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Experienced risk of burnout among teachers with persistent turnover intentions

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ABSTRACT

This study explored the relationship between teacher burnout risk and career turnover intentions. The participants consisted of 313 Finnish comprehensive schoolteachers with persistent turnover intentions in a five-year follow-up. The data consisted of Likert-type statements and one open-ended question. In the latent profile analysis, four burnout profiles, from moderate to high risk of burnout, were identified. More than half of the teachers displayed transient or persistent high risk of burnout. The most frequently experienced burnout symptom was exhaustion, although perceived inadequacy and cynicism were also associated with teacher turnover intentions. Teachers with persistent turnover intentions also experienced burnout symptoms. The reasons teachers gave for their turnover intentions were associated with the different burnout profiles. Teachers experiencing moderate risk of burnout were more likely to report a lack of commitment to the teaching profession as a primary reason for turnover intention, compared to other profiles with a higher risk of burnout.

1. Introduction

Teacher burnout is a chronic psychological syndrome that develops gradually in reaction to prolonged feelings of exhaustion, cynicism and inadequacy (Hakanen, Bakker, and Schaufeli 2006; Maslach, Schaufeli, and Leiter 2001). In comparison to other human relations professions, teachers have been found to experience higher levels of stress. More specifically, they have been found to experience high levels of exhaustion while experiencing lower levels of cynicism and inadequacy in their work (Pietarinen et al. 2013a, 2013b). Burnout symptoms are associated with a defensive coping mechanism, such as escaping from the context perceived as the primary source of stress (Tziner et al. 2015). A body of evidence indicates that burnout is a significant trigger for teacher

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turnover intentions and, further, a determinant of career change (e.g., Goddard and Goddard 2006; Klassen and Chiu 2011; Larrivee 2012; Leung and Lee 2006; Pyhältö, Pietarinen, and Soini 2020). Accordingly, experiencing higher levels of burnout symptoms, including exhaustion, cynicism and inadequacy, puts a teacher at greater risk of leaving the teaching profession. Previous studies also suggest that excessive work demands combined with continuous school reforms (e.g., large-scale educational reforms), introduced within a short period of time with limited resources, rendered an increase in both teacher burnout and teacher turnover intentions (Lasky 2005; Provasnik and Dorfman 2005; Pyhältö, Pietarinen, and Soini 2020).

Teacher burnout and turnover have been identified as global concerns (Glazer 2018; Mojsa-Kaja, Golonga, and Tadeusz 2015; Perrone, Player, and Youngs 2019; Rajendran, Watt, and Richardson 2020). In Finland, where teaching has traditionally been a highly appreciated profession, more than 40% of teachers reported experiencing stress in their work quite or very often (Länsikallio, Kinnunen, and Ilves 2018), and an equal share have reported entertaining turnover intentions (Jokinen, Taajamo, and Välijärvi 2014; Pyhältö, Pietarinen, and Soini 2020). Both teacher burnout and turnover intentions have been found to be cumulative, meaning that prior experiences of emotional exhaustion, cynicism, inadequacy and/or perceived turnover intentions also predict such experiences in the future (Acker 2004; Maslach, Schaufeli, and Leiter 2001; Räsänen et al. 2020; Taris et al. 2016). Moreover, both teacher burnout symptoms and prolonged turnover intentions have similar indirect negative influences on students' well-being, engagement and academic achievements (Gluschkoff 2017; Herman, Hickmon-Rosa, and Reinke 2018; Oberle and Schonert-Reichl 2016; Ronfeldt, Loeb, and Wyckoff 2013). Teacher turnover intention and occupational stress have negative effects on the school's psycho-social environment, where students operate with teachers and peers on a daily basis (Elovainio et al. 2011; Guin 2004). Teacher stress can be contagious, through social interactions and by impairing teacher–student interactions and classroom climate (Guin 2004), and hence has a negative influence on students' study and well-being (Gluschkoff 2017).

Several cross-sectional studies have identified different teacher burnout profiles (e.g., Buonomo, Fatigante, and Fiorilli 2017; Leiter and Maslach 2016; Mäkikangas and Kinnunen 2016) and the link between burnout symptoms and turnover intention (Griffeth, Hom, and Gaertner 2000; Perrone, Player, and Youngs 2019; Schaufeli and Bakker 2004). Moreover, one recent cross-sectional study identified five burnout profiles among Finnish class, subject and special education teacher cohorts. The commonest profile, with a 47% sample share, was a profile with no risk of experiencing burnout (Pyhältö et al. 2020). Teachers belonging to this profile displayed only low levels of exhaustion, inadequacy in teacher–student relationships and cynicism towards the professional community (Pyhältö et al. 2020). However, longitudinal research evidence of the development of different teacher burnout trajectories through time, and especially their relationship with persistent turnover intentions, is still scarce (e.g., Leiter and Maslach 2016). Accordingly, the aim of this study was to bridge the gap in the literature by exploring the relationship between different teacher burnout trajectories, including exhaustion, cynicism towards the professional community and inadequacy in teacher–student interaction, and the primary reason teachers gave for their persistent turnover intentions.

1.1. Teacher burnout

Teacher burnout occurs when work-related demands overcome teachers' resources and abilities to cope adequately, leading them to feel exhaustion, cynicism and/or professional inadequacy in their work (Hakanen, Bakker, and Schaufeli 2006; Maslach, Schaufeli, and Leiter 2001). It is suggested that teacher burnout develops gradually as a result of accumulated positive and negative emotional responses to the perceived (im-)balance between work-related demands and the resources at hand (Montgomery and Rupp 1998–2017; Peeters and Rutte 2005). Teacher burnout results typically from an excessive workload (Adera and Bullock 2010) and/or conflicting demands, leading to emotional exhaustion (Larrivee 2012). The conflicting demands may arise from an effort–reward imbalance (Gluschkoff 2017), dysfunctional school organisational relationships (e.g., a lack of social support) (Capone, Joshanloo, and Park 2019), role conflicts or ambiguities in received work assignments (Maslach, Schaufeli, and Leiter 2001).

Social interrelations play a central role in teachers' work, constituting both resources and demands for teachers. Friction in these significant relationships increases a teacher's risk of developing burnout (Harmsen et al. 2018). For example, numbers of students with behavioural disorders have been found to be related to teacher burnout, especially in perceived emotional exhaustion and inadequacy in teacher–student interaction (Kokkinos 2007; Soini et al. 2019). Inadequacy is a self-evaluative component of burnout, involving an experience of professional inefficacy or reduced professional accomplishment (Hakanen, Bakker, and Schaufeli 2006; Maslach and Leiter 2008). Teachers' perceived inadequacy typically includes perceiving themselves to be underqualified and not doing enough related to teaching and student learning, which is the core of pedagogical work. In turn, teachers and principals have been found to experience cynicism, especially in relation to the professional community (Räsänen et al. 2020).

Emotional exhaustion, which refers to feelings of work overload and fatigue, has also been considered a core component of burnout (Maslach, Schaufeli, and Leiter 2001; Taris et al. 2016). It mediates the relationship between job demands and occupational outcomes (Rajendran, Watt, and Richardson 2020). However, evidence suggests that cynicism involving a distant or negative attitude towards work, students, colleagues or parents may be a more crucial determinant of teacher burnout than increased exhaustion (Hakanen, Bakker, and Schaufeli 2006; Leiter and Maslach 2016; Maslach, Schaufeli, and Leiter 2001). All three symptoms are necessary for understanding teacher burnout (Maslach et al. 2008), which may lead to dysfunctional teacher behaviour, with obvious negative implications for teachers' health (e.g., depression), motivation and organisational commitment (Capone, Joshanloo, and Park 2019; Hakanen, Bakker, and Schaufeli 2006), classroom management and climate (Oberle and Schonert-Reichl 2016), and student outcomes, including students' adaptive behaviours and academic achievement (Herman, Hickmon-Rosa, and Reinke 2018). Moreover, to cope with the imbalanced relationship between demands and resources (i.e. the joint/reciprocal effect of the increased stress and dysfunctional teacher behaviour), teachers may start to entertain persistent career turnover intention as a coping mechanism to tolerate work-related stressors (Billingsley 2004; Huang, Chuang, and Lin 2003). Previous studies have shown that burnout predicted involuntary (e.g., dismissal) or voluntary professional turnover (Chang 2009; Goodman and Boss 2002; Griffeth, Hom, and Gaertner 2000; Perrone, Player, and Youngs 2019;

Schaufeli and Bakker 2004). Although all three burnout symptoms (exhaustion, cynicism and inadequacy) are associated with the intention to quit, emotional exhaustion has been found to be the dominant determinant (Leung and Lee 2006; Skaalvik and Skaalvik 2011). Teachers who report prolonged work-related stress and feeling stressed on a daily or weekly basis are likely to report higher rates of attrition (Billingsley 2004).

However, teachers can be dissatisfied or frustrated with teaching work for many reasons (e.g., school administration, support from colleagues or working conditions), without experiencing burnout symptoms. Accordingly, the intention to leave the teaching profession and experiencing burnout symptoms are separate but partly intertwined constructs (see also Farber 2000), and personality traits, meaning emotional responses to stress and the means to cope with the various stressors, vary among teachers (Kokkinos 2007; Maslach, Schaufeli, and Leiter 2001; Montgomery and Rupp 1998–2017).

1.2. Intention to leave the teaching profession

Previous studies have shown that the intention to leave the teaching profession is a pre-phase and predictor of actual teacher attrition (Clandinin, Downey, and Huber 2009; Griffeth, Hom, and Gaertner 2000; Locke 1968). In other words, the intention to leave arises if a teacher remains in the teaching profession despite a prolonged unresolved imbalance. The turnover intention can be triggered by multiple individual attributes, such as stress or frustration, or by contextual attributes, such as low salary or limited opportunities for professional development (Deangelis, Wall, and Che 2013; Parker 2015; Schaefer, Long, and Clandinin 2012).

Similarly to teacher burnout, the intention to leave the teaching profession also develops gradually. Accordingly, the actual act of quitting may take several months or even years after the first turnover intentions (Acker 2004). The decision to leave the profession typically includes three stages: the intention to leave the current work triggers the intention to consider other careers, which in turn may reinforce the actual decision to quit the current work position (e.g., Billingsley, Carlson, and Klein 2004). Accordingly, the intention to leave the teaching profession converts more probably into actual implementation through reflection, resulting in a concrete plan for turnover (i.e., when, where and how the teacher will carry out the intended turnover) (e.g., Ajzen, Czasch, and Flood 2009; Billingsley et al. 2004).

Previous studies have shown that a teacher's decision to leave the teaching profession is typically preceded by a profound consideration in which they assess their situation, weigh different career options, look for new work opportunities and reflect on the reasons, motives, risks and resources needed to carry out the turnover (Clandinin, Downey, and Huber 2009; Heikonen et al. 2016; Ngo-Henha 2017). In turn, teacher turnover intention reflects attitudes, perceptions and judgements of the teacher towards the work organisation (Ngo-Henha 2017).

However, the intention to leave the teaching profession is not only a major concern in terms of increased teacher attrition. It also has detrimental effects on a teacher's everyday work, for example, by negatively affecting teaching effectiveness (e.g., student outcome, teacher motivation and commitment) and the working culture of the school (e.g., staff morale, team work, reputation, financial and social capital) (Ladd 2011; Ngo-Henha 2017;

Ronfeldt, Loeb, and Wyckoff 2013). Those who have turnover intentions are often the most talented and skilled employees, who are more likely to find alternative employment opportunities (Ngo-Henha 2017).

Moreover, intentions to leave the teaching profession have been found to be relatively persistent, although the primary reasons for turnover intention may vary over time (Räsänen et al. 2020). This indicates that typically, a teacher's turnover intention involves reflecting on different reasons for the potential turnover negotiation process, with different justifications over time. Our previous study showed that the main reasons teachers reported for their turnover intentions were *system-wide school factors*, indicating that they cannot influence their own work (i.e. limited resources, employment contract, low salary and teacher job description or work performance); *challenges of interaction* with school staff, students, parents or educational stakeholders; *lack of commitment* in terms of professional goals, values and personal investments in teaching; perceived heavy *workload*; or *multiple factors* as a combination of the above individual factors (Räsänen et al. 2020). All in all, the reasons for teacher turnover intention typically reflect low job satisfaction (Saeed et al. 2014). In turn, a teacher's perceived overall job satisfaction, meaning their positive affective reaction to their work, has been found to predict a low intention to leave the teaching profession (Skaalvik and Skaalvik 2011).

2. Aim of the study and research context

2.1. Aim of the study

This study aims to gain a better understanding of the relationships between a) the different teacher burnout trajectories among Finnish comprehensive school teachers, including exhaustion, cynicism towards the professional community and inadequacy in teacher–student interaction, and b) the primary reasons teachers gave for persistent turnover intention. Accordingly, the following hypotheses were tested:

H1: Different kinds of teacher profiles can be detected in terms of experienced exhaustion, cynicism towards the professional community and inadequacy in teacher–student interaction (Hultell, Melin, and Gustavsson 2013; Leiter and Maslach 2016; Mojsa-Kaja, Golonga, and Tadeusz 2015; Mäkikangas and Kinnunen 2016).

H2: By focusing on teachers with persistent turnover intentions, we will identify different burnout trajectories with elevated levels of burnout symptoms (Borman and Dowling 2008; Klassen and Chiu 2011; Leung and Lee 2006; O'Brien, Goddard, and Keeffe 2016). These detected profiles may also differ in terms of the changes over time in burnout symptoms (Leiter and Maslach 2016; Maslach and Leiter 2008; Taris et al. 2016).

H3: Teacher burnout profiles differ in terms of the reported primary reason for turnover intention (Liu and Onwuegbuzie 2012; Rajendran, Watt, and Richardson 2020; Räsänen et al. 2020; Skaalvik and Skaalvik 2011). More specifically, the burnout profiles may be differently related to particular reasons (*multiple factors/the school system/challenges of interaction/workload/lack of commitment*) which teachers give for their career turnover intention.

2.2. Research context

Finland does not have an extensive private school system; comprehensive schooling is publicly funded. Comprehensive school (grades 1–9) offers a similar basic education to all children. No separation of students into academic or vocational studies is made during these years. Educational institutions do not have hierarchies based on pay or other forms of appreciation. This means that only a few opportunities exist for career advancement in teaching in Finland.

Primary school teachers complete a five-year university Master of Arts in Education degree, after which they receive a formal qualification to teach grades 1–6. Subject teachers who typically teach grades 7–9 (lower secondary school) usually have a Master's degree in a subject domain, with an additional compulsory one year of study (60 credit points) in educational science. Special education teachers who teach in grades 1–9 have a Master's degree in special education. Nearly all (95%) Finnish teachers are fully qualified (Kumpulainen 2017). The high level of training is considered necessary because teachers in Finland are professionally very autonomous. Principals are required to have a teaching qualification for the level of the school they lead, in addition to having completed a university programme in educational leadership (see Finnish National Agency for Education 2022).

A teacher may extend their teaching qualifications and apply for a teaching position at a higher level of education; a primary school teacher, for example, can become a qualified subject teacher. Some teachers progress to headteacher positions during their careers, and some move on to other educational professions (OECD 2003; Toom and Husu 2016). The age structure of Finnish comprehensive school teachers is relatively high (more than 60% are 50 years old or over), which will increase the number of retirements in the near future (Kumpulainen 2017). The age structure of teachers in Finland is similar to that in many European countries (OECD 2012).

3. Method

3.1. Participants

This study used data collected from Finnish comprehensive school teachers in a national longitudinal survey utilising probability sampling ($N = 6000$). The longitudinal research design included a five-year follow-up with two measurement points (T1 in 2010 $n = 2310$ teachers, and T2 in 2016 $n = 1504$ teachers). The total response rates were 39% (T1) and 65% (T2) (for more details see Pietarinen et al. 2013b; Räsänen et al. 2020).

The criteria for selecting the teachers for this particular study were that they all had persistent turnover intentions (repeatedly reported turnover intentions and responded to the open-ended question at both measurement points). This group ($n = 313$ comprehensive schoolteachers) included primary ($n = 106$; 34%), subject ($n = 115$; 37%) and special education ($n = 92$; 29%) teachers. The mean age of the respondents at T1 was 41 years ($SD = 7.83$; Min/Max: 27/60 years). The majority of the respondents[1] were female ($n = 256$; 82%) and a minority were male ($n = 56$; 18%). All the respondents had MA degrees, and they were at various stages of their careers. The response rates for primary, subject and special education teachers were not biased. The schools in which the teachers worked

varied in terms of size and grades taught. The data on the group of teachers with persistent turnover intentions were examined more closely in order to explore the relationship between teacher burnout and turnover intention, and the primary reasons given for this.

3.2. Measurement instrument

The *Socio-contextual Teacher Burnout* scale draws on both Maslach and Jackson's (1981) burnout scale and Elo, Leppänen, and Jahkola's (2003) single-item stress scale in terms of measuring teachers' perceived exhaustion. The scale was constructed by specifying the social working environment of experienced exhaustion, cynicism and inadequacy. Teacher burnout was measured by (a) exhaustion (three items), (b) cynicism towards the professional community (three items), and (c) inadequacy in teacher–student interaction (three items). All the items were rated on a 7-point Likert-type scale ranging from 1 (*completely disagree*) to 7 (*completely agree*), excluding the stress item, which was rated on a 10-point scale. The items are shown in the Appendix.

Teacher turnover intentions were measured with one item and with an open-ended question: *Have you considered leaving the profession? Yes/No. If you have, what were your reasons?* The one-item measure has been used and validated in prior studies as a reliable measure of teacher turnover intention (e.g., Goddard and Goddard 2006), especially when an open-ended question enables more in-depth reflection of the perceived reasons for personal turnover intentions.

3.3. Data analysis

Teachers' open-ended responses were qualitatively content analysed in five categories which were identified from the data on both measurement occasions: *multiple factors* (T1 44, 14%; T2 53, 17%), disappointment with system-wide factors in *the school system* (T1 68, 22%; T2 77, 25%), *challenges of interaction* in the school's social environment (T1 51, 16%; T2 33, 10.5%), perceived heavy *workload* (T1 72, 23%; T2 64, 20%) and *lack of commitment* to the teaching profession (T1 78, 25%; T2 86, 27.5%) (Räsänen et al. 2020).

Latent profile analysis (LPA) was used to group teachers according to experienced socio-contextual burnout symptoms, which included exhaustion, cynicism towards the professional community and inadequacy in terms of teacher–student interaction. LPA involved grouping individuals into latent classes, based on their observed response pattern in specific variables (Berlin, Williams, and Parra 2014). More specifically, LPA was used in this study to explore the variation in the teachers' burnout symptoms and to examine whether the primary reasons for turnover intentions differed in terms of their profile membership. The analyses were conducted using Mplus statistical package version 8.2 and a robust maximum likelihood estimator, as this produces robust standard errors and chi-square statistics to handle non-normally distributed data (Muthén and Muthén 1998–2017). There were only a few missing values in the data, so the analysis was mostly based on complete cases; nevertheless, the full information estimation was applied. The observed mean scores for the three components of burnout were used as indicators in the

latent profiles. The residuals of the indicator variables were allowed to correlate within classes over time (e.g., exhaustion T1 with exhaustion T2 but not exhaustion T1 with cynicism T1).

Evaluating model fit consisted of specifying mixture models with one to six classes. Several fit indices were used in choosing the final model. Both the statistical and the content criteria were applied to determine the most appropriate number of latent profiles (Nylund, Asparouhov, and Muthén 2007). The mean differences between latent profiles were tested using the Model Constraint command in Mplus.

After identifying the most suitable latent profile solution, the primary reason for turnover intention was added as an auxiliary distal outcome of the latent class variable (see Asparouhov and Muthén 2014) using the DCAT option of Mplus (Lanza, Tan, and Bray 2013; Muthén and Muthén 1998–2017). The DCAT procedure performs equality tests of probabilities across latent classes and provides the odds ratios comparing the probabilities of the reasons for turnover intention between latent profiles.

4. Results

4.1. Selection of the best mixture solution

Akaike (AIC), Bayesian (BIC) and sample-size adjusted Bayesian (aBIC) information criteria were employed to test the goodness-of-fit of the model with the data, with lower values indicating a better fit (see Table 1 for mixture solutions with 1–6 classes). Both AIC and aBIC showed increasing fit with every additional class, whereas BIC indicated increasing fit until class 3 and decreasing fit from classes 4 to 6. The entropy value increased with each additional class, indicating a better fit. However, the bootstrapped likelihood ratio test (BLRT) indicated that adding a fifth or sixth class did not enhance the statistical fit of the model. Moreover, the five-class and six-class solutions included one rather small latent class (fewer than 20 participants). Accordingly, the extraction of more than four classes did not add substantive value.

The entropy value and latent class probabilities were used to evaluate the statistical clarity of different mixture solutions. An entropy statistic of 0.71 was considered adequate, considering the high latent class probabilities for all classes. The probabilities remained high for all classes up to the 4-class solution (0.88, 0.79, 0.78 and 0.87) and decreased slightly for the 5-class solution (see Table 1).

The different solutions were also compared with the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR) and the Lo-Mendell-Rubin adjusted likelihood ratio test (LMR). Statistically significant test results ($p < 0.05$) in the VLMR and BLRT indicated that the 3-class model fitted the data better than four or more classes. However, the entropy was better in the 4-class model than in the 3-class solution. Based on the available statistical criteria, 3- or 4-class mixture solutions were the most acceptable. Accordingly, we selected the 4-class solution, as it provided the most specific insight into the burnout profiles of teachers with persistent turnover intentions.

4.2. Burnout profiles among teachers with persistent turnover intentions

The results showed that the four latent profiles of teachers' burnout reached the best fit with the data. The mean profiles of the four classes are shown in Figure 1.

Table 1. Fit indices and class frequencies for latent profile analyses (LPA) with different number of latent classes.

No of classes	LogL(nf)	AIC	BIC	aBIC	Entropy	Latent class probabilities	VLRM	LMR	BLRT	Class counts (most likely/posterior)[a]
1	−3351.074 (15)	6732.148	6788.341	6740.65	N/A	1.000	N/A	N/A	N/A	313/313
2	−3297.809 (22)	6639.609	6722.025	6652.248	0.657	0.89, 0.91	.0232	.0252	.0000	159,154/163,150
3	−3274.336 (29)	6606.671	6715.311	6623.333	0.685	0.90, 0.84, 0.81	.0341	.0368	.0000	150,83,80/152,77,84
4	**−3258.913 (36)**	**6589.827**	**6724.690**	**6610.509**	**0.707**	**0.88, 0.79, 0.78, 0.87**	**.2641**	**.2727**	**.0000**	**134,35,60,84/138,32,61,82**
5	−3249.616 (43)	6585.232	6746.319	6609.939	0.729	0.85, 0.87, 0.84, 0.79, 0.77	.6384	.6445	.1333	17,128,71,41,56/13,134,72,40,54
6	−3237.228 (50)	6574.457	6761.767	6603.183	0.753	0.87, 0.77, 0.79, 0.89, 0.77, 0.81	.4023	.4065	.4065	11,40,37,121,29,75/11,36,36,124,30,76

Notes: LogL = loglikelihood value, nf = number of free parameters; AIC = Akaike information criterion; BIC = Bayesian information criterion; aBIC = adjusted Bayesian information criterion; VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio test; LMR = Lo-Mendell-Rubin adjusted likelihood ratio test; BLRT = bootstrapped likelihood ratio test. The selected model is in bold typeface.

[a]Class counts are based on estimated posterior probabilities (before slash) and classification of individuals based on their most likely latent class membership. N is 313.
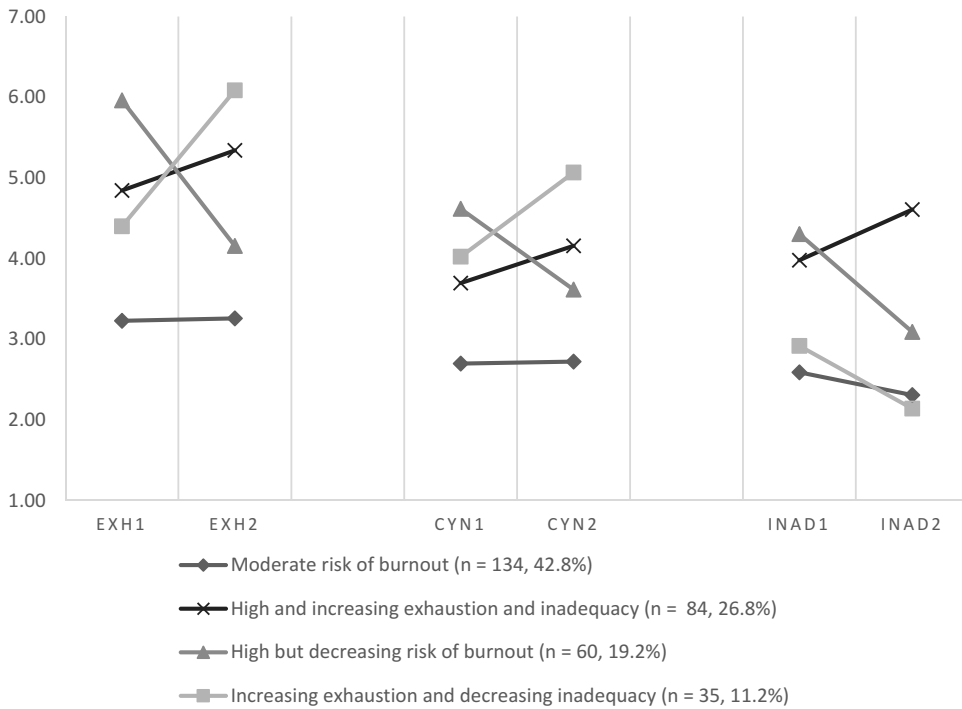
Figure 1. The risk of burnout among teachers with persistent turnover intentions T1–T2: 4 latent classes.

In the first latent profile, *Moderate risk of burnout*, the perceived exhaustion, inadequacy in teacher–student interaction and cynicism towards the professional community were similarly and consistently at a moderate level. This was the commonest profile, with a 43% share ($n = 134$) among teachers with persistent turnover intentions. Cynicism towards the professional community ($p = .884$) and exhaustion ($p = .877$) remained stable, and inadequacy in teacher–student interaction slightly decreased over time (see Table 2). Compared to the other burnout profiles, teachers within this profile experienced statistically lower levels of burnout symptoms, with a few exceptions (see Table 2).

Table 2. Means (and standard errors in parentheses) for teacher burnout symptoms in latent profiles of teacher burnout.

	Moderate risk of burnout	High and increasing exhaustion and inadequacy	High but decreasing risk of burnout	Increasing exhaustion and decreasing inadequacy
Exhaustion T1	3.23 (0.24)[a1]	4.84 (0.23)[b]	5.96 (0.21)	4.40 (0.71)[ab]
Exhaustion T2	3.26 (0.23)[c1]	5.34 (0.19)[de]	4.16 (0.55)[cd]	6.08 (0.34)[e]
Cynicism T1	2.70 (0.13)[2]	3.70 (0.22)[f3]	4.61 (0.35)[g]	4.02 (0.36)[fg4]
Cynicism T2	2.72 (0.16)[2]	4.16 (0.20)[h3]	3.61 (0.31)[h]	5.07 (0.40)[4]
Inadequacy T1	2.59 (0.19)[i]	3.98 (0.18)[j]	4.30 (0.29)[j]	2.92 (0.35)[i]
Inadequacy T2	2.31 (0.10)[k]	4.61 (0.15)	3.09 (0.30)	2.14 (0.18)[k]

Note: Mean differences were calculated using model constraint functions in Mplus, which gives the *p* value based on *z* score. Matching superscript letters after the statistics indicate which group means were similar and did not display statistically significant differences. Letters mark non-significant differences in burnout symptoms between latent groups. Numbers mark non-significant differences in burnout symptoms between time points within each group. All other differences in group means were statistically significant at the $p < 05$ level.

The second latent profile was *High and increasing exhaustion and inadequacy*, including a 27% share (*n* = 84) of teachers with persistent turnover intention. This burnout profile was characterised by high and slightly increasing exhaustion and inadequacy in teacher–student interaction. In turn, the perceived cynicism towards the professional community (*p* = .059) remained stable in this profile over five years.

The third latent profile, *High but decreasing risk of burnout*, represented 19% of the teachers (*n* = 60). Teachers in this profile showed simultaneously high levels of exhaustion, cynicism towards the professional community and inadequacy in teacher–student interaction at T1, and a statistically significant decrease in all these dimensions at T2. Exhaustion was the highest in this profile at T1.

The fourth latent profile was characterised by *Increasing exhaustion and decreasing inadequacy*. Teachers in this profile were highly exhausted already at T1, and this increased strongly over five years. By contrast, perceived inadequacy in teacher–student interaction was at a moderate level and slightly decreased over time. Cynicism towards the professional community (*p* = .072) appeared to increase over time, but the difference was not statistically significant, partly owing to the small group size. This profile represented 11% of the teachers (*n* = 35).

All in all, most of the mean differences in burnout symptoms between profiles that are visible in Figure 1 were statistically significant (see Table 2). The highest averages in the burnout symptoms were in exhaustion, and especially within the profiles. Cynicism towards the professional community remained relatively stable over the five-year period. In comparison, more changes occurred in the experienced exhaustion and inadequacy in teacher–student interaction.

4.3. Differences between burnout profiles in the primary reasons for turnover intentions

The results also showed that the detected burnout profiles differed statistically significantly from each other in terms of the primary reason given for turnover intention (see Table 3). More specifically, teachers belonging to the *High but decreasing risk of burnout* profile had 1.95-fold higher odds of reporting workload as the primary reason for turnover intention at T1 compared with reporting some other reason, such as the school system strain, challenges of interaction in the school community or lack of commitment, in comparison with the teachers in the *Increasing exhaustion and inadequacy* profile. Instead, teachers belonging to the *Moderate risk of burnout* profile had 0.51-fold odds of reporting workload as the primary reason for turnover at T1 than teachers in the *Increasing exhaustion and inadequacy* profile (profile difference *p* < 05).

Moreover, teachers belonging to the *Increasing exhaustion and decreasing inadequacy* profile were more likely (OR = 13.47) to report disappointment with system-wide factors in the school system as the primary reason for turnover intention at T1 in comparison with other burnout profiles.

The results showed that teachers belonging to the *Moderate risk of burnout* profile were more likely to report (OR = 3.60 at T1; OR = 5.86 at T2) lack of commitment to the teaching profession as the primary reason for turnover intention in comparison with other burnout profiles (see Table 3).

Table 3. Odds ratios with 95% confidence interval for the interrelations between primary reason for turnover intention and teacher burnout profile membership.

Burnout profile	Workload		Challenges of interaction		The school system		Lack of commitment		Multiple factors	
	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Moderate risk of burnout	0.51[0.18;1.48] [a*]	0.38 [0.13;1.10] [b+]	0.69 [0.27;1.76]	0.72 [0.20;2.57]	1.26 [0.50;3.22] [e*]	1.62 [0.72;3.66]	3.60 [1.17;11.14] [h*** i*** j*]	5.86 [2.08;16.51] [*** N+ m***]	0.29 [0.09;0.95] [o* p*]	0.21 [0.08;0.55] [r**]
High and increasing exhaustion and inadequacy	1.00 [1.00;1.00]	1.00 [1.00;1.00] [b+ c+]	1.00 [1.00;1.00]	1.00 [1.00;1.00]	1.00 [1.00;1.00] [g*]	1.00 [1.00;1.00] [e+]	1.00 [1.00;1.00] [j* k*]	1.00 [1.00;1.00] [m***]	1.00 [1.00;1.00] [o*]	1.00 [1.00;1.00] [r**]
High but decreasing risk of burnout	1.95 [0.73;5.26] [a*]	1.03 [0.35;2.98] [d+]	1.55 [0.53;4.55]	0.59 [0.09;4.00]	0.75 [0.20;2.85] [f*]	1.49 [0.47;4.69]	0.31 [0.04;2.64] [i**]	2.27 [0.49;10.59] [N+]	1.40 [0.51;3.84] [p* q+]	0.55 [0.17;1.78]
Increasing exhaustion and decreasing inadequacy	0.77 [0.07;8.83]	0.28 [0.19;3.67] [c+ d+]	0.26 [0.00;93.68]	2.43 [0.59;9.95]	13.47 [2.21;82.30] [e** f** g**]	3.47 [1.03;11.64] [e+]	0.13 [0.01;1.50] [h*** k*]	0.75 [0.17;3.33] [i***]	0.23 [0.01;4.60] [q+]	0.41 [0.12;1.44]

Note: Odds ratio, 95% confidence interval in brackets (lower level; upper level) *p < 10; * p < 05; ** p < 01;
*** p < 001. Matching superscript letters after the statistics indicate which group means displayed statistically significant differences.

Teachers belonging to the *Moderate risk of burnout* profile were less likely (OR = 0.29 at T1 and OR = 0.21 at T2) to report multiple factors as the primary reason for turnover intention in comparison to the *High and increasing exhaustion and inadequacy* and *High but decreasing risk of burnout* profiles. In terms of multiple factors as the primary reason for turnover intention at T2, belonging to the *Moderate risk of burnout* profile differed (p = 001) from the *High and increasing exhaustion and inadequacy* profile.

Moreover, the results showed that the odds of belonging to a certain teacher burnout profile did not statistically differ at either measurement point when considering challenges in interaction as the primary reason for turnover intention.

5. Discussion

This study explored the relationship between the different risks of burnout profiles and trajectories among Finnish comprehensive school teachers with persistent turnover intentions. The relationships between the profiles and the primary reasons teachers gave for turnover intentions were studied. Teachers experience high demands, such as multiple conflicting expectations, and frequent changes may give rise to uncertainty, instability and anxiety (Dzhakupov, Madalieva, and Fedorovich 2012), which may further lead to turnover intentions.

The results suggested four burnout profiles with moderate to high risk of burnout. Altogether, 42% of teachers displayed a *Moderate risk of burnout* profile, while more than half displayed momentarily or persistently high risk of burnout. Accordingly, in this study we did not find profiles with no or low risk of burnout among teachers with persistent turnover intentions. Prior cross-sectional research evidence had suggested that a teacher profile with no burnout risk was commonest in the overall teacher population (see, e.g., Pyhältö et al. 2020). Hence, this novel result showed that teachers with persistent turnover intentions are also a specific group of teachers in terms of perceived teacher burnout symptoms. Accordingly, teachers with persistent turnover intentions experienced, on average, higher levels of burnout symptoms, confirming hypothesis H2.

Further investigation showed that burnout symptoms and persistent thoughts of leaving teaching were clearly related. As expected (H1), the detected profiles differed from each other in terms of levels of experienced burnout symptoms (see Table 2). This suggests that the teachers need different kinds of support and interventions in order to avoid burnout (Leiter and Maslach 2016).

The relationships between burnout risk and turnover intentions are also complex. There may be several factors that keep teachers from leaving, and only a single burnout symptom in the specific context of a teacher's work is experienced. Planning to leave teaching after making significant investments in the career is a major decision, which is not taken lightly (see also Struyven and Vanthournout 2014). Entertaining turnover intentions may also provide a coping strategy that keeps a teacher from developing full-blown burnout, but such a strategy may also hinder the teacher's efforts to rectify unsatisfying working conditions.

The results further showed that the teacher burnout profiles differed from each other primarily in terms of the experienced exhaustion and inadequacy in teacher–student interaction (see Table 2). The burnout symptom experienced most frequently by teachers during the follow-up period was exhaustion. This suggests that experienced exhaustion

functions as a driver for the development of burnout symptoms among teachers with persistent turnover intention (see, e.g., Pyhältö et al. 2020; Schaufeli and Salanova 2007). An interesting exception to this was the *increasing exhaustion and decreasing inadequacy* profile trajectory, in which varied patterns of experiencing burnout symptoms occurred. This may indicate that inadequacy in teacher–student interaction develops somewhat independently of other burnout dimensions (see also Pyhältö et al. 2020; Skaalvik and Skaalvik 2017).

The present study also suggested that all three dimensions of burnout were meaningfully associated with teacher turnover intentions, confirming hypothesis H3. A comparison of the primary reasons for turnover intentions across the profiles showed that teachers with the *moderate risk of burnout* profile had a greater probability of reporting lack of commitment as the primary reason for turnover intention compared with other profiles with higher risk of burnout. Although the present study does not prove causal directions, a possible interpretation is that a lack of commitment to the teaching profession may function as a coping strategy buffering the burnout risk. The teachers with a *moderate risk of burnout* reported stable cynicism towards the professional community over the follow-up period, which may cause them to withdraw rather than get involved, thereby further increasing the risk of burnout.

Moreover, in the *increasing exhaustion and decreasing inadequacy* profile, teachers more typically reported system-wide factors in the school system as the primary reason for turnover. It may be that within this profile, teachers are more aware of the demands of societal and educational changes in the school system and what it would take to succeed as a teacher, and feel that their resources are limited in this respect. The profile was also characterised by increasing cynicism towards the professional community, which may result from unsatisfactory collegial relations or teachers' objections to various educational policies and their implementation (Glazer 2018; Pyhältö, Pietarinen, and Salmela-Aro 2011; Räsänen et al. 2020). Interestingly, teachers with a *high but decreasing risk of burnout* profile reported workload as the primary reason for entertaining turnover intentions at T1, whereas five years later the reported primary reason was lack of commitment. At the same time, the risk of burnout decreased. It can be presumed that teachers regulated their burden by distancing themselves from the job demands, thereby reducing their workload.

Our results showed that burnout symptoms are strongly associated with persistent turnover intentions. This implies that it would be important to identify these intentions early on and simultaneously to enhance occupational well-being. Individual variations both in teachers' experienced burnout risk and reasons for turnover intentions were detected. For example, a lack of commitment to the profession in terms of goals, values and personal investments in teaching may be used as a coping strategy against stressful transactions at work. Experiencing burnout symptoms and entertaining turnover intentions may be detrimental to good quality teaching, student–teacher relationships, supporting colleagues, constructing relationships with parents and, ultimately, remaining in the profession to develop instead of leaving. Accordingly, taking measures to prevent this combination would have potentially significant societal advantages. Providing the resources that teachers need to accomplish their work and preserve

their own well-being will benefit students' learning and well-being (Gluschkoff 2017; Herman, Hickmon-Rosa, and Reinke 2018) as well as school development (Imants and Van Der Wal 2020).

6. Methodological reflections

The present study has some limitations. First, the profiles identified represent an interpretation that is dependent on the particular population of this study of Finnish teachers with persistent turnover intentions. One must be cautious of generalising the results to school contexts in other countries or to any country's overall teacher population. Research conducted among different teacher populations is needed. Moreover, even though the sample size was reasonable ($N = 6000$) for longitudinal research, it was not completely representative of Finnish school teachers. More specifically, female teachers (T1: Chi-square 7.220; $p < 05$) were over-represented in the samples at both measurement points. In terms of age, teachers over 50 years old were under-represented (T1: Chi-square 26.942; $p < 001$ and T2: Chi-square 11.777; $p < 01$) in the samples at both measurement points.

However, the person-based approach adopted in this study could identify developmental changes in the dimensions of burnout, whereas the results from longitudinal studies using a variable-based approach could even out the changes in dimensions and indicate the stability of burnout (e.g., Hultell, Melin, and Gustavsson 2013; Taris et al. 2016). The approach made it possible to account for the inter-individual variation by extracting latent burnout profiles among Finnish teachers. Even so, it is important to note that the results may be specific to the five-year time interval used in the study. Changes in burnout symptoms will not develop in only one direction, as was shown in this study, and the time between the two measurement points might have hidden variations in burnout symptoms. Accordingly, further research is needed, with more measurement points, to explore whether these symptoms vary over shorter time intervals.

Note

1. There was one missing value in gender variable.

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Appendix

Scales and items of teacher burnout (translated from Finnish)

Scales and items*

1. **Exhaustion (EXH) (3 items)**

EXH11[1]: Stress means a situation in which a person feels tense, restless, nervous or anxious or is unable to sleep at night because his/her mind is troubled all the time. Do you feel this kind of work-related stress?

EXH12: I feel burnt out.

EXH13: With this work pace, I don't think I'll make it to retirement age.

2. **Cynicism towards the teacher community (CYN) (3 items)**

CYN21 I'm disappointed in our teacher community's ways of handling our shared affairs.

CYN22 In spite of several efforts to develop the working habits of our teacher community they haven't really changed.

CYN23 I often feel like an outsider in my work community.

3. **Inadequacy in teacher–pupil interaction (INAD) (3 items)**

INAD31 The challenging pupils make me question my abilities as a teacher.

INAD32 I often feel I have failed in my work with pupils.

INAD33 Dealing with problem situations considering my pupils often upsets me.

*Item scale: completely disagree – 1 2 3 4 5 6 7 – completely agree.

[1] Except for item EXH11, which was measured on a 10-point scale from 1 = *not at all* to 10 = *very much*