *"I think it is quite important for the person sitting there to be … someone who understands, in a way, what it's like."*	Works as a researcher. Seems to be embracing a more diverse physician identity.	2018	*"You are told every day that the only important work you can do is there [in a patient-related role]. Everything else is useless. The peak of happiness, workwise, it's where it happens; it's where you are important."* *"I kind of think I am not good enough at anything. I think no one has a use for my work … and working life has no use for me."*	I should work with patients to be valuable and succeed at work as a doctor.
				2019	*"I have worked on a collaborative project to improve clinical research."* *"My colleagues are very skilled people and a fun team to work with, so I was drawn in."*	I can contribute with something important and valuable by doing nonclinical work.

Perceived importance of peer support for subsequent change

The interviews revealed that the physicians considered participation in the peer support programme key to facilitating reflection on and subsequent changes in the difficult situations they faced:

(i) The results showed that peer support can legitimise help-seeking and emphasise the importance of taking one's condition seriously. As Interviewee 1 (2019) stated, "What was interesting was obtaining confirmation of the seriousness of the matter—that I did the right thing by asking for help and that help was available. I am allowed to say that I am human."

(ii) The participants claimed that the realisation that colleagues also struggled with the gap between their needs and their role expectations was a step towards accepting that change was necessary. Interviewee 6 (2019) stated, "Just being there with the others [at the peer support service], talking to colleagues and being in a setting where everyone had their stuff [their difficulties], felt like a sanctuary where you could be yourself."

(iii) The participants found that peer support contributed to a better understanding of their own reactions, promoted an awareness of physicians' difficulties, and gave them words and concepts to help clarify their situations. Interviewee 11 (2019) explained, "I learned words and concepts for things that hadn't been clear to me before. [...] I think they will be very useful for the rest of my life."

(iv) The participants experienced the peer support sessions as a push towards doing something constructive rather than hoping that the situations would change automatically. They also described experiencing increasing trust in themselves and emphasised that it was important for "the person sitting there [the peer supporter] to be […] someone who understands, in a way, what it's like" (Interviewee 12, 2019).

Making changes in the work situation

(i) Reducing the workload. The participants saw reducing the workload as beneficial. They achieved short-term reductions through spells of sick leave or by spreading their days of annual leave or sabbaticals across weeks. In the long term, they found it beneficial to reduce their work to part-time or to reduce their workloads by changing work tasks, such as switching to nonclinical work for a period, working less with patients and more to support younger colleagues, or being relieved of educational tasks. Interviewee 10 (2019) described replacing 50% leadership–50% clinical work with work in a 100% clinical position:

> Now I work 100% in a clinical setting. [...] When you work like that (clinically) […] you don't have to take your work home with you, but when I worked as a manager [...] most weekends, I would get a phone call about something that had happened or someone who had called in sick […] I had to work all the time. It's a huge difference.

Some participants moved to new work positions with more collegial collaboration, and two participants shifted to a new medical speciality.

(ii) Changes in approaches to work. The participants reported changing their approaches to work as a way of improving their situations. Increased self-confidence helped them dare to

raise issues with their managers, which alleviated the situations, or they dared to stand up to senior colleagues. According to Interviewee 8 (2019):

> I've become much better at handling things. Whenever I need to consult with […] an on-call doctor[…] and they start getting a bit rude, I don't put up with it. I've become very good at telling them that I don't want to listen to that sort of language. I'm not calling them for fun; I'm calling because I need assistance.

Some participants found it inspiring to assume professional responsibility for a specific area of clinical work. Others reported deliberately slowing down their pace at work to allow them more time to speak to patients.

Changes in situations outside work

(i) Addressing private relationships. Four participants reported recognising and accepting the need to readjust their relationships with their partners and children by, for example, prioritising home life and communication with their partners. Interviewee 1 (2019) said:

> What hasn't changed? [...] How much I expect to do in a day, both on my own behalf and with the kids, uh, how I talk to my children [...] We talk a lot more about feelings and priorities in life. That's important to them.

Two participants had started the process of separating from their partner after peer counselling.

(ii) Alterations in daily routines. The participants perceived changes in their daily routines, such as increasing physical activity, as beneficial for physical and mental health. Interviewee 7 (2019) explained, "Even though it [physical activity] is not psychotherapy, it works as mental therapy all the same. I feel that I benefit from it, so it's well worth the money and time invested."

Other beneficial initiatives included practising mindfulness, engaging a cleaner at home, dedicating days to doing nothing, reading books about stress management, keeping diaries, and reducing the use of alcohol.

Seeking treatment

Half of the participants sought psychiatric or somatic treatment after peer counselling. They found that validation of the need for treatment by peer counsellors and the healthcare system was important for normalising their situations.

(i) Therapy helped reduce depressive symptoms, anxiety, and sleep disturbances, and it also facilitated returns to work, in some instances, albeit while taking antidepressants and hypnotics. Interviewee 5 (2019) explained:

> Since then, I have attended therapy with an experienced psychologist. I still do. I was on sick leave for a fortnight. I took sleeping pills and began to sleep again. Since then, I've been back at work. I must say that I have benefitted from psychotherapy. I feel better than I did a year ago.

Some participants found couple´s therapy important for their relationships with their partners and children.

(ii) Somatic treatment. After years of denying their conditions, two of the participants sought necessary somatic treatment from healthcare providers after receiving peer support. Interviewee 1 (2019) said, "I learned a lot on a human level about the fact that I actually have a chronic illness and about all the challenges that I have neglected in my daily life."

Changed perceptions of the professional medical role

When seeking peer support, some participants described feeling trapped in a situation in which their challenges (feeling mentally or physically ill or not coping with their work or work–home balance) did not match their expectations of what a good physician ought to be (Horne et al., 2021). They expressed impatience and devalued their own reactions, feeling that they should cope in a more "professional" way. Interviewee 2 (2018) said, "You have a duty to work and to sort of keep on going. […] You have a social responsibility, and you should get a grip and somehow give it your best," and Interviewee 6 (2018) said, "I should not be sick in the way I am now [mental illness]. That´s not the way it should be."

At the follow-up, some participants described changes in their own role expectations regarding how to cope with being a physician, having become aware of the discrepancy between the situations they faced and their baseline role expectations. They were more accepting of the importance of self-care, seeing that it could be unhealthy for life to consist only of work and that you could be a good doctor while at the same time having an illness that required treatment. (See Table 2 for descriptions of individual changes from baseline to follow-up.) Interviewee 2 (2019) made the following comment:

> I now feel that I see life and work differently, and I have plans to reduce my hours by taking a 100% position. […] Why do I feel like shit when I only work 100%? But that's how the medical profession is defined in a way; you are not 100% when you are 100%—you are 100% when you are 140% or something.

Interviewee 6 (2019) said, "With everything I've been through, I feel that I'm a little less concerned with the facade with hiding things, so it feels a little better," and Interviewee 11 (2019) elucidated:

> We can't have people thinking it [working as a physician] is a normal job, but I understand that it's not healthy […] that it shouldn't occupy as much [of life] as I allowed it to do before, or as many doctors did before me and several doctors do today.

Discussion

In this study, we investigated how professionals perceived peer support that enabled them to reconsider their own expectations of the role of physician, practise better self-care, and thereby define more sustainable work situations.

At baseline, the physicians reported experiences of not coping with their situations due to illness or challenging work situations—including work-life imbalances (Horne et al., 2021). They also assumed that their professional medical roles involved having a duty to work, no matter what, or that having an illness was incompatible with being a doctor. Their actions align with a culture that can harm individuals who adhere to professional, often nonexplicit, norms that are considered correct (Bennett et al., 2004). According to Schein´s (2017) organisational theory, this results in as a discrepancy between physicians' experiences of needing help and treatment (artefacts) and the professional medical culture's belief that "a doctors´ duty is to work, no matter what" (espoused value). In the peer support setting, the physicians increased their awareness of this discrepancy, which enhanced their acknowledgement of their situations and prompted reflection on alternative ways to achieve change.

At the one-year follow-up, the physicians reported changes in their understanding of their professional medical roles. The participants highlighted the importance of taking care of oneself (although this could be difficult), seeing that it can be unhealthy for life to consist only of work, and embracing the idea that a good doctor heeds his or her own needs (espoused values). This change in expectations of the medical role seemed to have facilitated the changes reported at follow-up—at work, outside work, and through treatment seeking (artefacts). This reduced the gap between artefacts and espoused values (Schein, 2017), enabling the professional medical role to evolve. The expectations and values implying that doctors need to work, no matter what, or cannot be mentally or physically ill point to an unwritten rule: "Doctors should be able to endure anything." This unwritten rule reflects integrated socialisation into a professional culture, as if "nature really works this way" (Schein, 2017, p.21), and learning something new in this realm requires us to "re-examine, and possibly change, some of the more stable portions of our cognitive structure" (p. 22). The physicians who participated in this study sought peer support because they needed guidance, change, and improvement in their lives (Horne et al., 2021). Although there was great variation regarding the specifics of why the physicians sought peer support, they all seemed to experience peer support as a unique window of opportunity for better understanding their own situations and making necessary life and work changes. They shared feelings of struggling to cope and falling short of their professional values, and they perceived the benefits of the peer support programme (Horne et al., 2023; Isaksson Rø et al., 2008). The physicians reported that they discovered new avenues for action through peer support and subsequently became better positioned to do something about their difficult situations. They shifted from ignoring or dismissing their own physical and mental needs to a greater acceptance of their situations, recognising that

factors such as illness, personal limitations, and self-worth beyond work performance influenced their medical roles (Shanafelt et al., 2019). They became aware of the implicit, almost unconscious values that Schein called "taken-for-granted assumptions," which can be questioned and altered, allowing for new choices that lead to improved self-care (Schein, 2017, p.7).

Can individual changes affect the general understanding of the professional medical role? First, collegial discussions of challenges and experiences within counselling settings can facilitate the spread of new thoughts and ideas across the wider professional community. Second, participants can take their new ways of thinking back to their workplaces by, for example, challenging established norms about what is acceptable and through new ways of doing things. One of the study participants no longer accepted that senior doctors on call should not be disturbed, leaving junior doctors to manage everything alone. This junior doctor started to demand support more clearly, which had implications for the medical role as well as for colleagues and leaders. Third, counsellors can use their counselling experiences when teaching medical students and young physicians, which can pave the way for new values and norms among a new generation of doctors. Changes facilitated at an individual level through peer counselling can potentially affect the established medical culture. Nielsen et al. (1995) stated that "for real long-term organisational change to occur, the systems existing within the minds of individuals must be altered" (p.35). Future researchers must examine possible relationships between individual changes and changes in elements of the professional medical culture, as well as in the wider professional work culture.

The physicians in this study described the peer support service as important for enabling them to change their situations. The service provided a setting in which the physicians discovered (often to their surprise) that they were not alone in their struggles. This legitimised their experiences of being in difficult situations and raised their awareness of ways to do something about them. The physicians described developing a clearer understanding of their struggles and learning to identify and categorise them. They also received gentle prompts to make changes at work or to seek treatment rather than passively waiting for their situations to improve.

The need to change values and, consequently, behaviour can be challenging in an established professional medical role. Such basic changes can represent a threat to individuals' self-esteem and professional and social acceptance within a professional culture (Alicke et al., 2020), and change can be a profound process that takes time (Jacobs et al., 1998). Peer support can reduce such threats by normalising the struggle to become a good professional (Jacobs et al., 1998). The realisation that other colleagues share the same struggle can minimise experiences of vulnerability and social stigma (Abrams, 2017) by mitigating the shame, embarrassment, and loneliness many physicians feel when seeking help (Brooks et al., 2011). This acknowledgement manifested in the interviews in the physicians' descriptions at follow-up of how they managed their situations differently, reporting changes (artefacts) that now

aligned better with their new espoused values (Schein et al., 2017). These changes included reducing their workloads through sick or sabbatical leave, individually adapting their work situations to meet specific needs, seeking somatic or psychiatric treatment, engaging in physical activity, and striving for a better work-life balance.

Strengths and limitations

This study contributes to a growing body of research on unhealthy professional cultural values that need to be changed to promote better self-care. The medical profession has been described as an archetypal profession, and the results of this study provide important insights for other professions for which peer support is established. A possible limitation to the interpretation of the results is the substantial variation in the reasons for the physicians in this study seeking peer support. Despite these differences, they described shared challenges in setting boundaries and taking care of themselves within a medical culture that expects physicians to be competent in all areas of life.

Although most of the peer supporters at Villa Sana are physicians with backgrounds in psychiatry, some of them are psychologists. This could be a limitation of the study because of differences in professional education and work experience.

Although qualitative studies can yield rich material from only a few interviews (Patton, 2014), and the sampling of participants ensured variation in terms of medical speciality, age, gender, and place of work, the small number of participants (N = 12) inevitably limits the external generalisability of the results.

A multidisciplinary author group, including two physicians working for the peer support service and two from other academic backgrounds studying medical professionalism, leadership, and organisational change, broadened the interpretation and understanding of the empirical material (Patton, 2014). We acknowledged the researchers' diverse influences in discussions when identifying and interpreting topics, which involved the researchers reflecting on their own professional values (Kvale et al., 2015). By approaching the material using a well-known theoretical lens that has already been applied to the field of medical professionalism, we are helping "the field build up a coherent body of work, which is transferable beyond the conditions in which individual studies were conducted," according to Bolander Laksov's work on making theory explicit (Bolander Laksov et al., 2017, p.2). This study can, therefore, be relevant and useful for physicians and other professions that offer peer support.

Conclusion

In this study, we explored how peer support can contribute to evolving the medical professional role and fostering improved self-care practices. The physician participants expressed new or increasing awareness of the discrepancy between their situations, involving difficult life and health situations, and the expectations within the medical professional culture that they should manage work, no matter what. A year later, the expectations of the medical role

had changed towards acceptance and acknowledgement of the medical role as also including factors such as illness, limitations, and self-worth beyond work performance. This helped the physicians move towards more sustainable physician roles, allowing for self-care, handling their situations by seeking treatment, or making changes within or outside of the workplace. Realising that other colleagues shared the same struggles provided relief by reducing feelings of vulnerability and social stigma.

Peer support offers an arena for enhancing awareness, acceptance, and acknowledgement of opportunities and alternative ways of understanding the professional medical role, which can lead to better self-care. These findings may apply to other professions; however, further research is needed to explore how peer support can foster a healthy professional culture and role identities that support self-care.

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What Does it Mean to Act Professionally? Ideas of Professionalism Within Medical, Police, and Social Work Education

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Abstract

Professionalism is a crucial element of curricula in many profession-oriented higher education programmes. However, defining and working with professionalism-oriented learning objectives can be challenging. Comparative perspectives on professionalism across educational contexts are often missing. This study explores educators' ideas on what students need to learn to effectively navigate and manage their professional practice within three professional education programmes: police, medical, and social work. The analysis captures how professionalism is portrayed in documents and interviews with teachers. The findings highlight shared ideas of professionalism across educational boundaries. The concept is described as multi-dimensional and complex, necessitating more communication about what can be expected of students and how teaching and assessment should be designed.

Keywords

Professionalism, professional education, medical education, social work education, police education

Introduction

This article explores how those involved in professional education define professionalism and examines prevailing ideas on what students need to learn to navigate and manage their professional practice effectively. The study describes and analyses how professionalism is conceptualised in higher education within three professional education programmes: police, medical, and social work.

Professional education programmes aim to enhance students' ability to act professionally. This task is complicated, as professionalism is an elusive and contested concept that is difficult to define (Burford et al., 2014; Fenwick, 2016). The challenge is further complicated by changing societal demands on professionals. The knowledge students are expected to have regarding professionalism is regulated and articulated in various documents, which must be interpreted and translated into action by those involved in higher education. A crucial aim of professional education is to develop professionalism, requiring all parties involved to understand the concept. Policymakers and teachers need to know what to teach and assess.

Professionalism is widely recognised as a core element and a significant goal of curricula across many higher education disciplines. However, it can be contested, challenging to teach and learn (Neve et al., 2017), and surrounded by ambiguity (Friedman, 2019). This is particularly true for curricula designed to prepare professional practitioners in fields such as medicine, teaching, management, engineering, and various health and social care professions (Fenwick, 2016). In these contexts, the curriculum concerning professionalism is often disputed and linked to issues such as a lack of consensus and uncertainties about the core of the subject (O'Sullivan et al., 2012). A common ground is crucial for professionals to convey meaning and create a shared identity (Abbott, 2014; Birden et al., 2014). Important aspects of such definitions include competencies, behaviour, beliefs, values, ethics, and adaptability to different contexts (Barnhoorn et al., 2019; Brown et al., 2023; Hodgson & Watts, 2017; Korthagen, 2004).

Given that professionalism is difficult to define, educators are tasked with teaching a concept without an accepted definition. Previous research has explored ways to address this issue. One perspective views professionalism not as a subject but as a process of identity development, influencing teaching and learning (Cruess et al., 2019). Conversely, others stress the importance of frameworks and standardised definitions of professionalism to enhance course quality and ensure fair, transparent assessments (Barnhoorn et al., 2019; Berger et al., 2020). Courses on professionalism often rely on practical and implicit knowledge, which differs from the knowledge that university teachers typically handle, complicating clear definitions (Bradbury et al., 2015).

This introduction clearly shows that professionalism-oriented learning objectives can be challenging to work with and define. Comparative perspectives and interdisciplinary studies on how professionalism is understood in educational settings are often missing (Barbarà-i-

Molinero et al., 2017). Traditionally, professional programmes have researched professionalism in isolation, limiting cross-disciplinary learning. Bradbury et al. (2015) highlighted that professionalism education is often domain-specific, leading to isolation within each professional field. This 'siloing' of knowledge results in minimal sharing of insights between professions, and there is a lack of understanding regarding common themes, differences, and challenges in teaching professionalism across various fields.

As professional education aims to develop students' professionalism, understanding the underpinning ideas is crucial. While much literature addresses professionalism conceptually and theoretically, empirical studies can provide insights into how educators interpret professionalism in practice across different contexts.

This article explores educators' ideas on what students need to learn to navigate and manage their professional practices effectively. By comparing three professional education programmes—police, medical, and social work—similarities and differences can be identified. This study is guided by the research question: *What ideas about professionalism exist in documents and among educators in three distinct educational programmes?*

Addressing this question offers insights into the significance of the logics underpinning professionalism, how they are understood and applied in different contexts, and the implications this may have for education.

The elusive concept of professionalism in educational settings

In today's society, the concepts of profession, professionalism, and professional conduct are of great public interest. Carr (2014) highlights two reasons for this. First, professions seek professional recognition as a marker of occupational status, fiercely protected by established professions, while other occupations strive to attain it. Second, professionalism implies elevated occupational standards, meaning 'professional' conduct meets the highest moral and technical criteria. Evetts (2011) argues that defining professionalism has lost its relevance, suggesting it is more interesting to explore why people find it meaningful. In higher education, the drive for professionalisation has increased demand for specialised knowledge and skills. Consequently, higher education institutions have developed professional education programmes where professionalism is central (Al-Eraky & Marei, 2015; Harrison et al., 2021; Nordberg & Andreassen, 2020; Tong & Hallenberg, 2018; Williams et al., 2019).

Professionalism is an elusive concept influenced by changing societal, historical, and contextual expectations. In medical education, it is seen as a key aspect of practice (Morrison et al., 2009), encompassing clinical competence, behaviours and attributes (Wearn et al., 2010), ethical conduct, and social justice (Mueller, 2015; Symonds & Talley, 2013). Barnhorn et al. (2019) highlight the importance of a multi-level framework for professionalism, noting that focusing solely on behaviour or competencies is insufficient. Environmental factors should

also be considered. Medical students and residents often encounter a mechanical, unreflective version of professionalism that lacks deeper ethical and humanistic aspirations (Brody & Doukas, 2014). Al-Eraky and Marei (2015) emphasise the need for a global model of professionalism, and the challenges in addressing it in medical education, including whether to conceptualise it as a list of attributes or a belief system. Differences in perceptions of professionalism complicate the task of nurturing it (Ong et al., 2020).

In contrast to medical education, professional capability frameworks in social work are comprehensive, covering values and ethics, knowledge, intervention skills, adaptability, leadership, commitment to social justice, and critical reflection and analysis (Brown et al., 2023). Weiss et al. (2004) highlight the role of social work education in shaping professional identity by providing individuals with the necessary knowledge, skills, behavioural norms, and values. However, there is little consensus on the specifics of these elements. Bair (2014, 2016) compares professionalism across different fields and argues that social work education tends to foster a more collective and extended view of professionalism than contexts such as education or nursing. These studies suggest that professionalism in social work education is a multifaceted and dynamic construct that is shaped by various factors.

Tong and Hallenberg (2018) and Williams et al. (2019) discuss the role of education in the professionalisation of the police force, with Tong and Hallenberg highlighting the need for sustainable approaches and Williams emphasising the importance of officers' sense of professionalism. Fielding (2018) provides a historical perspective, tracing the evolution of professionalism in policing where scientific police management—and contemporary issues like private policing and procedural justice—influences training. These studies underscore the need for a nuanced understanding of professionalism in police education, considering broader societal and technological changes. To meet the demands of rapid societal change, police education must focus on generic competencies, such as critical thinking, reflection, communication, and analytical skills (Bäck, 2020). Research on police officers, teachers, and social workers describes collegiality, based on trust in the knowledge and authority of professionals, as fundamental to professionalism (Löfgren & Wieslander, 2020). Wallner et al. (2024) describe personal ethics, educational standards, and professional practice as three dimensions influencing students' development of professional judgment.

Research on professionalism in professional education is complex, encompassing teaching and learning about various phenomena. A recent review by Snell et al. (2020) focused on professional identity and socialisation within the health sector and identified several interrelated concepts: professional identity, professional socialisation, professionalisation, professionalism, professional behaviour, and professional role. These concepts are often assumed to be synonymous and used interchangeably. Harrits (2016) explores different logics underpinning professionalism: one logic is based on formal knowledge and training, seen as function-specific, and the other is grounded in values, feelings, and intuition, described as personal and relational. When combined, these logics characterise professionalism as blended and hybrid.

Despite the chequered history of the concept of professionalisation in educational contexts, its importance is increasingly emphasised, as practitioners' perceptions of professionalism are initially shaped through professional education (Al-Eraky & Marei, 2015; Evetts, 2009; Nordberg & Andreassen, 2020). The vague definition of professionalism contributes to difficulties in constructing teaching frameworks and raises assessment questions (Birden et al., 2014). Wilson et al. (2013) show that limited awareness of professionalism's purpose among teachers negatively impacts students' understanding in higher education, making it challenging for teachers to teach and assess this domain (Bryden et al., 2010; Hammer et al., 2000).

In summary, the literature on professionalism in professional education highlights its multifaceted nature and the importance of context-specific approaches. Professional education shapes practitioners' perceptions of their roles, underscoring its significance. While some comparative studies exist, gaps remain in understanding common themes, differences, and challenges in teaching professionalism across various fields. This study identifies similarities, differences, and challenges in different educational contexts, offering educators a deeper understanding of how to effectively convey professionalism to students and providing opportunities for cross-professional insight sharing.

Methods

The study employed a theory-building approach to address a research question on the contested concept of professionalism, which lacks a unified definition and has multiple theories (Eisenhardt, 2021). This approach allowed for theoretical sampling across three professional educational settings in Sweden: the medical, social work, and police programmes. The focus was on undergraduate courses designed to develop professionalism. Interviews and document analysis were conducted to investigate ideas of professionalism empirically.

A comparative approach was adopted, examining shared and unique aspects of professionalism across different educational practices. This involved selecting cases where the central subject of study was expected to be present and designing them to highlight parallels and disparities, contributing to theoretical development (Eisenhardt, 2021). Such considerations typically intensify the empirical focus on the central subject, reduce the possibility of alternative interpretations, and enhance the applicability of findings.

Study setting

The organisation of professional education in Sweden varies across programmes due to differences in time allocation and financial resources. In medicine, professionalism is taught as a separate course throughout the programme. In social work, it is integrated into other courses. Both include theoretical and practical elements, such as reflection and role-play. Police education differs, with a theoretical course on professionalism at the end of the final semester and similar elements throughout the programme, though not explicitly stated.

Medical education consists of 12 semesters of full-time study, leading to a medical degree with a general licence to practise medicine. Social work education leads to a Bachelor of Science in Social Work after seven semesters, including one practicum. The police programme, regulated by an agreement between the Police Authority and the university, includes four semesters of full-time study without an academic degree. To become a warranted police officer, students undergo six months of probationary training under supervision at a police department.

Since professionalism is a multidimensional concept, its development does not only occur in separate courses or course elements. However, explicit courses in the medical and social work programmes were seen as good samples to capture this phenomenon (Eisenhart, 2021). The police programme, lacking specific courses, took another approach. The curriculum was examined for ideas underpinning the slogan: “We educate professional police officers!”. The selection was based on sensitizing concepts (Bowen, 2006) associated with professionalism. Previous research identifies that these concepts include professional behaviour, professional approach, empathy, ethics, and self-awareness.

Data collection

Data collection was conducted in two steps. Firstly, documents that broadly cover and describe the written ideas of professionalism within the programmes were collected to gain an overview of the content and provide context. These included documents related to courses or course elements aimed at developing professionalism.

The latest versions of each syllabus were obtained from the programme websites. Access to course platforms was provided by study administrators, and a total of 1070 pages of documents were collected (course syllabi, study guides, lecture plans, schedules, instructions, and handouts). Thereafter, all course syllabi for each semester were reviewed, and learning outcomes linked to professionalism were selected for an in-depth review.

In the second step, 18 semi-structured interviews were conducted (ten women and eight men) with teachers of professionalism courses: six on the medical programme, five on the social work programme, and seven on the police programme. The interviews were conducted and recorded via Zoom, lasted for 60—120 minutes, and were transcribed verbatim. An interview guide was used to outline two themes for discussion: (1) Ideas about being professional; and (2) What is the development of professionalism in “your” education? The first theme contained questions designed to capture teachers’ views of both professional and non-professional behaviour of students and professionals, and how being professional is talked about within the work teams. The second theme concerned the content, what professionalism courses consist of, and what students will learn.

Table 1

Data in the Present Study

	Documents	Interviews
Medical Education	434 pages; Syllabus, study guides, lecture plans, schedules	6 teacher interviews
Social work Education	407 pages; Syllabus, study guides, lecture plans, schedules	5 teacher interviews
Police Education	229 pages; Syllabus, study guides, lecture plans, schedules	7 teacher interviews

Analysis

This study employed an iterative inductive approach, in which analysis was conducted concurrently with data collection (Srivastava & Hopwood, 2009). This approach is based on the premise that when theoretical reading, data collection, and analysis occur simultaneously, they reinforce each other. An empirically driven thematic analysis inspired by Gioia et al. (2013) was used to analyse documents and interviews.

Early in the analysis, documents and interviews from each programme were examined with the intention of constructing a concept map of the written ideas about professionalism that underpin its development and to map teachers' conceptions about professionalism. Following Gioia et al. (2013), this analysis organised codes into emerging categories and later into theoretical dimensions to explain how professionalism was defined, both in documents and by teachers.

To develop the data structure, I first conducted data-driven coding, where codes were close to the material. These were constructed "using informant-centric terms and codes" (Gioia et al., 2013, p.18). This initially resulted in a large number of codes. To reduce the number, I sought differences and similarities among them, and new labels were given to the codes. In this way, I constructed first-order concepts that closely mirrored content, illuminating explicit areas of professionalism.

Following Gioia et al. (2013), the analysis focused on how first-order concepts could be merged into themes to describe and explain the observed phenomena at a higher level of abstraction. This was done by grouping codes with similar content, thereby constructing second-order themes. The first-order concepts and second-order themes were refined into aggregated dimensions of professionalism. This led to the construction of two concept dimensions: interpersonal and contextual. The interpersonal dimension involves self-awareness and

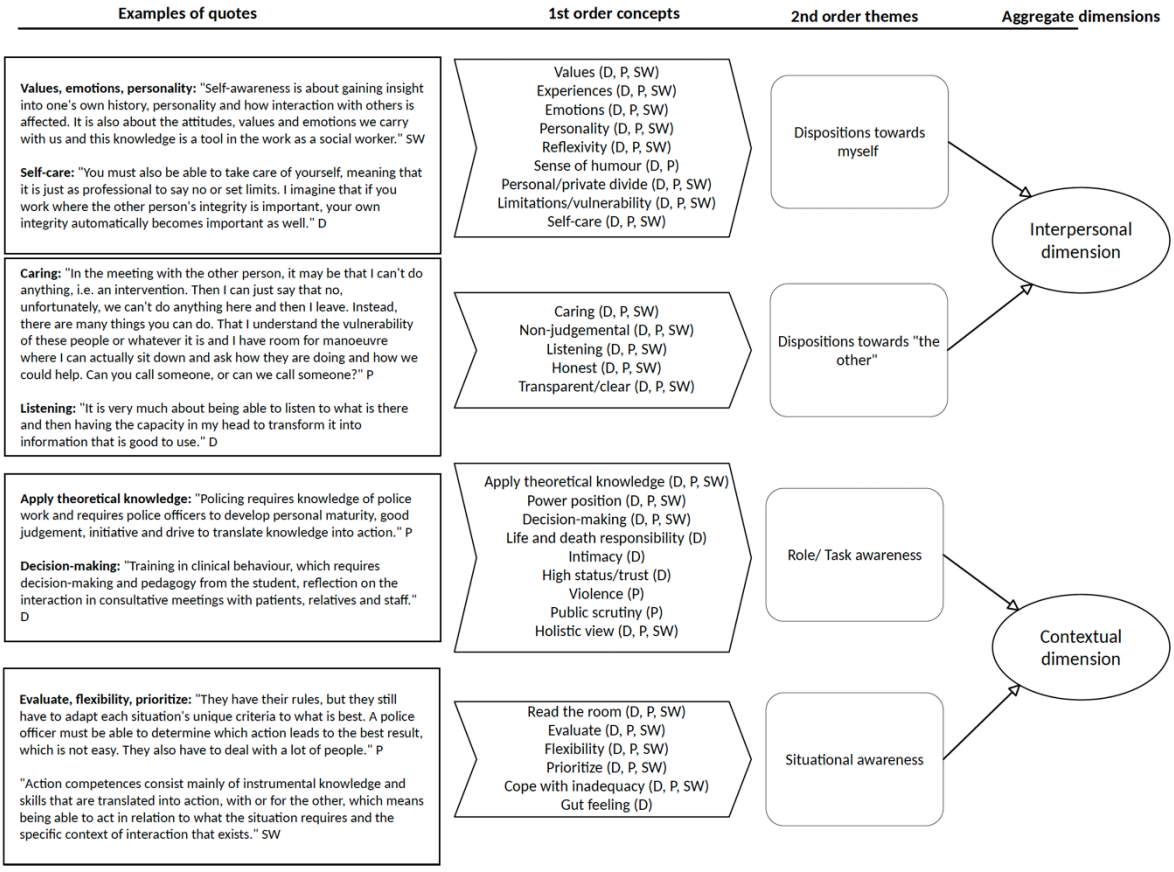
understanding how to relate to others. In contrast, the contextual dimension involves role and task awareness, and situational awareness. To visualise the different steps of the coding process and how the analysis progressed from data to theorising, a data structure was created (see Figure 1). Finally, codes, categories, and dimensions were compared to determine whether there were categories unique to any of the programmes.

Findings

The findings present ideas of professionalism in three professional education programmes. The data structure provides an overview of these ideas reflected in documents and teachers' narratives (see Figure 1).

Figure 1

Ideas of Professionalism: Data Structure Containing Example Quotes, Concepts, Themes, and Aggregated Dimensions of Professionalism



As depicted in Figure 1, numerous ideas about professionalism are shared across the programmes. Specifically, two central dimensions of professionalism are *interpersonal* and *contextual*. These dimensions can be further operationalised into *dispositions towards oneself*, *dispositions towards the other*, *role and task awareness*, and *situational awareness*. The following sections describe in more depth how these dimensions are constructed.

Interpersonal dimension

According to interviews and documents, the interpersonal dimension concerns self-awareness, or 'dispositions towards oneself', and understanding how to relate to others. Many teachers emphasised the importance of interpersonal relations, requiring reflexive ability and a range of social skills to understand how emotions and beliefs influence communication and actions in professional encounters.

Dispositions towards oneself

The first theme, *dispositions towards oneself*, is strongly linked to self-awareness and reflexive abilities. Teachers repeatedly stated in interviews that reflecting on one's actions is crucial for developing self-awareness and understanding the reasons behind one's actions and decisions. For instance, a teacher from the police education programme underscored the importance of self-reflection in enhancing professionalism:

> Professionalism involves not only how you communicate and discuss various topics but also how you carry out your actions. To me, it largely centres upon self-reflection. By gaining a slightly different perspective, you can better understand your own actions. You'll be able to interpret situations more effectively and critically examine your role in them. (Teacher, police education)

This belief was also expressed by teachers in other programmes. Similarly, self-awareness as a prerequisite for reflection was described in many documents. Specifically, self-awareness is described as fundamental for professionals to manage social relations and to know what actions to take in variable situations. This theme pertains to the student as an individual, requiring an awareness of the emotions, norms, values, and cultural anchors a professional carries in relation to others. This complex portrayal of self-awareness was particularly emphasised in the medical programme, as highlighted in the excerpt below from teaching guidelines:

> [this course focuses on] understanding human behaviour, knowledge about how we interact with each other, psychological understanding of the importance of the patient and our own behaviour in the patient-doctor relationship. The focus [in this course] is on increasing the student's self-awareness. The content involves the human being from different psychological perspectives and in social contexts, stress, crisis, and crisis management and the connection between psyche and soma. (Study guide Professional development, medical education)

A common way to contextualise self-awareness and reflection in all three programmes was through an emphasis on social issues such as domestic violence, addiction, LGBTQ+ matters, illness, death, and crisis. Similarly, the importance of self-awareness was emphasised in documents for critically examining one's position in relation to social stratification aspects like gender, class, ethnicity, power, disability, and age.

Building on this, many interviews underscored that reflexive ability involves recognising one's limitations, both in terms of knowledge needed for continuous development and vulnerability. Teachers emphasised identifying triggers, or 'key issues' that cause stress reactions. This mental preparation was particularly stressed in the police programme but was evident in all three. For example, stress management and coping strategies were described as crucial aspects of professional behaviour, enhancing the ability to navigate future professional roles.

Documents clearly state that students should deepen their self-awareness and reflective abilities in relation to their values and future professional roles. They emphasise the need to continually update one's ethical compass throughout one's professional life to uphold democratic values. An excerpt from teaching guidelines for social work education underscores value alignment and ethical awareness: 'The social worker's professional mission includes safeguarding the profession and the ethical guidelines that require awareness of the norms and values that should apply, ensuring that the social worker's own values are in line with these values.'

Self-awareness involves identifying, analysing, and discussing ethical dilemmas in professional practice, such as police use of force or dealing with death or other difficult decisions. Teachers believe that applying professional conduct' helps students address problematic aspects and uphold values in citizen interactions. Another aspect discussed in interviews was the boundary between personal and private matters, emphasising the need to set aside personal perspectives in counselling and relationship-building. Teachers stated that excessive personal involvement can hinder assistance, so maintaining distance is key. They emphasised that students should use personal traits as tools for solutions. One police programme teacher noted: "Being humorous in a difficult situation can be very professional at times and solve a lot in the moment."

Dispositions towards the other

A second interpersonal theme and a central tenet of professionalism was *dispositions towards the other*, which encompasses relational skills. These skills are described as closely linked to empathic ability and values, such as understanding another person's feelings, putting oneself in their situation, showing respect, and being non-judgemental. Further, these skills must be exercised while maintaining personal boundaries. Teachers in all contexts described these skills as essential to professionalism. A teacher within the police programme illustrated this point succinctly:

> The rule of law and the equal value of all people require us to always act on these principles. While I understand that there are necessary exceptions in the police profession, it remains crucial to treat people well. Acting professionally as a police officer means treating everyone equally, regardless of their identity. (Teacher, police education)

This quote emphasises the importance of seeing the person behind the situation. By this reasoning, a professional approach requires recognising and appreciating the uniqueness of individuals and their situations, respecting their knowledge and experience, and allowing for empathy and participation. Teachers across all programmes noted this is particularly significant in encounters with vulnerable individuals, such as those with mental illness, addiction, or in situations involving death or domestic violence. Meaningful contact also involves understanding how professional communication impacts others, requiring awareness of how body language and emotions can escalate or de-escalate situations.

Teachers widely agreed that caring is crucial in encounters, especially when influence is limited. A police teacher described it as "going the extra mile" for someone else:

> In the meeting with another person, it may be that I can't do anything, that is, intervene. Then I could just say that no, unfortunately, we can't do anything here and then I leave. Instead, there are many things you can do. That I understand the vulnerability of these people or whatever it is, and I have room for manoeuvre where I can actually sit down and ask how they're doing and how we could help. Can you call someone, or can we call someone? To show that you care. (Teacher, police education)

Teachers emphasise that making a special effort to help or comfort someone means going beyond usual expectations or norms, which costs nothing but gives a lot to the other person.

According to teachers, respect is crucial because all three professions involve authority and decision-making, which can sometimes be unfavourable. Thus, there is a strong emphasis on professional manners across all educational contexts, visible in course assignments and teachers' statements. This involves ensuring the other person feels respected, and their values and wishes are considered during decision-making. A medical education teacher highlighted the importance of honesty, clarity, and transparency:

> What patients want is for you to be crystal clear. They often want to know yes or no to questions that can't be answered with yes or no. You have to express yourself as far as you can, so you can be as clear as possible. You can never say "I think this patient will die the day after tomorrow." We can never predict that. But I can answer that question by saying "yes, it's possible" or "it's possible that he'll die within a week or a few days." As a professional, it's important that you don't withhold information from patients. (Teacher, medical education)

This quote describes a challenging situation where the professional must balance being too blunt and direct or too vague and unclear. To find an appropriate balance, teachers emphasised the importance of being an active listener and connecting with others in a way that makes them feel respected and acknowledged. This involves being attentive, balancing speaking and listening, and reading situations to know when to move on or step back.

As described in the empirical material, dispositions towards the other involve understanding the patient's or client's situation, identifying their needs, and meeting those needs as far as possible. According to documents and interviews, much professional work is primarily about the interpersonal dimension between the professional (oneself) and the individual encountered (the other).

Contextual dimension

In addition to the interpersonal dimension of professionalism, a 'contextual dimension' includes role, task and situational awareness. This dimension focuses on the professional's role, relevant knowledge and skills, as well as understanding the context, including time, place, and space. In both documents and interviews, these contextual factors are considered central to informing a professional's decisions and predicting outcomes in their work.

Role and task awareness

The third theme, *role and task awareness*, was described in both documents and interviews as involving an understanding of the institutional context of the role and the organisation in which a professional works. Documents like the medical programme curriculum highlight the ability to ethically analyse and reflect upon one's role as a doctor and decision-maker in relation to patients, relatives, co-workers, and other professionals within and outside the healthcare system. Teachers from all three education programmes also stressed the ability to translate theoretical knowledge into practical action, using acquired knowledge and experience to benefit those served. Several documents from the police programme emphasise the profession's duty to serve the public and underscore the importance of the professional role in various encounters, particularly with individuals in vulnerable situations, such as those experiencing mental health issues, addiction, bereavement, or domestic violence. This involves understanding both the other person and oneself within the specific context of the encounter, and having the capacity to make informed judgements about appropriate interventions, taking into account relevant scientific, societal, and ethical considerations. The approach adopts a holistic view of the individual, with strong emphasis on making well-informed decisions while upholding and respecting human rights. Interviews also mirrored this perspective, with teachers noting a high demand for this orientation in professions of power, where crucial decisions affect people's lives. Teachers across all three programmes stressed the importance of a holistic approach to decision-making to ensure decisions are well thought-out and substantiated, maintaining trust in the profession.

At first glance, the word 'power' characterises the contextual orientation within all three professions. However, its interpretation varies between contexts. In medicine, teachers described power as the relationship between professionalism and the responsibility for life and death, trust, and intimacy. Firstly, doctors have the knowledge and power to make life-and-death decisions, which comes with significant responsibility. Secondly, they hold high status

and are trusted by society, requiring respect and humility. Thirdly, as illustrated by the quote below, doctors can become very close and intimate with others:

> It's the uniqueness of being able to get incredibly close to a human being in half an hour… intimately. You have both physical intimacies, the ability to touch, and also the opportunity to talk about things. How do you feel at home in bed? I mean, you can meet a complete stranger for thirty minutes, and that's totally unique. It's as if society has invested in us. That's why it works. So, even though I may not be perfect, society has invested in me, and that allows me to be this intimate with a stranger. Because that person trusts me as a representative. They know I have a long education. They hope I've had professional training, and they're essentially putting their life in my hands. (Teacher, medical education)

Teachers noted that intimacy is achievable due to the trust between patient and doctor, which must be managed with great care. They highlighted the importance of remaining humble and downplaying the powerful role of making life-and-death decisions to avoid becoming intoxicated with power.

In contrast, teachers on the police programme linked power to the use of force. The right to use violence compromises strong human rights values, necessitating ethical considerations. Teachers highlighted the unique relationship in policing between professionalism, the monopoly on violence, exposure to risk, and public scrutiny. This involves understanding when and how to use force professionally, being aware of the consequences, handling violent and high-risk situations requiring rapid and difficult decisions, and managing frequent public scrutiny. Teachers noted that this scrutiny creates high, often unachievable, public expectations of professional behaviour. Actions deemed professional by police can be viewed negatively by the public, leading to perceptions of unprofessionalism.

In social work, within course syllabi, power is associated with the complexities of exercising public authority, focusing on legal certainty, investigative procedures, and needs assessments for appropriate interventions. Teachers highlighted the complexity of balancing being a helper and an authority figure, which requires a holistic perspective for all decisions, as described in documents and interviews. In the interviews, the ability and competence to recognise that everything around a client affects them in different ways was underlined as important when exercising power, necessitating an understanding of the social systems influencing individuals.

Situational awareness

The theme of *situational awareness* involves understanding how time, place, and space influence actions. In interviews, this was described as the ability to "read a room," identifying both obvious information and subtle cues. Teachers noted that this awareness requires evaluating

and prioritising while remaining flexible and open to reversing decisions if necessary. Situational awareness was also described as being present and mindful of both the situation and the person encountered. A teacher in the social work programme described it as the ability to interpret the multitude of 'signals' a person sends out and relate them to one's strengths, weaknesses, knowledge, and skills:

> Being professional and having mastery competence involves the ability to read and interpret a situation. I draw upon my knowledge of cancer care, the specific workplace, and the individual's cancer type. Additionally, I consider psychological and social challenges, as well as typical reactions. This evaluation helps me determine the urgency of the situation and prioritise how I can provide assistance. (Teacher, social work education)

This quote focuses on flexibility. A teacher in the police programme also reflected upon the importance of the ability to evaluate and prioritise in relation to the context in which one finds oneself:

> On the one hand, I think it's very context dependent. We have the big context of working as a police officer. It's kind of an overall context, but then there are a lot of different contexts where the requirements for what's professional differ somewhat. It can be one thing when you're on traffic control, another when you're dealing with a plaintiff or a suspect in an interrogation situation. (Teacher, police education)

As this quote shows, diverse contexts are particularly evident in the role of a police officer, demanding professionalism in various situations.

In many interviews, situational awareness was described as involving the ability to cope with inadequacy, which is essential for professional behaviour. Rather than relying on strict rules, teachers stressed that professionalism includes improvisation based on experience, knowledge, and situational interpretation. A police education teacher highlighted the importance of interpreting and applying regulations in defining professionalism:

> For me, professionalism is about the fact that there are always laws and rules to be applied and they will always be interpreted in some way among people and groups and individuals. How you interpret something and how it should be done, that's the discussion you need to have in order to think about what it is to be a professional. The legislation provides practice or space for this to be done. But there's always room for interpretation because these are situations you end up in when working with people. (Teacher, police education)

This quote illustrates that decisions in these situations must be interpreted and guided by intuition. A teacher in the medical programme expressed it as: "You have to trust your gut feeling, and trust that feeling if you're congruent, present, and attuned to what's important."

In summary, situational awareness was primarily described as the ability to 'decode the environment', perceiving and interpreting both explicit and implicit aspects. Teachers highlighted that this involves assessment and prioritisation skills, along with the flexibility to alter decisions when necessary.

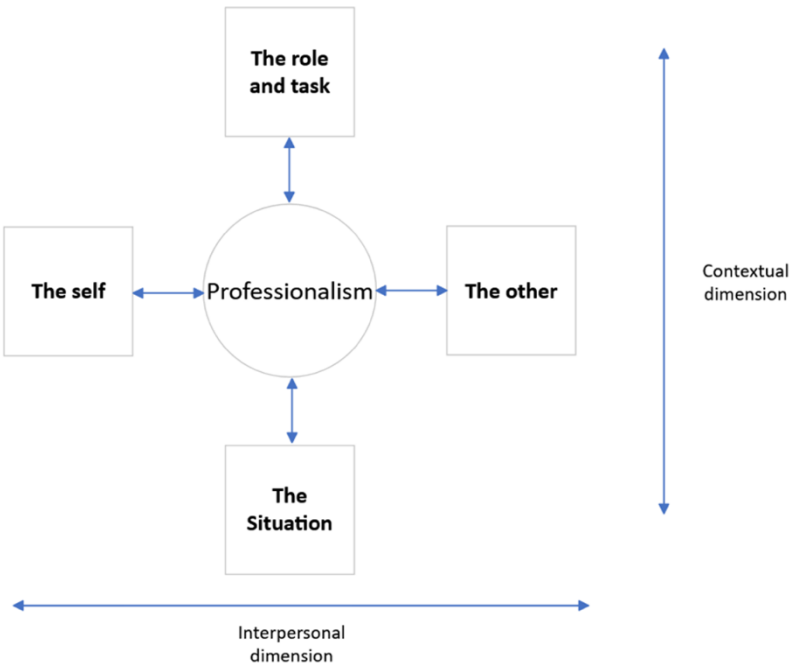
Discussion

This article explores educators' ideas on what students need to learn to effectively navigate and manage their professional practices. A key role of educators in professional education is to teach and develop students' professionalism. The results show that professionalism was discussed in terms of dispositions towards oneself, the other, the role, and the situation. These themes were constructed as two aggregated dimensions, meaning that professionalism is enacted in both an interpersonal and contextual dimension. I will now discuss these results from two perspectives. Firstly, I will examine how the themes and dimensions of professionalism are interrelated. Secondly, I will address how this view of professionalism can pose challenges for professional education.

The following model (see Figure 2) maps the themes and dimensions described in the findings. It provides a visual representation of central and shared meanings associated with professionalism in the studied contexts. The model aims to explain the breadth of the focal phenomenon, and reveal the core logic of the reasoning that emerges.

Figure 2

Model of professionalism



This model of professionalism combines two important dimensions, contextual and interpersonal, highlighting similarities between the programmes. The first dimension relates to contextual factors, where profession-specific knowledge and values are crucial. The second focuses on the people involved and interpersonal values. These dimensions intersect in four aspects: the professional role and task (e.g., relevant theoretical and practical knowledge, obligations), the context (e.g., jurisdiction, assignment, type of encounter), the self, and others (e.g., self-awareness, lived experiences, life situations, values, current states).

The results reveal the importance of professionals considering the context while also accounting for interpersonal dynamics, the specific characteristics of a situation, and the professional knowledge base. This means adapting actions and behaviours to situational demands.

The findings present a complex view of professionalism and support previous research. For instance, Neve et al. (2017) identified professionalism as a contentious concept, while Burford et al. (2014) highlighted its complexity due to various elements related to attitudes, identity, behaviour, status, and patient expectations. The dimensions described in the model can be understood as logics shaping the concept of professionalism. This combination aligns with Harrits' (2016) description of blended, hybrid professionalism as "a logic based on formal and practical knowledge and a personal, relational, and emotion-based logic" (p. 12).

The contextual dimension aligns with previous research on formal-scientific knowledge of professionals (Abbott, 2014; Harrits, 2016; Parsons, 1991). Unlike many studies, this dimension is implied rather than explicitly emphasised as part of professionalism. Across all programmes, the interpersonal dimension and relational skills are consistently highlighted. Given the focus on "people professions" (Fenwick, 2016, p.3), it is logical that the relational aspect and the interactions between clients and professionals are considered significant. Unprofessional behaviour can damage relationships and erode trust in a profession (Barnhorn et al., 2019). However, both dimensions shape ideas of professionalism, particularly when teachers discuss the interpersonal dimension in relation to societal trust and authority. Balancing authority with citizens' needs is crucial for maintaining public trust.

The comparative analysis revealed differences between the programmes. Each profession is aware of an inherent power dimension, but its expression varies. In medicine, it involves avoiding the projecting of superiority associated with high status. For social workers, power involves making life-changing decisions and requires a holistic perspective, considering both the helper and authority roles. In the police profession, power is clearly linked to the monopoly of violence, creating tension between the right to use force and potential human rights violations, complicating decision-making.

Another distinction is the context in which power is exercised, with varying degrees of transparency in the actual practice of each profession. Medicine has little transparency, as interactions occur between doctor and patient. Social workers, by contrast, operate in both private

and public contexts, while police officers frequently work in the public eye. These levels of transparency affect how professionalism is scrutinised.

The study highlights dimensions or logics underpinning educators' ideas on what students need to learn to effectively navigate and manage their professional practices. Using a comparative approach, it examines shared and unique aspects of professionalism across educational practices. Unlike Burford et al. (2014), who argued that views of professionalism vary between and within professional groups, this study reveals more similarities than differences. The underlying ideas of professionalism appear to hold true across all professions. These findings have implications for professional education, which will be discussed further.

Challenges for professional education

The findings of this study have implications for teaching professionalism. Previous research shows that courses on professionalism often rely on practical and implicit knowledge, making them different from other higher education courses and more challenging to teach (Bradbury et al., 2015). Moreover, students often perceive the content as "fuzzy" and unclear (Leo & Eagen, 2008) or abstract and irrelevant (Fulchand et al., 2014; Neve et al., 2017). This study nuances these criticisms, suggesting that professionalism is a multidimensional and complex concept that encompasses a broad range of content. Additionally, professionalism is expressed through actions, with an emphasis on professional-citizen relations, making both teaching and assessing it particularly challenging.

Previous research (Liljeholm Bång et al., 2024) has identified a tendency among educators to avoid assessing professionalism in practice, opting for written examinations over practical ones. This approach may contribute to students' feelings of fuzziness and abstraction. Professionalism involves skills that require years of experience to develop, yet professionals are expected to master them early in their careers. In professional education, both teachers and recruiters serve as gatekeepers to the profession (Lindberg, 2013). The image of professionalism portrayed sets exceedingly high standards. Those involved in professional education should consider whether it is reasonable to expect students to be professionals before starting their careers. One way to address this is to focus on developing skilled professionals "in the making" (Lindberg, 2013, p.432), emphasising professional ideals without imposing the same expectations as on fully qualified graduates.

As previously noted, despite variations in the structure and content of professionalism courses, the overarching ideas of professionalism across programmes are remarkably similar. However, there is diversity of ideas within individual programmes, indicating that teachers differ in how they interpret and define professionalism. They expressed a need for more internal discussions to refine their perspectives and to clarify, both for themselves and their students, what their expectations entail. It is crucial for students to understand the purpose and significance of professionalism. Otherwise, they may downplay its importance compared to subject-specific content (Leo & Eagen, 2008; Neve et al., 2017; Wilson et al., 2013).

Previous research on professionalism has often been isolated within each professional domain and presented as specific to each profession (Bradbury et al., 2015). While context is recognised as crucial for acting professionally, this study demonstrates that ideas of professionalism are more similar than different across professional contexts. In human-service professions operating within dynamic environments, generic skills are emphasised as essential for professional conduct. Adaptability and flexibility are key, especially in personal interactions, as the interpersonal dimension was prominently highlighted in the findings. Rooney et al. (2015) also highlight the importance of developing flexibility, or agility, for practitioners who must respond effectively to unfolding situations. These critical skills are neither easy to teach nor straightforward to assess, underscoring the need for deeper discussions across educational boundaries.

Conclusion

This study makes a significant contribution to the literature on professionalism. Firstly, it highlights that professionalism is widely understood as a multidimensional concept, comprising skills and abilities requiring extensive professional experience to develop, regardless of the specific profession. Secondly, it underscores the importance of communication among educators within each educational programme to clarify their ideas about professionalism and discuss reasonable expectations for students with no prior professional experience. These shared understandings form the foundation of both teaching and assessment. Thirdly, the study reveals that educators across different professions encounter similar challenges in translating the concept of professionalism into teaching and assessment. This underscores the value of broadening discussions across professional fields to learn from each other.

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