



Hardness or Resignation: How Emotional Challenges During Work-Based Education Influence the Professional Becoming of Medical Students and Student Teachers

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Abstract

This paper addresses how emotionally challenging experiences during work-based education may influence the professional becoming of student teachers and medical students. We conducted a qualitative analysis of eight focus group interviews with undergraduates from two universities in Sweden who studied to become either physicians or teachers, and interpreted their experiences through Wenger's theory of communities of practice. The findings show that students' ideal view of how to be caring in their aspiring professional role as physician or teacher collided with existing practices, which affected them emotionally. In particular, the students found it challenging when norms and practices differed from their values of professionalism and when the professional culture within practices reflected hardness (physicians) or resignation (teachers). Both medical students and student teachers experienced that professional decision making and legitimacy challenged them emotionally, however in different ways and for different reasons. This study makes visible both general and specific aspects of how students view their future role in the welfare sector and challenging dimensions of professional practice. The findings bring into focus the question of how professional education can support students' professional becoming in relation to their emotional challenges.

Keywords Professional becoming · Work-based education · Medical students · Student teachers · Professional identity

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Introduction

This paper addresses students' experiences of professional becoming, with a special focus on student teachers' and medical students' emotional challenges. During work-based education, several stressful and challenging situations occur, yet students are expected to learn and develop a professional identity. Given reports suggesting that students do not feel adequately prepared for the challenges of the profession (Brennan et al., 2010; Amir et al., 2017), and considering the strained work-situation with high emotional stress and mental illness among welfare professionals (Sverke et al., 2016; AFA, 2017), more knowledge is needed about how emotionally challenging situations influence the professional identity formation of student teachers and medical students. In this paper, we focus on work-based education, by which we refer to the time that student teachers and medical students spend at schools, or in health care, as part of their undergraduate studies.

A growing number of studies show that medical students and student teachers experience emotional challenges already during their undergraduate education, especially during work-based education (Caires et al., 2012; Rees et al., 2013; Kremer et al., 2016; Lindqvist, 2019; Weurlander et al., 2019). Students' experiences of emotional stress during education are especially troublesome, considering that longitudinal studies show how these negative experiences are linked to burnout during the first years of their professional career (Gustavsson et al., 2013). Previous research regarding medical students has identified emotionally challenging situations relating to patient encounters, such as meeting severely ill or demanding patients, and feelings of unease when using patients to further their own learning (Weurlander et al., 2018, 2019). In addition, several studies show that medical and healthcare students experience the medical culture as detached, and that unprofessional behaviour by healthcare professionals affects students negatively (Monrouxe & Rees, 2012; Rees et al., 2015). Such unprofessional behaviour includes situations that, in the students' views, compromises patients' dignity or safety, or when healthcare professionals seem ignorant towards students or patients (Weurlander et al., 2019).

Similarly, research regarding student teachers' emotional challenges show that everyday situations involving pupils can be demanding and stressful (Riesky, 2013; Lindqvist, 2019). Such situations include, for example, bullying, expressions of racism or sexism, encounters with socially vulnerable pupils, and classroom management of misbehaving pupils. Studies also show that supervisors are significant for student teachers' experiences of work-based education, and, in particular, to support students' initial 'practice shock' upon entering the work environment in schools (Meijer et al., 2011). Overall, student teachers' negative experiences and negative role models tend to outweigh positive experiences (Johnston, 2010; Mukeredzi & Mandrona, 2013), yet we know little about how these emotional challenges contribute to students' views of their future professional role.

Previous findings show that undergraduate students' experiences of emotional challenges may result in feelings of uncertainty and professional inadequacy (Weurlander et al., 2019; Lindqvist et al., 2017). Several researchers argue that

learning to manage both positive and negative feelings is an important part of professional becoming (Timošćuk & Ugaste, 2012; Dornan et al., 2015). Whilst emotional demands might be inevitable during professional education, research report that students are oftentimes left to manage their emotions and feelings of inadequacy by themselves (Weurlander et al., 2018; Lindqvist, 2019), and that stressful situations may cause students to focus on coping rather than on learning (Johnston, 2010; Lindqvist et al., 2017).

Comparisons among different professional educations are scarce, and studies about professional becoming tend to focus on either student teachers or medical students. One strength of conducting comparisons between students' experiences from different professional educations is the potential to illuminate the specifics associated with professional becoming for students in each professional education, while at the same time addressing the more general nature of the phenomenon. This study aim to gain deeper understanding of how emotionally challenging situations during work-based education may influence students' professional becoming, and therefore compares students' experiences from two professional educations. This ambition was guided by the following research questions:

- How may emotionally challenging situations influence medical students' and student teachers' views of their future professional role? (RQ1)
- What differences and similarities can be found between medical students' and student teachers' experiences of professional becoming, in relation to emotionally challenging situations? (RQ2)

Work-Based Education in Medical and Teacher Education

Relevant for the present study, is the medical and teacher education in Sweden. In addition to campus-based courses, both educational programmes include work-based courses, mainly located in the second half of the curriculum, which requires students to participate in the day-to-day work of professional physicians and teachers, respectively. The Swedish medical curriculum was at the time 5.5 years and the lower-secondary subject teacher education includes 4.5 years of study. In the medical program, the majority of courses during the second half of the program (semester 5–11) are work-based, including both theory and clinical practice. In contrast, teacher education includes theory courses taught at the university, whilst the work placement focuses on practice (20 weeks distributed in periods of several weeks across the curriculum). Student teachers' spend several weeks with the same supervisor during each work-based period. In contrast, the medical students meet new supervisors almost every week as they participate in clinical practice at different health care sites (about 1–2 weeks/site) experiencing inpatient and outpatient care, and learning about various specialities such as surgery, cardiology, emergency and primary care. The students in both programs may wish for particular schools or health-care units for their work-placements but the University organises and decides the placements. Consequently, students may experience both publicly funded and private schools and wards, and in areas with different socio-economic conditions.

Regulations regarding overall intended learning outcomes for professional education are stipulated in the Swedish Higher Education Ordinance (1993:100) (1993), including requirements specifying the amount of work-based education for the teacher education curriculum.

Theoretical Framework

The focus in this paper is students' experiences of *professional becoming* in conjunction with emotionally challenging situations. Professional becoming is here viewed as a social process situated in various contexts, such as when students participate in a professional practice, interacting with supervisors, other professionals, pupils, or patients (Wenger, 2008; Scanlon, 2011). The process of becoming is also influenced by values and norms embedded in the professional practice. In the literature, several overlapping concepts are used, for example, professional development, socialisation, enculturation, and professional identity formation (Scanlon, 2011; Cruess et al., 2015). We use the concept of professional becoming, and by this, we refer to the complex process of developing professional knowledge, skills, judgment, and reasoning, as well as professional identity.

There is a growing body of research focusing on professional development and professional identity formation in different contexts, including professional education (Holden et al., 2012; Trede et al., 2012; Izadinia, 2013; Tomlinson & Jackson, 2021). However, there is no unified theoretical framework for exploring the process of becoming professional, and previous research draws upon different conceptual and methodological perspectives (Scanlon, 2011; Trede et al., 2012; Irby & Hamstra, 2016).

Similarly, emotions are studied and theorised from multiple perspectives including neurobiological, cognitive and sociological focus, and consequently conceptualised in different ways (Turner, 2009). Theories regarding emotions explain reasons for, and effects of, emotional arousal as well as the social functions of emotions in bringing people together and differentiating between individuals and groups in society (Fischer & Manstead, 2008; Turner, 2009). One strand of research focuses on how expectations connected with the increase or loss of status and power regarding one's social position may cause emotional arousal (Turner, 2009). We acknowledge that emotions are subjective, influenced by several factors and expressed by individuals. However, we do not aim to explain why, or how, individual students experience emotional challenges. Instead, this study concerns how these experiences may affect their process of becoming professionals, including adopting a professional identity and role associated with certain status and societal expectations. With such socio-culture perspective, and our focus on the process of professional becoming, we draw upon Wenger's theory of how individuals learn by participating in the community of practice they strive to become a part of (Wenger, 2008). Recent literature about learning at work often emphasise how professionals (re-)negotiate their professional identity including their professional commitments and values (Hökkä et al., 2020). In this study, we consider students' negotiations of meaning regarding their future professional role as an expression of their professional becoming. Thus, a point of

departure here is that experiences during work-based education have a major influence on students' professional becoming.

Communities of practice (CoP) provides a theoretical framework regarding how individuals, through interaction with established members of a CoP, develop the norms and behaviours that signify the CoP before they become full members. Thus, CoP describes the *process of becoming*. The CoP is here referred to as the profession that the students strive to become, either a physician or a teacher. There are local responses to what it means to be a professional within each CoP. However, shared stories, discourses, and historical events tie the members in a CoP together, and create a joint understanding of what signifies the profession. Students' efforts to belong to the community are about learning how to enact the cultural codes and use the tools that signify the community. Once members belong to the CoP, there is a mutual accountability for what the profession stands for (Wenger, 2008).

According to Wenger (2008), practice is central and reflects the pursuit of the enterprise, and social relations between members in the community. Learning in practice emphasises *learning as doing*, and that each CoP has a unique understanding of the ways that things are performed. In this study, practice is framed by the context where the students perform their work-based training. During the students' training, they constantly negotiate meaning from their experiences, as they participate in different situations. This dynamic process of negotiating meaning and interacting with others in different situations includes both acting and thinking as one entity. The participation in CoPs shapes our experiences, and is fundamental to who we are, and, thus, goes beyond mere engagement in various settings or collaborations with others. The individual's process of making meaning from experiences while *being* and *becoming* a member of a community is part of identity formation. In building their professional identity, the students constantly negotiate what it means to be professional, i.e., *what does it mean to be a physician or a teacher?* and, *how should I act as a professional teacher or doctor?* In this paper, Wenger's description of 'learning as becoming' help to unveil how the students make sense of their experiences in relation to how they view, and re-shape their views about what the profession and belonging to the professional community are all about. Using CoP as a lens, means drawing attention to socio-cultural dimensions of the students' future professional identity and role, such as professional culture, norms, legitimacy and decision-making, and boundaries between the professional and the private.

Methods

Study Design and Data Collection

As part of a larger project focusing on undergraduate students' experiences of emotionally challenging situations, the present study used an interpretative qualitative approach to explore students' professional becoming (Creswell & Poth, 2018). Participants were recruited from among medical students and lower-secondary subject teacher students (becoming teachers for pupils 13–16 years) at two Swedish universities. The sampling intended to capture a broad variation of challenging experiences,

and therefore students of different ages, gender, and ethnicity, and from different years of study (middle and end) were approached via e-mail. Invitations were made to 28 medical students in semesters 5 and 11 selected according to the demographic criteria (half accepted/found time to participate). Invitations were sent in rounds to student teachers based on a list of e-mail addresses of all students in semesters 5 and 9. After scheduling four interviews with students of different ages, gender and teaching subject and reaching saturation in the initial analysis, no more invitations were sent (less than half of the invited students participated). In total 34 students, ages 21–43 participated, including: 14 medical students (7 women and 7 men) of which some were born and had attended primary school outside Sweden, and 20 student teachers (15 women and 5 men) who were all born in Sweden and studied to teach a variety of subjects. Data were generated from eight focus group interviews (4/ program), including 3–6 students in each group, half of which included students from the middle of their studies, and half of the interviews included students nearing the end of their program.

The focus group interviews intended to help participants associate whilst interacting and sharing their experiences (Morgan, 1996). Therefore, open-ended questions were used to probe the students' narratives regarding emotionally challenging situations, guided by questions including, 'Tell me about situations during the education that aroused strong positive emotions/ strong discomfort, or, made you feel bad? How did you handle this? What did you learn? Are there situations that you worry about in your education, or in the future?' The audio recorded interviews lasted between 55 and 95 min, were conducted in Swedish, and later transcribed. The interview quotes presented in this paper are denoted according to the respective student groups, MedS (medical) and STeach (teacher), followed by the interview number, 1–4, for each group. All students consented to participate voluntarily, after receiving oral and written information regarding this study's purpose, data handling, and their rights as participants, in accordance with the ethical approval.

Data Analysis

In the present study, we performed a secondary analysis, something that is increasingly common as a way to explore the same dataset from other perspectives (Bishop & Kuula-Luumi, 2017). The findings from previous analyses address other research questions, and are reported in the context of each educational setting (Lindqvist, et al. 2017; Weurlander, et al. 2019). With a new approach, we distanced ourselves from previous results throughout the secondary analysis. The transcriptions were read several times in order to identify the codes unique for each data set (student teachers and medical students), as well as patterns across data sets regarding how students negotiate and make meaning of their future professional roles and professional becoming. The initial coding was thematic, i.e. inductive and interpretative aiming to identify patterns in the form of themes relevant to our overall research purpose and questions (Braun & Clarke, 2006). This inductive phase included: familiarisation, initial coding, identifying themes and refining those whilst generating a thematic map (phase 1–4 according to Braun & Clarke, 2006). However, sensitive

to our theoretical and epistemological perspectives (Thornberg, 2012) – professional becoming with a socio-culture stance –, the final themes include latent meanings, where Wenger's (2008) theory of learning to become a member of a community of practice was used as a theoretical lens. Thus, the final part of the analysis was abductive and two of the components included in CoP, *meaning* and *identity* (the other components are practice and community), were used as tools to find and interpret patterns, and in that way the final themes were framed according to dimensions that signify CoPs. CoP is thus used here as an analytical tool to make sense of data, and as a conceptual framework to discuss the findings. Using CoP as a lens during the analysis enabled us to focus on the students' experiences and negotiations regarding professional culture, norms, boundaries, and legitimacy. Memos were used throughout the analysis (Thornberg, 2012), and the generated themes were discussed within the multi-professional research team, which included senior medical consultants with teaching and research experience in medical education (AW, AS & ALL), as well as educational researchers with experience of teaching and conducting research regarding different educational levels (LB, MW, HL, RT & HH).

Findings

During work-based education, students experienced the practice of their future profession, prompting reflections over how their job entailed more than they expected. This broadened view of their future role and the demands of their professional practice differed, and to some extent collided with, their perceptions of the ideal teacher or physician, and their values of professionalism. Next, students' views of the ideal professional role are outlined, including how their views were affected by emotionally challenging experiences during work-based education (RQ1). This is followed by a presentation of those aspects of becoming a professional teacher or physician that students experienced as emotionally challenging, framed as dimensions that are central during the process of professional becoming according to our theoretical perspective CoP (Wenger, 2008). Throughout the presentation we illuminate differences and similarities between the student teachers' and medical students' experiences of professional becoming (RQ2).

Ideals and Realities of Being Professional – Students' Views of their Role

Becoming a professional means that value systems and norms regarding workplace behaviour become an integrated part of what the students need to learn. In both student groups, we found a strong dedication to be caring, and thereby contribute to society, and help individuals. The students in both study programs used words like *caring*, and *being respectful*, to describe their respective future professional roles (see Table 1). Overall, they were motivated to influence people's lives in positive directions, as illustrated by the student teacher Lisa's quote:

Table 1 Students' views of the ideal professional

Dimensions of professional practice	Student teachers' views	Medical students' views
The ideal professional	Caring and dedicated Socially competent	Caring and empathic Respectful towards patients, relatives, and other health professionals
Ideal values	Educating good, competent, and democratic members of society	Respect for patients while providing adequate, timely, and correct medical care

Still, you feel that you've made, how to put it, an impression in some way on that pupil. [...] After all, that is why you become a teacher. (STeach 1)

Student teachers' and medical students' views of ideal professional behaviour were quite similar, and they reported conflicted feelings about how to maintain ideals of caring for others when they realised the limitations of practice. In their experience, their future role would be constrained regarding how much time could be dedicated to relations and caring for others. In particular, they were challenged by limited possibilities to consider the whole individual, including pupils' or patients' life situations, to the extent they had hoped for.

Emotional Challenges in Professional Becoming

Students' initial ideals of being a caring practitioner collided with their work-based experiences, which created emotional challenges regarding their future professional role and practices. These challenges are presented in Table 2, and framed in accordance with dimensions that characterise CoPs according to Wenger's (2008) theory: professional culture and norms, legitimacy including decision making, and boundaries.

Challenging Professional Cultures and Norms – Resignation or Hardness

During work-based practice, students were faced with practitioners who behaved in ways that they considered unprofessional towards pupils or patients. Both medical students and student teachers found that these negative role models were emotionally challenging to handle. Anna, one of the student teachers, said:

And eventually you almost feel that you are not able to cope anymore. And when you constantly feel that your supervisor doesn't even care, and that you're the one who has to make the decisions when pupils swear at each other in the classroom, or make insults to other people. (STeach 1)

Table 2 Challenging dimensions of students' professional becoming – a comparison between student teachers' and medical students' experiences

Dimensions of professional practice	Challenges with becoming a professional Teacher	Challenges with becoming a professional Physician
Challenging professional cultures and norms	Resignation culture Unethical behaviour amongst pupils and colleagues, enactment of non-democratic values such as racism	Hardness culture Expected to accept ways of practicing until expertise has been reached
Professional legitimacy and decision making	Will be questioned by parents and society Students realise that they will have to stand up for choices they make Being overqualified in terms of subject area knowledge	Being the one with the responsibility Expectations from society of being a superhero Students question themselves regarding medical knowledge and skills. Limited 'pieces of knowledge' may result in malpractice
Drawing boundaries	Towards engagement in supporting pupils' social life and their well-being Towards colleagues behaving unprofessionally	Towards patients' life situation and overall health condition When ethical dilemmas arise, e.g., boundaries for patients' influence

While student teachers were challenged with colleagues who had given up (resignation), medical students experienced that they had to face very demanding situations, and were expected to ‘bite the bullet’ (hardness). They talked about how embarrassing or shameful it was when they showed strong reactions, such as fainting, or when they hesitated to perform clinical procedures for the first time. Students were expected to handle all kinds of tough situations, but struggled with how some of these learning situations were delivered, illustrated by Sara’s and Laura’s comments:

What is it that they are trying to prove? That you should be able to handle everything? [...] Of course, you must be able to deal with a lot, but still, you cannot be cold-hearted. (MedS 1)

We had a whole day about violence towards children and domestic violence, and such. I wasn’t really prepared, I experienced that as really, really hard. [...] It felt like, well, you are medical students, you shall be able to handle this by now. But then there were incredible rough descriptions, and descriptions about what people do, especially to kids. I experienced that as really hard. (MedS 1)

Negative role models contributed to students’ reflections over what kind of unprofessional behaviour they wished to avoid in their own future practice. However, when student teachers experienced an overall negative professional culture at the school, they questioned their choice of profession. Molly shared her experience:

The teacher that I worked a lot together with talked about how hard and stressful it was, and she just longed for the day she could quit. [...] She regretted having worked as a teacher her whole life. Being a teacher had gotten so much worse, and that constant atmosphere, and pretty much at the whole school. [...] It was really hard. It made me take a break for half a year. So, it made me lose the motivation completely, but I found my way back again, because this is not the situation in all places. [...] But I still carry it with me. [...] It’s a negative feeling and it came back to me at another practicum. (STeach 1).

The student teachers shared several stories about colleagues and supervisors who, according to them, had resigned to less-than-ideal ways of teaching, managing conflicts, or maintaining an orderly and calm classroom atmosphere. In addition, the students had to defend their choice to become teachers when friends or family questioned why they entered such a demanding and underpaid occupation. When the students experienced the same sort of questioning from professional teachers, during work-based education, they became emotionally challenged and demotivated. Sara shared one story, where a teacher confronted her and her peers about why they wanted to become teachers. Before turning and leaving, the teacher responded to Sara’s ideas by saying:

Ahh, so you still live in that illusion. Soon you will come back to reality. (STeach 1)

Professional Legitimacy and Decision Making

While medical students worried about having too limited medical knowledge, student teachers perceived that their academic studies made them over-qualified in relation to what they are expected to teach. Although the student teachers had different views regarding whether the depth of their subject-specific knowledge was necessary, they agreed that they learned far more than what they would apply as professional teachers. However, they believed that their solid knowledge base could contribute to legitimacy, and help them feel more comfortable in relation to parents and colleagues. They anticipated that they, as future teachers, would be questioned and criticised by parents, media, and society in a way that might undermine their authority. This shared perception among student teachers regarding the future created feelings of uncertainty, and undermined their confidence in becoming teachers. Nadia said, with a laugh:

I also have to be accountable for my actions in front of their parents. I really have an issue with this whole parent thing, and I wish that all children lived at orphanages during the time I had them at school. (STeach 4)

In contrast, medical students felt that, as physicians, they will have a natural legitimacy, and perceived that the society's expectations of their capabilities were high, as illustrated by Robin's quote:

I guess there is this perception that the doctor shall be the superhero that can do everything. But I think it can be good to remind people that you're also a human. (MedS 4)

Medical students worried about being the one in charge, which meant making life-changing decisions regarding patients. In their view, performing medical treatments requires more than the fragmented pieces of knowledge that they currently had. They recognised that they still have a lot to learn before making decisions that will influence patients' health. Even then, being a professional physician means risking that a wrong decision might inflict harm, suffering, or even death. These reflections about how physicians are humans, and sometimes make mistakes, also made the students feel humble, regarding how they, as professional physicians, might also have bad days at work. Therefore, they wanted to be careful in criticising colleagues who made medical errors. While medical students struggled with feelings of inadequacy in the face of social expectation, student teachers experienced that negative debates in media, as well as in society at large, affected negatively how they saw their teacher roles as authorities in the future.

Drawing Boundaries

Both student groups experienced that their professional role in the welfare sector entailed challenges separating their private life from work-related emotional stress. One example was how the medical students deliberately avoided burdening their

spouses with stories from clinical work, despite feeling overwhelmed by a patient's life situation. Student teachers' boundaries concerned the heart-breaking realisation that their work will be restricted to learning, and fostering during school-time, despite pupils' obvious need for other kinds of care and support. For example, Mary shared a story about feeling nauseous after being unable to help a pupil with a troubled home situation:

There is actually nothing I can do right now. Because I'm not a social worker. [...] There is nothing one can do. It was very unpleasant. (STeach 2)

In a similar way, the medical students found it hard to influence patients' life choices, like diet or exercise habits, outside of hospital care.

The social misery [...] people that don't want to leave the hospital because they are so lonely. It's extremely hard to handle, and it's, but I think that will be worse when you are the one that needs to make the decision, too. I've a bad feeling about that. (MedS 1).

Unlike the student teachers, medical students felt worried about all the ethical decisions involved in their future professional role. Such situations included determining when patients were incapable of expressing their needs and wishes regarding medical treatments, and how to communicate with patients or relatives about when to stop further medical treatment. David expressed this dilemma:

Where is the [mental] limit for someone to speak up about how they you wish to be treated? (MedS 3).

Discussion

This study illuminates how emotionally challenging experiences during work-based professional education may influence student teachers' and medical students' professional becoming. The altruistic and somewhat idealistic student views of professional work, found in this study, are well known (Chong & Low, 2008; Jungert et al., 2014; Piumatti et al., 2019). Scanlon (2011) discusses how welfare sector jobs are traditionally associated with attracting young people dedicated to caring for patients and clients, and a recent OECD survey report (Schleicher, 2020) suggests that serving a larger social purpose is what motivated teachers' choice of profession. Becoming a teacher or a physician means learning to handle situations where professional actions challenge the perception of being good or caring. The students in this study experienced such situations, which broadened their view of their future professional role, and collided with their personal values and motives for becoming a physician or a teacher. Work-based education is the specific context in professional education where situated learning and training of practical professional skills and attitudes takes place. This is when medical students and student teachers first engage in legitimate peripheral participation in their intended professional CoP. Belonging to a CoP means that the professional role becomes a part of who these students are, and that they represent the professional culture, and characteristics of their professional

community (Wenger, 2008). Mutual accountability, according to Wenger (2008), means that codes, languages, and practices are likely to be defended by the community, even at times when colleagues' actions are questionable. The students in this study negotiated whether they would be able to come to terms with, and contribute to, the practices they experienced, if this required setting aside their personal values. Dall'Alba (2009) argues, from a philosophical perspective, that professionals also become what they enact, and thus, professional practice has a deeper significance for an individual's identity. She proposes that education programs must acknowledge the importance of students' ontology (*who am I becoming*) and create opportunities for students to not only integrate the knowledge and skills associated with professional becoming, but also include emphasis on *being professional*, considerate of the kind of possibilities and constraints that students' aspiring identity entails.

Next, the discussion regarding similarities and differences between the 'student groups' (medical and teacher) of how emotional challenges may influence their professional becoming (RQ2) is structured in accordance with dimensions that characterise CoPs: professional culture and norms, professional legitimacy including decision making, and boundaries.

Challenging Professional Cultures and Norms

Becoming a teacher or physician includes learning and internalising norms and codes that are embedded in the professional culture. However, students in the present study encountered practices that were troublesome for their professional development. For example, students experienced a 'hardness' culture within medical professional practice and questioned whether teaching strategies that were inconsiderate of their emotions would be good for their learning, and why being a physician was associated with emotional detachment. Although challenging situations might be an inevitable part of medical training, the students in this study perceived that they had little support in managing their emotions, and they often kept their negative feelings to themselves. According to Wenger (2008), learners continuously negotiate what their aspiring professional role really means. Students in the current study tried to make sense of the negative professional cultures they experienced within workplaces, and whether these cultures were specific to certain schools or health care units, or reflected more widespread future professional practices. Previous research indicates that student teachers become focused on themselves, and trying to cope with their situation, rather than learning from experiences, at those times when social and professional relations become problematic (Johnston, 2010). A review of research regarding emotions and work-place learning suggest that emotions may hinder, for example, teachers from trying new methods or result in 'non-learning' (Hökkä et al., 2020). In contrast, dealing with emotions evoked by stressful work situations may contribute to developing emotional agency and that professionals become better equipped to face challenges constructively (Hökkä et al., 2022). Such emotional agency may also help professionals recognise and support other's emotions, which should be an important quality of teachers and physicians working in

the welfare sector. Hence, students' emotional challenges can be an important source for learning and it seems that they need improved support in this regard.

The students in this study questioned whether, in the future, they would be able to influence negative norms associated with their aspiring profession. Professional roles, and CoPs, are not static, and the re-shaping of professional roles is part of an ongoing social process (Wenger, 2008), although changing established practises may be difficult to accomplish (Dall'Alba, 2009). In this study, student teachers reported that resignation was part of the professional teacher culture, and something they had to resist. Most student teachers found strength in the idea that practice can be developed, and sought to be part of that change process. At the same time, they were affected by how teachers within their CoP expressed negative perceptions of their profession. The inclusion of specific strategies to deal with constraints among colleagues in the workplace may be one area that needs to be addressed during education, in order to help students gain perspectives regarding relational matters that seem to cause stress during their professional becoming.

Professional Legitimacy and Decision Making

This study highlights how students' professional becoming is associated with, and influenced by, the broader societal discourse regarding what different roles represent. What is interesting in the current findings, is that both student groups were troubled by the legitimacy and societal expectations of their expert knowledge as professionals —whether high (physicians) or low (teachers). Student teachers experienced an overall negative view of their profession in society, strengthened by the national media debate, and by some practicing teachers at different schools. Scanlon (2011) reasons about how professional knowledge is contested in today's societies:

A certain kind of superior, universal and esoteric knowledge was once seen as the foundation for claims to professional status. Trust in these foundationalist epistemologies has now been replaced by an acknowledgement from within the professions, from outside agencies and from individual members of the lay public, of the fragmentation, temporality and instability of professional knowledge. (Scanlon, 2011, p. 245–246).

Student teachers in this study were confronted with the resignation of teachers working in their own CoP. It seems that this was unexpected, and reinforced the negative view that for students was associated with being a teacher. Instead of being part of a strong community, which stood up for professionalism, students found it hard to resist internalising society's challenging view of their future role, and wondered why they should keep their idealism when their choice of profession was questioned by so many. They worried about having to stand up for their professional knowledge, and how to approach parents who, they foresaw, would question their judgements and expertise. In contrast, medical students perceived the physician role as possessing legitimacy. They felt challenged to live up to the high expectations associated with physicians. Even on bad days at work, they will, as future physicians be expected to cope with all kinds

of tough situations. The comparison of the students' experiences in this study shows the contrast between what the aspiring physicians and teachers, believed to be the negative, yet salient, features of the current professional culture in each CoP: hardness or resignation. Neither becoming a thick-skinned superhero physician, nor the resigned teacher, seem attractive. Yet the first implies being a winner, and the latter attitude belongs to someone who has given up early on.

In this study, students encountered situations during their emergent development that challenged them emotionally, regarding the demands of their intended professional role. We agree with authors who propose dedicated time in the curriculum for reflection, together with work-based supervisors and university teachers, to help students learn from these challenging situations (Cruess et al., 2015; Rodrigues & Mogarro, 2019). This study corroborates that students need such dialogues to also concern the work culture, and societal expectations of professional roles. In addition to teaching the ideal norms and correct procedure, such reflections should address students' experiences of challenging norms and (un)professional interaction at the workplace, as well as how to make sense of such experiences.

Drawing Boundaries Between Work and Private Dedication

The students in this study struggled with how they, as professionals, would be able to draw boundaries in their involvement in patients' and pupils' lives. The necessity for students in professional education to learn strategies for drawing boundaries between professional caring and what may become private dedication, and when to do so, is known from previous work (e.g., in Scanlon, 2011). The current study also shows that, during work-based education, student teachers were struck by the extent to which their future job entails managing relations between and towards pupils, parents, and colleagues. They felt that they will have to struggle to become a teacher capable of establishing and maintaining good relations. The medical students, on the other hand, were challenged by how to balance between providing medical treatment and human caring. In their mind, physicians seem to focus on the medical aspects and draw boundaries towards the patients' life situation as a whole. In medical education, one challenge is to support students' development of empathic approaches when they also need to learn to cope with emotionally stressful situations (Györfy et al., 2016; Piumatti et al., 2019). Whilst work-based education intends to broaden students' perspectives of their future role beyond theoretical knowledge, students in the current study seemed to need further support in learning from these challenging experiences. Previous research recognises that students, at the beginning of forming a professional identity, need to discuss tensions that arise when personal beliefs of caring collide with professional practice (Cruess et al., 2015; Rodrigues & Mogarro, 2019). Considering the risk for burnout and negative stress in welfare jobs, learning to cope with and establish clear boundaries between one's professional and one's private self seems to be an increasingly important part of professional education.

Conclusions

Student teachers and medical students experience emotional challenges during work-based education that form their view of their professional role, and how they picture their future practice. This study draws attention to professional students' need to reconcile themselves with the idea of belonging to their future professional community (CoP), including the values and practices that entail. Students' professional becoming includes making sense of experiences, such as when personal values collide with professional practice during work-based education.

The students in the current study questioned what they experienced as part of the current culture within professional practice: hardness (medical) or resignation (teacher). Medical students viewed the physician's role as authoritative, but found the attribution of superhero-status emotionally challenging, since it implies a need to develop into a perfect human that never make wrong decisions. Student teachers were burdened by the anticipation that their professional authority will be continuously questioned, although they considered themselves highly knowledgeable in their teaching subjects. Thus, the students associated their intended professional roles with negative views embedded in current societal discourses, based on their experiences during work-based education. We argue that the students' efforts to make sense of their future roles should be taken seriously, and not simply as misunderstandings or isolated bad examples of practice. Rather, the students' views seem to influence and make their professional becoming hard in ways that may risk their well-being.

This study implies that professional education should acknowledge that the emotional challenges during undergraduate studies influence professional becoming, and, consequently students' needs for support in both coping with and learning from these negative experiences. In particular, experiences that make it hard for students to imagine themselves as professionals, and thus be accountable for the values and practices connected with their future professional role, should be addressed during education. Given the welfare sector's need to recruit and retain skilled and well-educated professionals, it seems urgent to acknowledge students' emotional challenges during work-based education in the curriculum, as does further research providing a deeper understanding of how education can support students in these regards.

Limitations

The current study focuses on emotional challenges and positive emotions are therefore not reported here. However, all students were asked about and shared positive experiences from work-based education during the interviews. Thus, our findings should not be interpreted as if students in these professional educations lack positive experiences, or that work-based education are mainly challenging in negative ways. Students were recruited on the premise that they had experienced emotionally challenging situations during their education (explicitly phrased in the email invitation). The current study cannot account for the frequency, or how many students

that experience emotional challenges during work-based education, or the overall impact of such stress on the student population. Such findings are part of our larger project and will be reported elsewhere. Here, we gain deeper perspective regarding students' professional becoming when they do experience emotional demands in work-based context, something that have been scarcely studied previously (Hökkä et al., 2020) but should be taken seriously.

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Availability of Data and Materials Data is not available due to ethical considerations to protect the research participants.

Declarations

Competing Interests The authors declare that they have no conflict of interest.

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References

- AFA. (2017). *Psykisk ohälsa i kommun- och landstingssektorn [Mental illness in the municipal and health care sector]*. AFA Försäkring.
- Amir, A., Mandler, D., Hauptman, S., & Gorev, D. (2017). Discomfort as a means of pre-service teachers' professional development – An action research as part of the 'Research Literacy' course. *European Journal of Teacher Education*, 40(2), 231–245. <https://doi.org/10.1080/02619768.2017.1284197>.
- Bishop, L., & Kuula-Luumi, A. (2017). Revisiting data reuse: A decade on. *Sage Open*, 7(1). <https://doi.org/10.1177/2158244016685136>.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- Brennan, N., Corrigan, O., Allard, J., Archer, J., Barnes, R., Bleakley, A., Collett, T., & De Bere, S. R. (2010). The transition from medical student to junior doctor: Today's experiences of Tomorrow's Doctors. *Medical Education*, 44(5), 449–458. <https://doi.org/10.1111/j.1365-2923.2009.03604.x>.

- Caires, S., Almeida, L., & Vieira, D. (2012). Becoming a teacher: Student teachers' experiences and perceptions about teaching practice. *European Journal of Teacher Education*, 35(2), 163–178. <https://doi.org/10.1080/02619768.2011.643395>.
- Chong, S., & Low, E.-L. (2008). Why I want to teach and how I feel about teaching—Formation of teacher identity from pre-service to the beginning teacher phase. *Educational Research for Policy and Practice*, 8(1), 59. <https://doi.org/10.1007/s10671-008-9056-z>.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.
- Cruess, R. L., Cruess, S. R., Donald Boudreau, J., Snell, L., & Steinert, Y. (2015). A schematic representation of the professional identity formation and socialization of medical students and residents: A guide for medical educators. *Academic Medicine*, 90(6), 718–725. <https://doi.org/10.1097/acm.0000000000000700>.
- Dall'Alba, G. (2009). Learning professional ways of being: Ambiguities of becoming. *Educational Philosophy and Theory*, 41(1), 34–45. <https://doi.org/10.1111/j.1469-5812.2008.00475.x>.
- Dornan, T., Pearson, E., Carson, P., Helmich, E., & Bundy, C. (2015). Emotions and identity in the figured world of becoming a doctor. *Medical Education*, 49, 174–185. <https://doi.org/10.1111/medu.12587>.
- Fischer, A. H., & Manstead, A. S. (2008). Social functions of emotion. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (3rd ed., pp. 456–468). The Guilford Press.
- Gustavsson, P., Hultell, D., & Rudman, A. (2013). *Lärares och sjuksköterskors hälsoutveckling och karriärvägar de första åren efter utbildning*. Karolinska Institutet.
- Györfi, Z., Birkás, E., & Sándor, I. (2016). Career motivation and burnout among medical students in Hungary - Could altruism be a protection factor? *BMC Medical Education*, 16(1), 182. <https://doi.org/10.1186/s12909-016-0690-5>.
- Higher Education Ordinance (1993:100). (1993). *Högskoleförordningen*. Ministry of Education and Science in Sweden (Utbildningsdepartementet).
- Hökkä, P., Vähäsantanen, K., & Paloniemi, S. (2020). Emotions in learning at work: A literature review. *Vocations and Learning*, 13(1), 1–25. <https://doi.org/10.1007/s12186-019-09226-z>.
- Hökkä, P., Vähäsantanen, K., Ikävalko, H. (2022). An integrative approach to emotional agency at work. *Vocations and Learning*, 1–24. <https://doi.org/10.1007/s12186-022-09299-3>.
- Holden, M., Buck, E., Clark, M., Szauter, K., & Trumble, J. (2012). Professional identity formation in medical education: The convergence of multiple domains. *HEC Forum*, 24(4), 245–255. <https://doi.org/10.1007/s10730-012-9197-6>.
- Irby, D. M., & Hamstra, S. J. (2016). Parting the clouds: Three professionalism frameworks in medical education. *Academic Medicine*, 91(12), 1606–1611. <https://doi.org/10.1097/ACM.0000000000001190>.
- Izadinia, M. (2013). A review of research on student teachers' professional identity. *British Educational Research Journal*, 39(4), 694–713. <https://doi.org/10.1080/01411926.2012.679614>.
- Johnston, D. H. (2010). 'Losing the joy': Student teachers' experiences of problematic relations with host teachers on school placement. *Teacher Development*, 14(3), 307–320. <https://doi.org/10.1080/13664530.2010.504012>.
- Jungert, T., Alm, F., & Thornberg, R. (2014). Motives for becoming a teacher and their relations to academic engagement and dropout among student teachers. *Journal of Education for Teaching*, 40(2), 173–185. <https://doi.org/10.1080/02607476.2013.869971>.
- Kremer, T., Mamede, S., RorizFilho, J. S., & MadeiroLeite, A. J. (2016). Emotionally difficult experiences faced by medical students during training. *Health Professions Education*, 2, 24–32. <https://doi.org/10.1016/j.hpe.2016.01.010>.
- Lindqvist, H. (2019). Strategies to cope with emotionally challenging situations in teacher education. *Journal of Education for Teaching*, 45(5), 540–552. <https://doi.org/10.1080/02607476.2019.1674565>.
- Lindqvist, H., Weurlander, M., Wernerson, A., & Thornberg, R. (2017). Resolving feelings of professional inadequacy: Student teachers' coping with distressful situations. *Teaching and Teacher Education*, 64, 270–279. <https://doi.org/10.1016/j.tate.2017.02.019>.
- Meijer, P. C., de Graaf, G., & Meirink, J. (2011). Key experiences in student teachers' development. *Teachers and Teaching*, 17(1), 115–129. <https://doi.org/10.1080/13540602.2011.538502>.
- Monrouxe, L. V., & Rees, C. E. (2012). "It's just a clash of cultures": Emotional talk within medical students' narratives of professionalism dilemmas. *Advances in Health Sciences Education Theory and Practice*, 17, 671–701. <https://doi.org/10.1007/s10459-011-9342-z>.

- Morgan, D. L. (1996). Focus groups. *Annual Review of Sociology*, 22(1), 129–152. <https://doi.org/10.1146/annurev.soc.22.1.129>.
- Mukeredzi, T. G., & Mandrona, A. R. (2013). The journey to becoming professionals: Student teachers' experiences of teaching practice in a rural South African context. *International Journal of Educational Research*, 62, 141–151. <https://doi.org/10.1016/j.ijer.2013.07.010>.
- Piumatti, G., Abbiati, M., Baroffio, A., & Gerbase, M. W. (2019). Associations between motivational factors for studying medicine, learning approaches and empathy among medical school candidates. *Advances in Health Sciences Education*, 24(2), 287–300. <https://doi.org/10.1007/s10459-018-9866-6>.
- Rees, C. E., Monrouxe, L. V., & McDonald, L. A. (2013). Narrative, emotion and action: Analyzing 'most memorable' professionalism dilemmas. *Medical Education*, 47, 80–96. <https://doi.org/10.1111/j.1365-2923.2012.04302.x>.
- Rees, C. E., Monrouxe, L. V., & McDonald, L. A. (2015). 'My mentor kicked a dying woman's bed...': Analysing UK nursing students' 'most memorable' professionalism dilemmas. *Journal of Advanced Nursing*, 71(1), 169–180. <https://doi.org/10.1111/jan.12457>.
- Riesky, R. (2013). How English student teachers deal with teaching difficulties in their teaching practicum. *Indonesian Journal of Applied Linguistics*, 2(2), 250–261. <https://doi.org/10.17509/ijal.v2i2.169>.
- Rodrigues, F., & Mogarro, M. J. (2019). Student teachers' professional identity: A review of research contributions. *Educational Research Review*, 28, 100286. <https://doi.org/10.1016/j.edurev.2019.100286>.
- Scanlon, L. (2011). 'Becoming' a professional. In L. Scanlon (Ed.), *"Becoming" a professional: An interdisciplinary analysis of professional learning* (pp. 13–32). Springer.
- Schleicher, A. (2020). *TALIS 2018: Insights and interpretations. Teaching and learning international survey*. OECD Publishing.
- Sverke, M., Falkenberg, H., Kecklund, G., Hanson, L. M., & Lindfors, P. (2016). *Kvinnors och mäns arbetsvillkor – betydelsen av organisatoriska faktorer och psykosocial arbetsmiljö för arbets- och hälsorelaterade utfall [Working conditions of women and men]*. Arbetsmiljöverket.
- Thornberg, R. (2012). Informed grounded theory. *Scandinavian Journal of Educational Research*, 56(3), 243–259. <https://doi.org/10.1080/00313831.2011.581686>.
- Timošćuk, I., & Ugaste, A. (2012). The role of emotions in student teachers' professional identity. *European Journal of Teacher Education*, 35(4), 421–433. <https://doi.org/10.1080/02619768.2012.662637>.
- Tomlinson, M., & Jackson, D. (2021). Professional identity formation in contemporary higher education students. *Studies in Higher Education*, 46(4), 885–900. <https://doi.org/10.1080/03075079.2019.1659763>.
- Trede, F., Macklin, R., & Bridges, D. (2012). Professional identity development: A review of the higher education literature. *Studies in Higher Education*, 37(3), 365–384. <https://doi.org/10.1080/03075079.2010.521237>.
- Turner, J. H. (2009). The sociology of emotions: Basic theoretical arguments. *Emotion Review*, 1(4), 340–354. <https://doi.org/10.1177/1754073909338305>.
- Wenger, Etienne. (2008). *Communities of practice. Learning, meaning and identity*. Cambridge University Press.
- Weurlander, M., Lönn, A., Seeberger, A., Broberger, E., Hult, H., & Wernerson, A. (2018). How do medical and nursing students experience emotional challenges during clinical placements? *International Journal of Medical Education*, 9, 74–82. <https://doi.org/10.5116/ijme.5a88.1f80>.
- Weurlander, M., Lönn, A., Seeberger, A., Hult, H., Thornberg, R., & Wernerson, A. (2019). Emotional challenges of medical students generate feelings of uncertainty. *Medical Education*, 53(10), 1037–1048. <https://doi.org/10.1111/medu.13934>.

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