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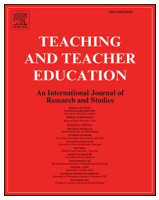
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Research paper

School staff members' professional agency in Finland, Scotland and Sweden – A comparative study

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A B S T R A C T

Professional agency has been comprehensively investigated in educational contexts, but there have been few quantitative or comparative studies. This quantitative study explored school staff members' professional agency in Finland, Scotland, and Sweden, addressing three dimensions of agency: *influencing at work*, *participation at work*, and *negotiating professional identity*. The questionnaire data indicated fairly strong agency among lower secondary school staff members across the dimensions and countries. Professional agency was perceived to be stronger in Sweden than in Finland or Scotland. There were some differences between the countries in terms of the background variables (e.g. working experience) affecting professional agency in schools.

1. Introduction

In the last decade, the concept of professional agency has emerged as fruitful for studying the everyday practices of teachers (e.g. Chaaban & Sawalhi, 2021) and the processes of learning, development, and change (e.g. Goller & Paloniemi, 2017). In addition to being closely related to individuals' learning and growth, professional agency is closely and positively connected to organizational transformation (e.g. Imants & Van der Wal, 2020). Pietarinen et al. (2016) showed how teachers' professional agency can be seen as an integrative concept in understanding teachers' learning, given that it combines personal attributes (e.g. motivation to learn and self-efficacy beliefs) with intentional actions to develop pedagogical practices, both in classrooms and in the school community more broadly (cf. also Toom et al., 2021). In general terms, professional agency refers to the power of individuals, particularly in a professional context. It involves the power to act independently, make choices, and exert control in one's work. The sphere of control is one's work and work community, and one's professional identity and development (Eteläpelto et al., 2013; Goller & Paloniemi, 2017).

Despite recent interest in professional agency in education, there are still gaps in our understanding. Most studies on professional agency in education have been qualitative in nature. Moreover, comparative research designs have been scarce, although Chaaban and Sawalhi (2021) and Oolbekkink-Marchand et al. (2017) conducted qualitative international comparative studies which illustrated the importance of relational and contextual issues in hindering or supporting teacher agency. These studies also highlighted the fact that within different national policies and contexts, one can identify differences and similarities in teachers' agency. There have also been some quantitative studies investigating teacher students' and teachers' agency in specific national educational contexts, i.e. with no comparative setting (e.g. Leijen et al., 2022; Pantić, 2017; Soini et al., 2015; Yli-Pietilä et al., 2023a). One recent exception is the comparative study by Yli-Pietilä et al. (2024), which examined the relationship between teachers' professional agency and well-being in four European countries. It should be noted that these studies examined teaching-related agency without seeking to address professional identity – that is, if professional identity is understood as involving work-related goals and values, in conjunction with one's commitment, identification, and orientation to work (Eteläpelto et al., 2013).

In addition, there has not been much quantitative research

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elaborating different background variables (e.g. professional roles, gender, and the length of the work career) related to professional agency in educational contexts; hence, we lack knowledge on how these different background factors affect the professional agency of teachers and other educational staff. There is some evidence from the university context that (i) as compared to researchers, leaders see themselves as having stronger agency, but also that (ii) gender, age, and the type of employment contract (fixed-term contract vs. permanent contract) are not connected to perceived professional agency (Vähäsantanen et al., 2020). Furthermore, in a recent study by Yli-Pietilä et al. (2023b), both gender and work experience were found to be related to the professional agency of primary school teachers.

It should be noted that empirical agency research in the educational field has focused mainly on the agency of teachers, with other professional groups (e.g. school leaders) receiving less attention. Therefore, in this paper, the theoretical literature referred to focuses on teacher research, while our findings are mainly discussed on the basis of studies elaborating teachers' agency.

Considering these gaps in research-based knowledge, the aim of the present study was to compare lower secondary school staff members' professional agency in three different national contexts – namely, Finland, Scotland, and Sweden. The participants encompassed lower secondary school staff as a whole – that is, all persons holding the post of a teacher, teaching assistant, or specialist (e.g. study counsellor, psychologist, or school social worker), encompassing also persons with senior management roles (e.g. head teacher and deputy head teacher). Our aim was also to gain a deeper understanding of the factors that could explain variations in professional agency. In this study, we saw professional agency through behavioural lenses and relied on a subject-centred sociocultural approach (Eteläpelto et al., 2013) – an approach that emphasizes professional agency in terms of actions related to work and professional identity. Consequently, the structure of professional agency was investigated across three dimensions – i.e. influencing at work, participation at work, and negotiating professional identity – through the use of the short version of the Professional Agency Measurement instrument (short-PAM; see Vähäsantanen et al., 2022). It is important to note that another measure of teachers' professional agency exists, namely the Teachers Professional Agency Measure (TPA), developed by Pyhältö et al. (2014). However, this measure specifically focuses on teachers' agency within classroom contexts and conceptualizes agency as a capacity that facilitates new learning. In contrast, our study examines the professional agency of the entire school staff, viewing it as actions related to their work and professional identity.

The countries involved in the study share many similarities in terms of social welfare policies – including universal healthcare systems, progressive taxation, and gender equality. However, they differ from each other in terms of national school policies, teacher training, and the teacher's work. They also differ in the general appreciation of teachers' work, which could affect the willingness of individuals to apply for teacher training and to remain employed as teachers. Thus, in Finland, the teaching profession is still quite highly valued among young people (Heikkinen et al., 2020). By contrast, in Sweden, the threshold to enter teacher programmes is low, and dropout rates are high, with the university teaching programme currently perceived as less prestigious than other university programmes (Bertilsson et al., 2022). Government documents in Scotland explicitly position teachers as 'prime agents of educational change' (Scottish Government, 2011), although there is still a need to increase teacher education numbers and encourage talented people to consider teaching as a profession.

This study explored whether school staff in these three countries have different experiences of professional agency, and how background variables are connected to these potential differences. Overall, this study aimed to contribute to agency studies in the educational field by exploring the structure of professional agency and the similarities and differences in agency over the three countries mentioned above.

2. Professional agency within a subject-centred sociocultural approach

Professional agency has been comprehensively discussed and investigated through the lens of sociocultural approaches (e.g. Edwards, 2015; Lipponen & Kumpulainen, 2011). Such approaches commonly understand agency as an activity and framing of professional agency within a dialectic of person and practice/culture. Sociocultural approaches have further adopted a change/transformative perspective to emphasize the power of the individual to engage in efforts/changes in current teaching practices and cultures. Note also use of *relational agency*, which has been seen as encompassing the reciprocal relationships utilized in work and involved in the strengthening of expertise (Edwards, 2015; Englund & Price, 2018; McNicholl, 2013).

In this study, we understood professional agency in the school context in line with a subject-centred sociocultural (SCSC) approach (Eteläpelto, 2017, pp. 183–201; Eteläpelto et al., 2013, 2014). In accordance with its sociocultural roots, the SCSC approach understands professional agency as an action-based phenomenon rather than as an individual property or capacity. It is seen as pertaining to work practices, and as manifested in and through – and further as resourced and constrained – by sociocultural conditions, including power relations, leadership practices, and the working culture. Such agency cannot be seen as divorced from social environments, with their affordances and restrictions, or not to the extent that one might view the individual alone as the starting point for action. Note, however, that this approach does take into account the role of individual backgrounds, such as work history and experiences, in professional agency (Eteläpelto et al., 2013).

In contrast with other sociocultural perspectives (e.g. Edwards, 2015), SCSC approaches professional identity as an integral part of agency. Professional identity refers to individuals' understanding and perception of themselves as professionals within a specific professional field (e.g. Beijaard et al., 2004; Eteläpelto, 2017, pp. 183–201). For example, in the case of teachers, it encompasses their beliefs, values, and practices, and is (re)constructed by their experiences, education, and interactions within educational and other contexts (e.g. Beijaard et al., 2023; Hong et al., 2018). To become and act as a teacher involves not only professional skills and competence, but first and foremost, the construction of a professional identity as a teacher (e.g. Beauchamp & Thomas, 2009; Beijaard et al., 2004). Thus, professional identity and continuous identity negotiation throughout one's career are pivotal in teacher development (Beijaard et al., 2023; Noonan, 2019). This conception of agency is clearly pivotal in the work of early-career teachers, who must embark on constructing a balanced professional identity and negotiating with their environment to become competent actors and professionals in the field of education (Cobb, 2022; Eteläpelto et al., 2015; Heikonen et al., 2017). However, professional agency has also been shown to play a pivotal role throughout teachers' careers. Teacher identity, viewed as continually 'becoming' rather than 'being' amid societal and institutional changes, requires teachers to have agency in navigating, making decisions, and renegotiating their professional selves within these changes (Beijaard et al., 2023; Toom et al., 2015). There is evidence that making real changes – for example, to teaching and classroom practices – requires teachers to have considerable professional agency in their identity negotiations (Kauppinen et al., 2020).

Overall, professional agency is here conceptualized as pertaining to work and professional identity, and as manifested through influencing, participating, and making choices and decisions in relation to work practices and professional identity (Eteläpelto et al., 2013; see also Chaaban & Sawalhi, 2021; Sun & Cheng, 2022). In line with these considerations, we have adopted a theoretical model of professional agency as encompassing three dimensions: *influencing at work, participation at work,* and *negotiating professional identity* (Vähäsantanen et al., 2019, 2022). *Influencing at work* illustrates how professionals are responsible actors who can exert influence on their own work practices

and shared matters within the work community. Viewed in this light, influential professionals are responsible actors who exert influence at work in a variety of ways related to individual and collective matters, such as the ways of working, the contents of the work, the limits to work, and shared work practices and cultures (see also Vähäsantanen et al., 2019). *Participation at work* refers to active engagement in shared discussion, collaboration, and development in the work community. Thus, agentic professionals can choose professional learning opportunities and make developmental suggestions, engage in collaborative practices and discussions via commenting and asking questions, and pursue areas of interest that enhance their teaching and other professional practices within complex professional settings (see also Gurney & Liyanage, 2016; Toom et al., 2021; Vähäsantanen et al., 2019). *Negotiating professional identity* encompasses the notion that professional agency refers to the enactment of one's professional interests and goals at work. Thus, this dimension includes the idea that professionals are active negotiators of their professional identities in their schools. Professionals who have a sense of their own professional agency are able to realize their interests and goals in their work and act based on their values (Vähäsantanen et al., 2019).

3. Professional agency in relation to autonomy and various background factors

Professional agency in the school context is often related to the concept of *autonomy*. The concepts of agency and autonomy partially overlap, but they have their own specific characteristics and differences. (Teacher) autonomy refers to teachers' freedom to act independently in their own field (teaching, curriculum implementation) based on their professional expertise and decision-making (Erss, 2018). Thus, the notion of autonomy highlights teachers as professionals controlling their own teaching. In a more negative sense it can be seen as related to the long-standing culture of teacher isolation, which is supported by structural arrangements within schools (such as teaching in separated classrooms, and having no arranged space or time for collaboration) (Vangrieken et al., 2017). Teacher agency, for its part, goes beyond the power to decide on one's individual teaching practices. It involves, for example, taking responsibility for one's own professional learning and identity construction, developing one's own work practices, and contributing to the wider educational community (Cong-Lem, 2021; Priestley et al., 2015; Toom et al., 2015). Thus, agency refers to teachers as actors whose view of themselves includes appropriating the teacher's role and even going beyond that role, in line with their personal commitments and values. In short, teacher *autonomy* refers to the degree to which teachers have control over their own teaching practices, while teacher *agency* is seen as teachers' capacity and/or behaviours to (more broadly) shape themselves as professionals (identity construction), and to influence the context in which they act (involving relationships with students, collaboration with colleagues, and engaging with the wider community). Often, the two notions are seen as connected, in the sense that strong autonomy can offer a platform for strong agency. However, there is evidence that strong teacher autonomy can act as a barrier to *collective agency* – for example, in efforts to develop school cultures and shared new practices (e.g. Manninen et al., 2022).

Recent studies have consistently suggested that agency is manifested via the interplay of *personal* and *social resources* (Biesta & Tedder, 2007; Eteläpelto et al., 2013; Oolbekkink-Marchand et al., 2022). Personal resources refer to an individual's unique and life history-based factors, which include skills, competencies, dispositions, and professional identity. Social resources frame and shape one's professional agency at many levels. Individuals' opportunities to act and influence are affected by global megatrends such as the rapid rise of artificial intelligence and global crises such as pandemics and wars (e.g. Artuso & Guijt, 2020). At the national level, structures and practices such as national educational policies or curricula shape professionals' enactment of agency. Both aspects are illustrated in Chaaban and Sawalhi's (2021) comparative study, which shows how teachers' professional agency is strongly resourced and/or restricted by national and institutional factors. Indeed, the school and institutional contexts frame and resource the enactment of agency in many ways. Hong et al. (2018) noted that in educational organizations, contextual and structural issues, such as the school culture, administration, and power relations, have often been seen as subjugating and restricting teachers' agency due to accountability policies and performance-driven cultures. On the other hand, there is also evidence of constructive practices that enhance teacher agency. For example, Min's (2019) findings indicated that a school culture fostered by supportive teacher–principal and teacher–teacher relationships directly influences individual teachers' agency over either the school- or classroom-level curriculum.

Thus far, there has been little research on *individual background characteristics as connected to the enactment of agency* in educational contexts. However, for example, *gender* has been studied extensively in educational contexts in relation to other agency-related issues, such as power. Traditionally, men have surpassed women in terms of their pay, seniority, and status (Arulampalam et al., 2007). A teaching career has been seen as typical female work, offering some opportunity for career progression, but favouring men who enter the profession. Men appear to rise to leadership and top positions relatively quickly, while women remain in junior posts (Nicolson, 2015), even if the few statistical studies touching on teacher agency and gender have not so far revealed significant differences in female and male agency (e.g. Vähäsantanen et al., 2020). Other categories related to normative power structures, such as *work roles,* have indeed been shown to be related to teachers' professional agency (Lau et al., 2023). There is also evidence from previous agency studies that people in leadership positions perceive a stronger sense of professional agency than do other personnel (Vähäsantanen et al., 2020) – a result which is not surprising given the leaders' normative power position.

In the educational field, studies have been conducted on the importance of *work experience*, especially in teachers' work. Conventional teacher development models see teachers' professional careers as a linear progression encompassing the stages from novice to expert (Raduan & Na, 2020). Studies have shown that initial-stage teachers in particular face numerous challenges and tensions in their work, such as workload and emotional pressure (Jokikokko et al., 2017), short work contracts (Marent et al., 2020), and the impact of 'reality shock' (Dicke et al., 2015). A few studies have also elaborated on teacher agency in relation to work experience. For example, Eteläpelto et al. (2015) found that novice teachers had a weak sense of agency with regard to the social management of the classroom, resulting in a need to renegotiate their professional identities. More experienced teachers in mid or late career have been reported to face different kinds of challenges, such as how to sustain their commitment to the profession (Day et al., 2005).

Although research on agency within education has focused mainly on the agency of teachers, there have also been a few studies addressing school leaders' agency. For example, the role of the school leader has been found to be crucial for novice teachers' perceived agency during their first years in the profession (Eteläpelto et al., 2015), and school leaders have noted that they play a crucial role in resolving tensions related to teachers' professional agency (Louws et al., 2020). Similarly, Polatcan et al. (2021) examined the relationship between transformational leadership (i.e. a leadership model emphasizing collaboration, participation, and innovation) and teacher agency. They found that in the school context, transformational leaders improve teachers' competencies and support their agency in learning, teaching, and school development. Thus, there is some evidence that school leaders play a crucial role in terms of supporting and/or hindering teachers' agency. However, studies up to now have viewed the leaders' role and leadership primarily as a contextual factor supporting or hindering the agency of others, and have not investigated school leaders' perceptions of their own professional agency.

4. National research contexts

This study was implemented in three countries – Finland, Scotland and Sweden – all of which present, in political and social terms, fairly similar contexts, insofar as they are Western democracies that emphasize education as a pre-eminent pillar of a sustainable welfare society. In their national policies, they all state the importance of a comprehensive social welfare system, universal healthcare, equity and equality, and education. Education is highly valued in all three countries, and each has a well-developed education system that provides free access to primary and secondary education for all students (Finnish National Agency for Education; Mooney & Wright, 2009; Sverige Riksdag).

However, there are some significant differences. In Finland, teachers are required to have a master's degree in education and to undergo extensive teacher training before entering the profession. In Sweden and Scotland, the requirements for teacher education are less rigorous and there is more variation in the qualifications and training of teachers. Another significant difference lies in the assessment practices. Finland and Sweden have moved away from standardized testing, using instead more formative assessments and teacher evaluations to assess student learning. In Scotland, there is still a significant emphasis on school inspections and external examinations (Munoz Chereau & Ehren, 2021). Yet another difference between the three countries is in school choice. In Sweden, guardians have a wide range of school choices, including private/independent schools, and schools are funded according to the number of students they attract (Lund, 2008). During the 2022–23 academic year, the proportion of school students (aged 13–15) enrolled in private/independent schools stood at 16% (Skolverket, 2023).

In Finland and Scotland, there is less emphasis on school choice and more emphasis on providing equal education in all schools. At the school organizational level, Finland and Sweden have a fairly similar administrative structure, encompassing a low hierarchy. In Scotland, the administrative structure of schools is more hierarchical, and the number of managers and middle managers is much higher than that in Finland and Sweden (e.g. Hammersley-Fletcher & Strain, 2011).

In Finland, there is a strong emphasis on teachers' professionalism and autonomy, and thus, as one would expect, agency. The teacher's role is regarded as that of a professional, i.e. as involving academic status (a degree at master's level), pedagogical expertise, freedom, and a willingness to develop the field. Schools and teachers are relatively highly valued (both among young people and citizens in general) and many people apply for teacher education programmes (e.g. Heikkinen et al., 2020). In Scotland, there are aspirations for teaching to become an enquiry-based, collaborative profession, and some new master's-level programmes for teachers have been introduced, although these are not compulsory. Policy discourses emphasize the importance of teaching as a highly skilled, reflexive profession. These seek to promote teacher agency in particular, often in the context of social justice agendas (Pantić, 2017). The values of teacher autonomy and agency are aspirational rather than structurally built into the organization of teachers' work, which largely consists of teacher–classroom instructional activity. In Sweden, regardless of the low number of applicants to teacher programmes, the teaching profession is still valued within society. However, the authority of the teacher is not self-evident. Guardians, especially from the elite middle class, place high demands not only on their children but also on the schools and the teachers. Teachers experience this as pressure; for example, they can be questioned on their practices, and they may need to prove that their grading is correct (Holmqvist, 2022).

5. Research questions

Our study focused on the professional agency of lower secondary school staff members in Finland, Scotland, and Sweden. The following research questions were set.

1. Can the three-dimensional structure of professional agency be confirmed among school staff members across different countries?
2. Are there mean level differences in professional agency among school staff members across different countries?
3. How are background variables connected to the manifestations of professional agency among school staff members across countries?

6. Methodology and methods

6.1. School sites and participants

This study was conducted as part of a larger research project in the Finnish, Swedish, and Scottish school contexts between 2020 and 2024. The research project was conducted in line with the instructions and ethical principles laid down by the EU General Data Protection Regulation, the national research academies of the participating countries, and the researchers' home universities.

Our survey data were gathered electronically during the global Covid-19 pandemic in 2020. We informed the respondents on the goals of the study via e-mail, and in the preface sheets of the online questionnaires. Participation was indicated as voluntary, with the right to withdraw at any time. We stressed that the collected data would be anonymized before analysis, storage, and publication. The participants did not receive any financial benefits for their participation. Data were collected from teachers and other school staff members belonging to two discretionarily chosen schools from Finland, two from Sweden, and three from Scotland. All seven schools are state-funded and located in urban areas of middle-sized or large cities. Migrant students comprise at least 7% of the chosen lower secondary schools. All the school names below are pseudonyms.

Finland: Downy Birch School is located in an area with a higher unemployment rate and slightly lower socioeconomic status than the average for the city. Silver Birch School is located in a neighbourhood that consists of several socioeconomically diverse smaller areas. Some of these areas are mainly composed of socioeconomically affluent households, while others are mainly households of below-average socioeconomic status. Downy Birch School has approximately 800 students and Silver Birch School has 400 students. In both schools, the number of students with a migrant background is slightly over 10%.

Sweden: The two schools in Sweden are located in one of the larger cities. Magnolia School is located in an ethnically and socioeconomically mixed neighbourhood, and 95% of the students have a migrant background. There are around 240 students at the school. The other school, Pine Tree, has 440 students attending grades 7–9 in a school with 700 primary students. The school is in a socioeconomically affluent area, with the majority of students coming from a white Swedish background. In Pine Tree, only around 7% of the students have a migrant background – a low percentage compared to the average for schools in Sweden.

Scotland: The three Scottish schools are all located in a city in Scotland's Central Belt. They are in different neighbourhoods, but each is composed of student populations from a mixture of socioeconomic backgrounds. Juniper School has the most impoverished households in its catchment area, while Rowan School has the fewest. Juniper caters to 830 students (20%–30% of migrant background), Beech has 980 (10%–20% migrants), and Rowan 890 students, with up to 10% coming from a migrant background.

Altogether, 114 (75%) school staff members from Finland, 88 (73.95%) from Sweden, and 205 (52.56%) from Scotland responded to the survey. The background characteristics of the participants in each country are presented in Table 1.

6.2. Measures and variables

We assessed participants' *professional agency* via the short version of the professional agency questionnaire (hereafter 'short-PAM'). This consists of nine items measuring three validated dimensions of

Table 1
Descriptive statistics for the background characteristics of the school staff in Finland, Sweden, and Scotland.

Background characteristics	Finland (n_{max} = 114)		Sweden (n_{max} = 88)		Scotland (n_{max} = 205)	
	n	%	*n*	%	*n*	%
Gender						
Female	75	72.12	50	64.94	111	72.55
Male	29	27.88	27	35.06	42	27.45
Missing data	10		11		52	
Work contract						
Part-time	9	8.04	21	25.00	40	20.62
Full-time	103	91.96	63	75.00	154	79.38
Missing data	2		4		11	
Work experience						
0–5 years	42	37.50	63	75.00	104	53.61
6–20 years	49	43.75	19	22.62	61	31.44
20+ years	21	18.75	2	2.38	29	14.95
Missing data	2		4		11	
Work role/post						
Assistants	9	8.04	7	8.64	15	8.15
Specialists	10	8.92	8	9.88	30	16.30
Managers	3	2.68	4	4.94	15	8.15
Teachers	90	80.36	62	76.54	124	67.40
Missing data	2		7		21	

professional agency: *influencing at work*, *participation at work*, and *negotiating professional identity* (Vähäsantanen et al., 2022). The measures (initial PAM measure and short-PAM) were developed to study the multidimensional nature of professional agency across different professional domains. The individual items are shown in Table 2. The short version of the measure was preferred to the longer version with 17 items (Vähäsantanen et al., 2019), as it made the study more concise, while allowing possibilities to use advanced statistical methods applicable to our data size. Short-PAM has been shown to be as reliable as the longer version of the instrument (Vähäsantanen et al., 2022). Shorter procedures also reduce participants' fatigue and address problems of low participation (e.g. Burisch, 1984). All the items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The original PAM measure was developed and presented in Finnish. The English translations and back-translations were made by a native English linguistics expert, who is also an expert in the Finnish language. Translations and back-translations from English to Swedish were implemented using a similar procedure. These translations were further triangulated and discussed by the research team.

The questionnaire also covered the participants' background information. The present study focused on *gender*, *years in the profession*, the nature of the *employment contract*, and the *work role/post*. *Gender* was coded as 0 = men, 1 = women, 2 = other/prefer not to say. The type of *work contract* was divided into two categories: 0 = full-time contract, 1 = part-time contract. *Years in the profession* was coded into three categories: 1 = 0–5 years (*early career staff*), 2 = 6–20 years (*mid-career staff*, comprising the reference category in the analysis), and 3 = over 20 years (*most experienced staff*). The *work role/post* of the participants was categorized as one of the following: 1 = teaching assistant, 2 = specialist (e.g. study counsellor, psychologist, school social worker), 3 = senior management role (e.g. head teacher, deputy head teacher), and 4 = teacher (comprising the reference category in the analysis). For the analysis, the latter two variables were dummy coded.

6.3. Data analysis

The data were analysed using structural equation modelling (SEM). In Phase 1 of the analysis, we compared the structure of short PAM across the three countries using multi-sample confirmatory factor analysis. This method was chosen because we wished to test whether the established three-dimensional structure of short-PAM (Vähäsantanen

Table 2
Descriptive statistics for the dimensions of professional agency, and correlations between the professional agency items by country (Finland/Sweden below the diagonal, Scotland above the diagonal).

Dimensions of professional agency		Influencing at work (items 1.–3.)			Participation at work (items 4.–6.)			Negotiating professional identity (items 7.–9.)		
n	Finland/Sweden/Scotland	110/81/168			110/81/168			110/81/168		
Missing data	Finland/Sweden/Scotland	4/7/37			4/7/37			4/7/37		
ω	Finland/Sweden/Scotland	.83/.84/.88			.84/.69/.85			.77/.84/.89		
M	Finland/Sweden/Scotland	3.59/4.22/3.80			3.72/4.50/3.99			3.79/4.36/4.05		
SD	Finland/Sweden/Scotland	0.85/0.80/0.91			0.87/0.52/0.80			0.73/0.66/0.86		
Items of professional agency		1.	2.	3.	4.	5.	6.	7.	8.	9.
1. I can participate in the preparation of matters in my unit		–	.79***	.67***	.54***	.54***	.60***	.53***	.59***	.65***
2. I can participate in the decision making in my unit.		.79***/67***	–	.60***	.53***	.45***	.60***	.48***	.55***	.61***
3. I am heard in matters relating to my own work.		.40***/.53***	.49***/.64***	–	.55***	.60***	.63***	.56***	.57***	.56***
4. I ask or comment actively in my unit.		.45***/.31**	.40***/.31***	.29**/.27*	–	.64***	.68***	.50***	.50***	.50***
5. I actively collaborate with others in my unit.		.35***/.36***	.36***/.29**	.26**/.36***	.58***/.33**	–	.64***	.53***	.49***	.56***
6. I make developmental suggestions regarding collective work practices.		.40***/.28*	.40***/.18	.21*/.04	.65***/.50***	.68***/.40***	–	.53***	.49***	.56***
7. I can act according to my own values in my work.		.34***/.47***	.25**/.39***	.40***/.32**	.28***/.30**	.16/.25*	.17/.32**	–	.74***	.66***
8. I can realize my professional goals in my work.		.23*/.48***	.11/.32**	.39***/.33**	.19/.29**	.19/.43***	.20*/.40***	.57***/.52***	–	.78***
9. In my work, I can focus on things that interest me.		.29**/.53***	.32***/.48***	.48***/.46***	.33***/.28*	.24*/.44***	.21*/.31**	.47***/.53***	.54***/.75***	–

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

et al., 2022) would receive support from the data from Finland, Sweden, and Scotland (Putnick & Bornstein, 2016). We conducted the analysis by testing full factorial invariance across the countries via four consecutive steps: 1) configural invariance (testing the equivalence of model form), 2) weak invariance (equivalence of factor loadings), 3) strong invariance (equivalence of item intercepts), and 4) strict invariance (equivalence of residual variances) (Meredith, 1993; Putnick & Bornstein, 2016). In steps 2–4, the preceding step (i.e. the less constrained model) served as the reference.

We continued the analysis by examining mean differences in the dimensions of professional agency among the school staff across the countries (i.e. research question 2) via SEM multi-sample procedure. To achieve this goal, we elaborated on the final model obtained in Phase 1 by comparing the means of the short PAM dimensions via an SEM multi-sample procedure. This was done by comparing the fit of the freely estimated model (i.e. with the means of the factors measuring the short PAM dimensions estimated freely across the three countries) to the fit of the constrained model, in which the means were constrained to be equal across the countries. Moreover, we considered Cohen's *d* to be a measure of the effect size of the mean differences between the countries (Cohen, 1988).

The last phase of our analysis focused on the associations between the selected background characteristics of the staff and the dimensions of professional agency, and the differences in these associations across the three countries (i.e. research question 3). The factors representing the dimensions of professional agency were utilized as dependent variables, while *gender, type of work contract,* and *work experience* served as independent variables. The work role was treated only as a control variable, since the small group sizes did not allow valid conclusions on the levels of professional agency by work role. The moderating effect of the country was investigated within the SEM framework using a multi-sample procedure. As in the analysis for research question 2, we formed a model in which the associations of the background characteristics and the control variable with the short PAM dimensions were estimated freely across the Finnish, Swedish, and Scottish datasets, then compared this to the model where the associations were constrained to equality across the samples. The small group sizes regarding background characteristics prevented us from conducting measurement invariance examinations in terms of the participants' background characteristics prior to the main SEM analyses.

In all the models tested, an acceptable model fit was indicated by a p value $\geq .05$ in the χ^2 test, with the comparative fit index (*CFI*; Bentler, 1990) and the Tucker-Lewis index (*TLI*; Tucker & Lewis, 1973) having values $> .90$, and the root mean square error of approximation (*RMSEA*; Steiger, 1990) and standardized root mean square error (*SRMR*; Hu & Bentler, 1995) having values $< .08$. For the comparison of the nested models in all three research questions, we utilized the Satorra–Bentler χ^2 difference test (Satorra & Bentler, 2001) and changes (Δ) in CFI, TLI, and RMSEA (Chen, 2007). A statistically significant χ^2 difference test would indicate that the freely estimated model had a better fit with the data, whereas a nonsignificant χ^2 difference test would indicate that the more constrained model had a better fit. ΔCFI and ΔTLI $\leq .01$, supplemented with ΔRMSEA $\leq .015$ between the more constrained model and the reference model, would indicate reasonable support for the more constrained model. Pairwise comparisons between the countries in Phases 2 and 3 were conducted via Wald tests.

All the analyses were performed using Mplus software version 8.6 (Muthén & Muthén, 1998-2017). We used a maximum likelihood estimator with robust standard errors, as our variables were skewed. Our variables also included missing values (7.9% for each short PAM item, 11.5% for gender, and 3.3% for work role). The missingness in the data was not missing completely at random (Little's MCAR test result: $\chi^2(44) = 72.19$, $p = .005$). The reason for some of the missingness in the gender variable ($n = 11$) was that we had to treat responses for the option 'other/prefer not to say' as missing in our analyses as there were too few of these responses in two of the country specific data sets so we could not analyse them as a separate group of the gender variable. There were no statistically significant differences in the distributions of the PAM dimensions in terms of how participants had responded to the gender question. As for the work role variable, participants who did not indicate their work role reported fewer opportunities to influence one's work ($M = 2.82$) and to identity negotiations ($M = 3.12$) than participants who had reported their work role (Ms 3.86 and 4.07, respectively). The work role was therefore considered in the analyses related to RQ3. As no other systematic reasons for the missingness could be identified, the missing values were assumed to be missing at random; hence, we were able to utilize the full information maximum likelihood procedure to account for missing data (Enders, 2010).

7. Results

7.1. Structure of short-PAM across Finnish, Swedish, and Scottish school staff

To answer the first research question, we examined whether the three-dimensional structure of short-PAM could be confirmed as equivalent across the Finnish, Swedish, and Scottish participants. The correlations between the short-PAM items are shown in Table 2, and the results of the invariance comparison examinations are shown in Table 3. Our initial configural invariance model fitted the data well, meaning that the basic organization of the short-PAM model was supported in all three countries. However, the modification indices (MI) suggested that the model could be improved by estimating a residual covariance between items 1 ('I can participate in the preparation of matters in my unit') and 3 ('I am heard in matters relating to my own work'), reflecting the *influencing at work* dimension (MI = 16.07 for Scotland). After adding this residual covariance to the model, weak invariance (i.e. equivalence of factor loadings) could be confirmed across the three countries (Table 3, invariance level 2). This suggests that each professional agency item reflects its corresponding professional agency dimension to a similar degree across the three country contexts. In other words, the examination confirms that the participants attach the same meaning attribution to the shortened dimensions of professional agency across the Finnish, Swedish, and Scottish data sets (Putnick & Bornstein, 2016).

Our data did not support strong invariance (i.e. equivalence of item intercepts), as the p value for the χ^2 difference test was statistically significant, and the changes in *CFI* and *TLI* exceeded the acceptable cut-offs (Table 3, invariance level 3a). Closer examination of the sources of misfit revealed that item 9 ('In my work, I can focus on things that interest me'), reflecting the *negotiating professional identity* dimension, contributed most to the misfit, insofar as Finnish staff members (intercept = 3.47) reported fewer opportunities to focus on things that they found interesting compared to Swedish (intercept = 3.73) and Scottish staff members (intercept = 3.79). As no other significant sources of misfit could be found in the strong invariance model, we decided to estimate this parameter freely across the countries. The modified model fitted the data well (invariance level 3b in Table 3), meaning that support for the partial invariance of the item intercepts was obtained. Thus, eight out of the nine items in the short PAM functioned similarly across the three countries, indicating that the staff members in the three countries rated the items similarly, with no systematic measurement bias found by country (Putnick & Bornstein, 2016). In contrast, the results for non-invariant item 9 suggested systematic differences between staff members from the three countries in their manner of responding to the item. The strong invariance results justified the mean comparisons between the three countries regarding the professional agency dimensions (which was the focus of research question 2). However, it should be noted that in the mean comparisons related to the *negotiating professional identity* dimension, the computation of the mean for this dimension was based on only two items that met the strong invariance criteria (i.e. items 7 and 8).

Table 3
Fit index values from the multiple sample tests of measurement invariance over the three countries.

Invariance level		χ^2	*df*	Scaling correction	Model comparison $\Delta\chi^2$ test	*CFI*	*ΔCFI*	*TLI*	*ΔTLI*	*RMSEA* (90% *CI*)	*ΔRMSEA*
1a	None (configural invariance)	117.45***	72	1.15		.967		.950		.073 (.048; .096)	
1b	None (configural invariance) + residual covariance	96.57*	69	1.14		.980		.969		.058 (.026; .084)	
2	Loadings (weak invariance)	107.70*	81	1.15	1b vs. 2: $\Delta\chi^2(12) = 11.40^{ns}$	.981	+.001	.974	+.005	.052 (.020; .077)	−.006
3a	Loadings, intercepts (strong invariance)	141.74***	93	1.12	2 vs. 3a: $\Delta\chi^2(12) = 37.70^{***}$	.965	−.016	.959	−.015	.066 (.043; .870)	+.014
3b	Loadings, intercepts (p. strong invariance)	130.42**	91	1.13	2 vs. 3b: $\Delta\chi^2(10) = 24.79^{**}$	.971	−.010	.966	−.008	.060 (.035; .082)	−.006
4	Loadings, intercepts, residual variances and covariance (p. strict invariance)	154.25**	107	1.18	3b vs. 4: $\Delta\chi^2(16) = 23.64^{ns}$	.966	−.005	.965	−.001	.061 (.038; .081)	+.001
5	Loadings, intercepts, residual variances and covariance, factor means	209.16***	113	1.18	4 vs. 5: $\Delta\chi^2(6) = 49.63^{***}$	.930	−.036	.933	−.032	.084 (.066; .102)	+.023

Note. Δ = difference, p. = partial invariance. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$, ^{ns}non-significant.

As the final step for confirming full factorial invariance, we examined strict invariance (i.e. the equivalence of item residual variances). As suggested by methodologists, the examination focused only on the eight items that met the scalar invariance criteria (Putnick & Bornstein, 2016). This step of the invariance was in fact supported by our data (Table 3, invariance level 4), meaning that the magnitude of unexplained variance (i.e. residual variance) in these items was equivalent across the Finnish, Swedish, and Scottish data.

7.2. Mean differences in professional agency across Finnish, Swedish, and Scottish school staff

Our second research question focused on the mean differences in the dimensions of professional agency across school staff members in Finland, Sweden, and Scotland. The means and standard deviations of the short-PAM dimensions by country are presented in the upper section of Table 2. The means were generally high in all three countries, suggesting that school staff in Finland, Sweden, and Scotland were able to manifest considerable professional agency in their work. However, it is notable that the means were highest in Sweden and lowest in Finland in all three dimensions. There were statistically significant differences between the countries on these levels, as shown by the country comparisons (Table 3, invariance level 5). Pairwise comparisons of the countries revealed differences between them in all three dimensions.

In the areas of *influencing at work* and *identity negotiation*, the Swedish staff members had a higher mean level than the Finnish ($d_{\text{influence}} = 0.79$, $d_{\text{identity}} = 0.62$) and the Scottish staff members ($d_{\text{influence}} = 0.54$, $d_{\text{identity}} = 0.57$). In the area of *influencing at work*, the Finnish and Scottish staff members differed, albeit with marginal significance ($p = .069$; $d_{\text{influence}} = 0.22$), in favour of the Scottish staff members. In the area of *identity negotiation*, no differences were observed between these latter two populations. These results suggest that the Swedish staff members manifested stronger agency in influencing work and negotiating professional identity than did their Finnish and Scottish counterparts. Regarding the second dimension of professional agency – i.e. *participation at work* – the Swedish staff members (Sweden vs. Finland: $d_{\text{participation}} = 1.20$; Sweden vs. Scotland: $d_{\text{participation}} = 0.77$) had the highest mean, and the Finnish staff members (Scotland vs. Finland: ($d_{\text{participation}} = 0.29$) had the lowest mean. Thus, the Swedish staff members manifested stronger agency in active participation and collaboration at work than did the Scottish and Finnish staff members.

7.3. Participants' background characteristics in relation to professional agency

Our third research question involved how the background characteristics of the participants were associated with the manifestations of professional agency, and whether these associations differed between Finland, Sweden, and Scotland. The results are presented in Table 4. Gender was associated with *influencing at work* and *participation at work*. Country-specific inspections revealed that Swedish male participants reported more influencing at work than did Swedish female participants. In the Finnish and Scottish data, gender was not associated with influencing at work. Country comparisons showed that there were no statistically significant differences in the strength of these relationships between the countries, indicating that female and male staff seemed to manifest similar professional agency in the domain of influencing at work. As regards participation, female staff members reported more participation at work than their male colleagues in all three countries. The strength of these country-specific linkages turned out to be equal, indicating that, irrespective of the country context, female staff seemed to have stronger agency in participation at work than their male counterparts. There were no gender differences in negotiating professional identity.

The type of work contract was statistically significantly associated with participation at work, and this linkage differed between countries

Table 4
Dimensions of professional agency in relation to background characteristics of the school staff members in Finland ($n = 104$), Sweden ($n = 76$), and Scotland ($n = 144$).

Background variables	Influencing at work			Participation at work			Negotiating professional identity		
	Finland	Sweden	Scotland	Finland	Sweden	Scotland	Finland	Sweden	Scotland
	β	β	β	β	β	β	β	β	β
Gender									
Female	–	–	–	–	–	–	–	–	–
Male	−0.10	0.19*	−0.17	−0.30**	−0.23°	−0.22**	−0.10	0.03	−0.11
Work contract									
Part-time	–	–	–	–	–	–	–	–	–
Full-time	0.13	0.07	0.03	0.48***[b, c]	0.20[a]	−0.01[a]	0.15	−0.04	0.08
Work experience									
0–5 years	0.15	0.10	−0.09	0.12	0.04	−0.06	0.05	−0.00	−0.07
6–20 years	–	–	–	–	–	–	–	–	–
20+ years	−0.02	−0.15	−0.25°	−0.09	−0.52°	−0.21°	0.18° [b, c]	−0.55**[a, c]	−0.21°[a, b]
Control variable:									
Work role/post									
Assistants	−0.23°	0.03	−0.22°	0.20°	−0.01	−0.03	0.09	0.07	−0.22*
Specialists	0.22*	−0.35*	−0.12	0.14	0.00	0.04	0.11	−0.32*	−0.03
Managers	0.15	0.22**	0.12	0.30**	0.24**	0.12	−0.13	0.10	0.00
Teachers	–	–	–	–	–	–	–	–	–

Note. β = standardized regression coefficient. – Reference group in the analysis. °$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$. The superscript letter indicates that standardized regression coefficients differed significantly between countries ($p < .05$). Reference of the superscript letters: a = Finland, b = Sweden, c = Scotland.

(Table 4). Thus, in the Finnish data, staff working full-time reported more participation at work compared to staff working part-time. In contrast, the type of work contract did not predict staff members' experiences of participation in Sweden and Scotland.

The length of work experience in the current profession was associated with all three dimensions of professional agency, but country-specific differences were found only between staff in their mid-career and staff with over 20 years of work experience (Table 4). A country-specific examination of *influencing at work* showed that the Scottish staff in their mid-careers reported stronger agency in influencing at work than the most experienced staff members. In the Finnish and Swedish data, no association was found between work experience and influencing at work. Regarding *participation at work*, Swedish and Scottish staff in their mid-careers reported more participation at work than staff with over 20 years of work experience, while among the Finnish staff, such a linkage was not found. Country comparisons in both these dimensions of professional agency (i.e. influencing and participating at work) showed that the strength of these relationships was equal across the countries, meaning that irrespective of the country context, staff members with varying years of work experience in the current profession seemed to manifest fairly similar agency in influencing and participating at work.

The length of the work experience in the current profession was also associated with *negotiating professional identity,* and this linkage differed between the countries (Table 4). Swedish and Scottish staff in their mid-careers manifested stronger agency in professional identity negotiation than did staff with the longest work experience. A contrary phenomenon was found in the Finnish sample, in which agency in professional identity negotiation among the most experienced staff members was stronger than that of staff in their mid-careers. The agency of the most experienced school staff members in professional identity negotiation thus varied depending on the country context. Their situation seemed to be strongest in Finland and weakest in Sweden.

8. Discussion

Given the lack of quantitative and comparative professional agency studies in the educational field, we aimed to explore school staff members' professional agency in three countries. The results confirmed a three-dimensional structure of professional agency in each country, indicating that the three shortened dimensions of professional agency have the same meaning for school staff members across the Finnish, Swedish, and Scottish school contexts. The results further indicated that for eight out of the nine items there was no systematic measurement bias between staff members from the three countries (Putnick & Bornstein, 2016). The only notable difference we found concerned item 9 of the *negotiating professional identity* dimension ('In my work, I can focus on things that interest me'). Here, Swedish and Scottish staff members reported more opportunities than their Finnish counterparts in terms of being able to focus on things that they found interesting. From a methodological point of view, this means that the computation of the mean for the *negotiating professional identity* dimension is based on the remaining two items (i.e. 'I can act according to my own values in my work' and 'I can realize my professional goals in my work') in our further mean comparisons across the countries. However, from a substantive point of view, we observed that statement 9 differs slightly from the other two statements, insofar as the latter two directly describe one's enactment of the cores of professional identity (e.g. professional goals), whereas the non-invariant item 9 refers to focusing on things that interest the respondent in a more general way, without directly referring to professional interests. Thus, one could argue that exclusion of the item 9 would make the dimension of negotiating professional identity more internally coherent. However, to our knowledge, this is the first country comparison on professional agency to be assessed by the short-PAM instrument, and we would therefore not at this point recommend exclusion of this item in future studies. It would be preferable to have further research using the full short-PAM instrument (including item 9), including more comprehensive data sets and more countries, to shed more light on the role of the item 9.

The school staff members in all three countries manifested relatively high levels of professional agency in terms of influencing at work, participation at work, and negotiating professional identity. This result is in line with previous studies regarding teachers' professional agency, indicating that they have strong agency in their work. Previous studies have shown that, in general, teachers perceive strong agency, especially in relation to their day-to-day teaching activities (Chaaban & Sawalhi, 2021; Charteris & Smardon, 2015; Yli-Pietilä et al., 2023b). However, previous research has also shown challenges to and limitations in teachers' perceived agency at work, particularly regarding their opportunities to affect structural and administrative-level issues. It has been noted that recent neoliberal policies involving a strengthened accountability culture have limited teachers' possibilities to act and influence at work according to their own beliefs and values (e.g. Holloway & Brass, 2018; Hong et al., 2018). The findings of this study imply that, regardless of these recent policies, school staff members' professional agency remains, in general, relatively high.

In terms of the mean differences in professional agency across the three countries, professional agency was perceived to be highest in Sweden, as compared to Finland and Scotland. Swedish school staff members reported higher levels of influencing at work, participation at work, and negotiating professional identity than their Finnish and Scottish counterparts. Moreover, staff members' professional agency was weakest in Finland in all three dimensions. This finding is somewhat surprising, given that in Finland, the national curriculum and the school policy highlight the notion of teachers as professionals with high-level autonomy in their work (e.g. Niemi et al., 2018). Previous studies have argued for a close relationship and overlap between teacher autonomy and agency (e.g. Erss, 2018; Priestley et al., 2015). It has also been suggested that a certain amount of autonomy is needed to enact agency (e.g. Beijaard et al., 2023) and to implement larger social or school transformations (Chung, 2023). The findings of this study, however, imply that the relationship between teacher autonomy and teacher agency is not straightforward. There is also evidence that strong teacher autonomy can act as a barrier to collective and relational agency – for example, in efforts to develop school cultures and shared new practices. Manninen et al. (2022) found that teachers' pedagogical autonomy formed a barrier in efforts towards collective school development, with teachers wishing to safeguard the prevailing school culture and practices. They concluded that although strong pedagogical autonomy has many advantages, it can also impede school transformations requiring collaborative effort. Our findings underline the complicated relationship between teacher autonomy and agency, and suggest that the dynamics in question require more detailed study.

As in previous studies, one can identify differences and similarities in teachers' agency within different national policies and contexts (Chaaban & Sawalhi, 2021; Oolbekkink-Marchand et al., 2017). The finding that Finnish school staff members have lower agency than staff in Scottish and Swedish schools may be related to recent national challenges in the educational field in Finland. The teaching profession in Finland has traditionally been respected, and teacher attrition has been relatively low. However, this has been changing in recent years, and teachers' well-being at work has been reported to be under threat. Deterioration in well-being appears to have occurred following the implementation (since 2016) of a new national curriculum (Kauppi et al., 2022). In line with this, a survey by the Finnish Trade Union of Education (2021) found that Finnish teachers increasingly experience their as work burdensome and stressful. Previous studies have shown that teachers' professional agency is closely related to their well-being at work (e.g. Sulis et al., 2023; Yli-Pietilä et al., 2024). Our findings may be consistent with indications of school staff members' decreased agency in Finland, related to recent challenges, notably in terms of well-being at work.

This study also examined the associations between school staff members' background characteristics and professional agency, and whether these associations differed across the three countries. We found that in relation to background characteristics, professional agency was manifested fairly similarly over the three countries. However, there were a few interesting differences regarding the dimensions of professional agency. *Gender* was found to have an association with participation at work. In each country, females manifested stronger agency in participation at work than males. In their review, Sabbe and Aelterman (2007) concluded that research on gender difference had not uncovered clear differences between male and female teachers. However, several studies have shown that power is intertwined with the teaching profession through gender; for example, male teachers are more likely to rise to leadership positions and to receive better pay (Nicholson, 2015). Female teachers also appear to collaborate and seek support from their peers more than do their male counterparts (e.g. Mora-Ruano et al., 2018). Furthermore, there are indications that female school leaders tend to favour collaborative and transformational leadership styles (Gil-Espinosa et al., 2024).

Overall, however, the results of professional agency research on gender have been contradictory. Yli-Pietilä et al. (2023b) found that female primary school teachers reported higher agency than male teachers, but other studies have not shown clear evidence of gender differences in professional agency (Heikonen et al., 2017; Pyhältö et al., 2014). Moreover, a study by Vähäsantanen et al. (2020) at university level did not find statistically significant differences between genders in terms of professional agency, including participation. In the present study, we found the result indicating females' stronger agency in participation at work to be worth highlighting, since (i) it covered all three countries, and (ii) is consistent with previous studies indicating gender differences in collaboration and participation among school staff. Both of these aspects suggest possibilities for further research.

Another interesting association was found between *work experience* and all three dimensions of professional agency. Here, the study revealed statistically significant differences between the countries. Qualitative studies have reported that early-career teachers in particular face challenges in terms of professional agency (e.g. Chaaban & Sawalhi, 2021; Eteläpelto et al., 2015). However, some quantitative studies on the professional agency of teachers have found no difference among teachers with regard to their work experience (Heikonen et al., 2017; Pyhältö et al., 2014); moreover, Yli-Pietilä et al. (2023b) found less experienced primary school teachers to be, in fact, more likely to report the highest professional agency. In our data, early-career staff members' professional agency did not differ from mid-career staff members' agency. Indeed, in Sweden and Scotland, the most experienced staff manifested *lower* professional agency than mid-career staff on all three dimensions (influencing, participation, and identity negotiation). By contrast, the Finnish data showed no such association, and the most experienced staff members manifested stronger agency than mid-career staff members in terms of negotiating professional identity. Explanations for these results might point to the desire of school staff members to leave their profession, with concomitant teacher attrition. The issue of teachers leaving their jobs has been a topic of concern in the UK and Sweden. The reported rates of attrition among teachers vary within the existing literature. Nevertheless, it has been estimated that both countries have experienced an attrition rate of approximately 30%–50% over a span of five years (Carlsson et al., 2019). In contrast, Finland exhibits a relatively low rate of teacher attrition (OECD, 2020). According to a recent report on European teachers by the European Commission/EACEA/Eurydice (2021), only Finland and Bosnia and Herzegovina have reported no challenges regarding teachers' willingness to stay in their jobs.

In our data connected to work experience, the professional agency of experienced staff members in Finland was stronger than that of mid-career staff members, especially in *professional identity negotiation*. This implies that Finnish staff members have possibilities to renegotiate their professional selves throughout their careers, and that the most experienced staff members' professional identities are adequately balanced. Previous studies have shown that a realistic and solid professional identity is related to teachers' intention to stay in their profession (Cunningham, 2020; Grillo & Kier, 2021; LaFrance & Rakes, 2022). Although we acknowledge the complex nature of teacher retention and attrition (e.g. Kelchtermans, 2017), our study would suggest that in Finland, the relatively low teacher attrition rate (as compared to Scotland and Sweden) could be related, in part, to the strong agency of experienced staff members in professional identity negotiation. This is by no means to neglect the broader socio-cultural and contextual issues in play. For example, in Finland, the status of the teaching profession is still relatively high, and this factor would tend to support teachers' commitment to the field. This question is multifaceted, and further research will be needed on connections between the agency of staff members in negotiating their professional identity and their willingness to stay in the profession.

9. Limitations, implications and concluding remarks

The study has certain limitations. Firstly, the sample sizes (respondents and schools) were relatively small. Although the amount of data was satisfactory for most of the analyses, concerns arose regarding low statistical power, particularly with regard to *work experience* and the *job title* as background variables. A comparative analysis on the work experience data indicated that Finland and Scotland possessed satisfactory sample sizes, whereas the Swedish dataset was too small to provide meaningful insights. Additionally, due to the limited number of respondents, the role of the job title could not be addressed thoroughly; hence, it was employed merely as a control variable. Previous studies have addressed the tendency of people in management positions to assess their professional agency more strongly than is the case among other personnel (Vähäsantanen et al., 2020). The small group sizes regarding background characteristics also prevented us from conducting more detailed measurement invariance examinations in terms of the participants' background characteristics. Thus, it remains unclear to what extent the dimensions of professional agency vary by school staff members' background characteristics within and between countries.

In addition, the small number of schools precluded us from controlling for the school-level variance, and this could have led to increased Type I (false positive) or Type II (false negative) errors in statistical inference. Nevertheless, the findings indicate variations among different professional groups concerning professional agency, and the study offers some insights into the significance of job titles in shaping the experience of professional agency. Here, one should note the need for future studies to elaborate on the importance of the job title, involving differences in normative power or status, in school staff members' professional agency.

It is also important to note that the data collection was restricted to urban settings and that the numbers of students with an immigrant background were above the national averages. Consequently, it is unclear whether our results can be generalized to schools in more rural areas, which would have fewer students with a migrant background. Finally, our data were collected at one point in time. It allowed us to assess the functionality of the short-PAM among school staff members across three country contexts, but not to draw conclusions about temporal changes in staff members' perceptions of professional agency. Whether similar levels of professional agency continue to be present from one day or one school year to another remains a question for future research.

Researchers largely agree that while agency is context-dependent, certain underlying dimensions related to agency, such as autonomy, the power to affect, and decision-making, are universally relevant (Goller & Paloniemi, 2017). Our findings add to the emerging quantitative evidence on professional agency (Vähäsantanen et al., 2019, 2020, 2022). They serve also to validate the short-PAM measure – here used in three different countries – as a valid and reliable assessment of professional agency, considered as a three-dimensional phenomenon, and covering how individuals have the power to affect issues related to their work and professional identity. It should be noted that previous examinations of short-PAM have provided comparative information across the professional domains of healthcare, real estate services, and IT (Vähäsantanen et al., 2022). Our current findings provide evidence on the short-PAM instrument from yet another professional domain, i.e. education at lower secondary level.

Our findings indicate that professional agency plays an important role in school staff members' experiences in Finland, Sweden, and Scotland. They suggest that cultural and educational contexts tend to shape the levels of professional agency among school staff members. They shed light on gender, work experience, and one's job title as factors influencing the manifestations of professional agency in the school context. However, research is needed to understand more fully the importance of different cultural and political contexts for school staff members' professional agency, and of other background factors that may apply. Overall, the study contributes to the literature on professional agency in educational contexts. It also shows that the short-PAM instrument works in different national contexts and can be utilized as a valid tool in future school agency studies.

CRediT authorship contribution statement

Päivi Hökkä: Writing – review & editing, Writing – original draft, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Eija Räikkönen:** Writing – review & editing, Writing – original draft, Software, Methodology, Formal analysis, Data curation. **Katja Vähäsantanen:** Writing – review & editing, Writing – original draft, Investigation, Funding acquisition, Data curation, Conceptualization. **Marc Sarazin:** Writing – review & editing, Software, Resources, Data curation. **Anna Lund:** Writing – review & editing, Project administration, Investigation, Funding acquisition, Data curation. **Natasa Pantić:** Writing – review & editing, Project administration, Investigation, Funding acquisition, Data curation.

Declaration of competing interest

We declare that there's no financial/personal interest or belief that could affect our objectivity.

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Data availability

Data will be made available on request.

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