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Running Head: Teacher Burnout

Predictors and Outcomes of Teachers' Burnout Trajectories over a Seven-Year Period

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Abstract

This research examines burnout trajectories over seven years (Time 1 and four months, eight months, and seven years after Time 1) among a sample of 951 teachers. Our results revealed three profiles of teachers presenting a *Moderate* (moderate levels that slightly decreased), *Low* (low levels that slightly increased), and *High* (high levels that slightly decreased) burnout trajectories. These profiles were found to be associated with predictors (self-efficacy, students' inattention, and principal's negative leadership) and outcomes (intentions to leave, somatization, sedatives, sleeping pills, and physical activity). These results thus documented the implications of these profiles, and potential levers of intervention.

Keywords: Burnout trajectories; growth mixture analyses; teachers; self-efficacy; lifestyle habits; intentions to leave; bifactor models.

Burnout, as a chronic psychological state of resource depletion, is highly prevalent among teachers (Schaufeli & Enzmann, 1998). Whereas between 5 to 30 percent of teachers will eventually report burnout symptoms (García-Carmona et al., 2019; Hakanen et al., 2006), Canadian estimates suggest that these symptoms are experienced, at least once a week, by 20 percent of them (Vlasie, 2021). When compared to other professions (e.g., nurses, mental health professionals), teachers have been found to show more signs of ill-being (Johnson et al., 2005), including burnout (Schaufeli et al., 2009). Presumably, the relational nature of teaching puts them at higher risk for emotional drainage, which could explain their vulnerability to burnout. Burnout is known to hinder individual and organizational (e.g., somatization, turnover; Halbesleben & Buckley, 2004) functioning in a way interfere with the accomplishment of the school's educational mission (Chang, 2009). In line with these observations, increasing attrition rates have been reported among US teachers (Carver-Thomas & Darling-Hammond, 2017), making burnout an increasing concern for schools (von der Embse et al., 2016).

Burnout is a psychological syndrome encompassing emotional exhaustion (i.e., depletion of physical energy and fatigue), depersonalization (i.e., excessively detached or negative responses to others), and a reduced sense of personal accomplishment (i.e., feelings of reduced work productivity and achievement) (Maslach & Jackson, 1986). However, workers also tend to experience burnout holistically as a single global dimension (Schaufeli & Enzmann, 1998). This global representation is supported by high correlations among burnout dimensions (Maslach et al., 2001), and stronger relations with covariates when burnout is defined globally (Shirom & Melamed, 2006).

Although burnout is a dynamic process unfolding over time (Dunford et al., 2012), few investigations have adopted a longitudinal perspective to understand the burnout trajectories most typically observed in the work context (Mäkikangas & Kinnunen, 2016), particularly among teachers. The current research contributes to burnout research in two manners. First, we rely on person-centered analyses (growth mixture modeling, GMM) to identify the distinct shape taken by teachers' burnout trajectories over seven years. Second, we document the theoretical and practical underpinnings of these trajectories by examining their links with individual and work-related predictors and outcomes.

Thus, a major contribution of this study lies in the adoption of a longitudinal design, allowing us to clarify how teachers' burnout evolves over the course of a seven-year period, and to examine their

predictors and outcomes. On the one hand, and matching the design used in many previous studies (see Mäkikangas & Kinnunen, 2016), data was collected three times during the first year of the study (with four-month intervals) to examine the short-term trajectories of teachers' burnout. However, to obtain a more accurate understanding of the longer-term development of burnout (Mäkikangas et al., 2020), we also capitalized from a research opportunity allowing us to follow up all participants seven years after the first data collection. This design allows us to achieve a greater level of precision through the simultaneous consideration of teachers' short- and long-term trajectories of burnout, and to achieve a more accurate understanding of long-term trajectories by allowing us to capitalize on a baseline assessment covering three measurement points collected at four-month intervals. Moreover, this approach also made it possible to consider short- (involving the initial measurement points) and long- (involving the whole trajectories) associations between these trajectories, their predictors, and their outcomes. Consequently, our results are likely to improve our understanding of the psychological mechanisms at play in burnout development, leading to more focused interventions specific to the teaching profession. For instance, based on the present findings, we might suggest interventions aiming to decrease teachers' burnout by nurturing teachers' self-efficacy, which in turn should contribute to reduce their intentions to leave the occupation and facilitate their well-being.

A Longitudinal Investigation

Numerous studies on burnout, including research specifically focused on teachers, have adopted cross-sectional designs or limited longitudinal designs (i.e., two measurement occasions; e.g., Author, 2014, 2018) precluding the analysis of burnout trajectories (Mäkikangas et al., 2020). To inform this issue, more intensive longitudinal investigations are necessary (i.e., three or more measurement occasions). This relative dearth of longitudinal research is critical when considering burnout, which represents a contextual, domain-specific, construct (Maslach et al., 2001). Furthermore, Mäkikangas et al.'s (2020) recently showed that burnout levels fluctuated over time and across among white-collar professionals.

Previous Longitudinal Evidence

To better grasp the longitudinal dynamics of burnout, estimates of rank-order stability provide a first source of evidence. For instance, Frögéli et al. (2019) obtained a moderately high level of rank-

order stability ($r = .72$) over a three-year period (see Kinnunen et al., 2019 for similar estimates over one and two years). Madigan et al. (2015) also reported slightly higher estimates of rank-order stability ($r = .78$) over a three-month period, consistent with the idea that burnout is more stable over a short period of time (Maslach & Leiter, 2008). Importantly, observing moderately high estimates of rank-order stability is not inconsistent with the idea that burnout levels might be impacted by work conditions which are themselves known to be quite stable over time (Lesener et al., 2019).

A second source of evidence comes from studies examining longitudinal burnout trajectories, which also supported the stability of burnout levels over time (e.g., May et al., 2020; Wang et al., 2015). However, just like estimates of rank-order stability, these average trajectories may mask substantial inter-individual heterogeneity (Mäkikangas & Kinnunen, 2016). Prior studies have thus adopted a person-centered approach to better understand the presence of inter-individual heterogeneity in the shape of burnout trajectories. Generally, these studies have relied on a maximum of three measurement occasions separated by a typical time lag of one or two years (Mäkikangas & Kinnunen, 2016). These studies have also most typically considered early career employees among different occupational groups (e.g., managers: Mäkikangas et al., 2012). In terms of results, these studies have identified solutions including three to eight profiles (e.g., Hultell et al., 2013; Mäkikangas et al., 2020), many of which were characterized by stable low, moderate or high levels of burnout, although profiles characterized by linear (decreasing or increasing) and curvilinear (U-shaped or reverse U-shaped) trajectories were identified. By showcasing the presence of distinct profiles of employees characterized by qualitatively different burnout trajectories, these studies support the idea that the moderately high levels of stability typically related to burnout levels might hide the presence of significant developmental heterogeneity. However, these results also show that many of these heterogenous profiles themselves generally tended to display relatively stable burnout trajectories (e.g., 3/4 of the managers in Mäkikangas et al., 2012), although trajectories characterized by longitudinal trends (i.e., increasing, decreasing, or curvilinear) can also happen, especially in longer-term studies (Mäkikangas & Kinnunen, 2016).

Longitudinal Heterogeneity in Teachers' Burnout Trajectories

Despite their interest, these prior studies present some noteworthy limitations. First, very little

research has focused on the burnout trajectories, their predictors, and their outcomes among samples of teachers. To our knowledge, a single study has specifically sought to uncover the distinct profiles taken by burnout trajectories among a sample of new teachers followed during their first three years of employment (Hultell et al., 2013). This study revealed that seven trajectories were required to achieve a comprehensive representation of teachers' burnout. However, the generalizability of these findings remains limited as these authors adopted a highly restrictive analytic parameterization, coupled with the reliance on an analytic model that essentially ignored the time-related dependencies present in the data (e.g., Bauer & Curran, 2003; Author, 2011). In addition, this study remains unable to inform the nature of teachers' burnout trajectories beyond this initial three-year period.

Second, little research has specifically sought to document the role played by work characteristics on the time-structured evolution of employees' burnout trajectories. Furthermore, the few studies in which efforts were made in this direction (Lee & Eissenstat, 2018; Mäkikangas et al., 2020) remained limited by their consideration of very generic work characteristics. Thus, despite their interest, these studies are unable to inform the development of interventions accounting for the specific reality of unique occupational groups, such as teachers (Author, 2012).

Third, although we have theoretical reasons (Maslach et al., 2001) to expect burnout trajectories to play a role in teachers' intentions to leave their profession and lifestyle habits (e.g., amount of physical activity), empirical evidence is currently lacking in this regard. Once again, Hultell et al. (2013) provided evidence showing that burnout trajectories were significantly related to teachers' self-efficacy, intentions to leave, and self-rated health during their first three years of employment, thus leaving as an open question whether similar associations would be maintained over time among more experienced teachers.

These limitations are addressed in the present research by focusing on teachers who completed a series of measures over a total of four measurement waves spanning seven years. Furthermore, rather than relying on restrictive methodological approaches (Hultell et al., 2013) the current research relies on a person-centered extension of latent curve models (Bollen & Curran, 2006), GMM. This approach makes it possible to identify population heterogeneity via the identification of distinct profiles of participants, each characterized by inter-individual variability and following qualitatively distinct

longitudinal trajectories. Due to the limited number of previous studies able to offer theoretical or empirical guidance, it is difficult to provide clear expectations concerning the expected number and nature of the burnout trajectories which will be observed over time. However, in line with the findings reported above, we formulate the following hypothesis:

Hypothesis 1. We expect to identify one Low trajectory characterized by stable levels of burnout over time, one High trajectory characterized by stable levels of burnout over time, one Low-Increasing trajectory characterized by initially low levels of burnout that increase over time, and one High-Decreasing trajectory characterized by initially high levels of burnout that decrease over time. However, other qualitatively and quantitatively distinct burnout trajectories are also likely.

The present study also addresses the aforementioned limitations by seeking to better document the role played by a series of demographic, individual, and work environment predictors of these burnout trajectories embedded in the teaching context (Kofler et al., 2008). Finally, this research aims to improve our understanding of the implications of these burnout trajectories in relation to a variety of work-related and personal outcomes.

Predictors of Teachers' Burnout Trajectories

Self-efficacy refers to one's confidence in having the abilities required to handle job-specific tasks and to cope with work-related challenges, stress, and their consequences (Klassen et al., 2011; Tschannen-Moran & Hoy, 2001). Teachers' self-efficacy is assumed to influence how job-specific resources and hindrances are perceived and acted upon, and thus to act as a potentially important predictor of more desirable burnout trajectories (Aloe et al., 2014a; Skaalvik & Skaalvik, 2017). More precisely, teachers confident in their abilities to successfully perform classroom management tasks should be more likely to experience a feeling of competence and mastery, which should decrease their risk of experiencing undesirable (high and/or increasing) burnout trajectories (Cherniss, 1993).

Because teacher efficacy is viewed as context- and task-specific (Tschannen-Moran & Hoy, 2001), we decided to focus on classroom discipline efficacy. This construct refers to teachers' ability to control classroom discipline and student behavior calmly and effectively (Friedman, 2003) and has been found to be important for preventing burnout (Aloe et al., 2014a). Although other aspects of teachers' efficacy (e.g., maintaining structure, demonstrating warmth, supporting learning) are also

likely to be highly important for teachers, numerous studies have shown that classroom discipline represents a significant concern for educational systems and a critical aspect of an effective learning environment (Kaufmann, 2020; Lopes & Oliveira, 2022). Moreover, teachers simply cannot ignore classroom misbehavior and discipline, as doing so will automatically interfere with all other aspects of their classroom behaviors and might even trigger a domino effect by communicating to students that such behaviors are acceptable (Scherzinger & Wettstein 2019). As a non-ignorable component of their work, and one that is often seen that taking time away from the more meaningful learning activities, classroom discipline can be conceptualized as a job demand for teachers, and thus as a likely driver of burnout (e.g., Bottiani et al., 2019). For this reason, teachers' perceptions of their efficacy in this domain are likely to be important in helping teachers avoid the development of problematic levels of burnout (e.g., Aloe et al., 2014a; Friedman, 2003).

Students' misconduct and lack of attention in the classroom are frequently reported as one of the top daily challenges faced by teachers (Aloe et al., 2014b). In the current research, we consider students' inattention in the classroom given substantial evidence that inattentive behaviors impair teachers' ability to focus on relevant aspects of their environment (Kofler et al., 2008). Indeed, students' inattention in the classroom is a form of misconduct which can arguably be considered as a factor impacting teachers' self-efficacy in their role as educators whose role is to nurture and maintain students' interest for learning. In accordance with social cognitive theory (SCT; Bandura, 1997), students' lack of attention in class has been found to increase the risk of teacher burnout (Friedman, 1995).

Finally, school principals have a key role both in developing collaborative school cultures and supporting teachers (Assunção Flores & Day, 2006). Moreover, principals can play an important role in the prediction, and prevention, of teacher burnout (Benita et al., 2019; Leithwood et al., 1996). Of directed relevance to the present investigation, principals' negative leadership behaviors (e.g., controlling, depreciative, laissez-faire) have been shown to have a detrimental effect on teachers' burnout (Eyal & Roth, 2011; Slemp et al., 2020). In prior studies, these leadership behaviors have been found to be closely related, forming a unitary leadership construct (Author, 2008, 2012). These behaviors can be oppressive, vindictive, and capricious, making them a high source of strain for

exposed teachers by interfering with teachers' sense of agency and self-efficacy (Bandura, 1997).

Based on previous evidence, we thus propose:

Hypothesis 2. Teachers' self-efficacy (initial levels and increases over time in these levels) is associated with profiles characterized by lower initial levels of burnout, and by stable or decreasing levels of burnout over time.

Hypothesis 3. Teachers' perceptions of students' inattention and of principals' negative leadership behaviors efficacy (initial levels and increases over time in these levels) are associated with profiles characterized by higher initial levels of burnout, and by stable or increasing levels of burnout over time.

Outcomes of Burnout Trajectories

Finally, we focus on the associations between teachers' burnout trajectories and one key indicator of professional dissatisfaction (i.e., intentions to leave) as well as various indicators of overall functioning in life (i.e., somatization, sedatives and sleeping pills consumption, and involvement in physical activity), all known to be intimately associated with burnout. The decision to focus on teachers' intentions to leave is predicated on the recognition that these intentions often accompany burnout (Author, 2015) and act as a core driver of voluntary turnover in various organizational settings (Rubenstein et al., 2018). Our decision to focus on somatic manifestations and the often associated use of sedatives and sleeping pills was predicated on the frequent observation that burnout is accompanied by a variety of health-related difficulties (Goering et al., 2017; van der Doef et al., 2012).

Interestingly, teachers suffering from burnout also tended to go to bed earlier and wake up later (Kawamata et al., 2020). Conversely, involvement in physical activity is known to share negative associations with burnout (Gerber et al., 2020). Following from these considerations, we propose:

Hypothesis 4. Profiles with higher initial levels of burnout and with stable or increasing burnout levels over time are associated with higher and increasing levels of somatization, intentions to leave, and sedatives and sleeping pills consumption over time, as well as with lower and decreasing levels of involvement in physical activity.

Hypothesis 5. Profiles with lower initial levels of burnout and with stable or decreasing burnout levels over time are associated with lower and decreasing levels of somatization, intentions to

leave, and sedatives and sleeping pills consumption over time, as well as with higher and increasing levels of involvement in physical activity.

Method

Procedure and Sample

This investigation was conducted among a sample of 951 French-Canadian public school teachers (elementary: 59.6%, high school: 24.9%, adults: 5.2%, and vocational: 9.8% education) from the Canadian province of Quebec who were followed over a seven-year period. They had a mean age of 42.3 years ($SD = 10.3$) and 14.9 years ($SD = 10.3$) of experience in teaching. Most worked full-time (77.0%) in a permanent position (76.3%) and were mostly women (76.2%). Data was collected four times (T1, T2: Four months after T1; T3: Eight months after T1; and T4: Seven years after T1).

At the start of the school year (T1), all teachers from two school boards received a letter in their pigeonhole explaining the goal of the research, the voluntary nature of the study, and the confidentiality of their responses. This package also included a pre-addressed return envelope and the questionnaire. Participants were informed that this was a longitudinal study and that they would be contacted to complete the same questionnaire at the three other time points. Interested participants had to provide their coordinates for the follow-up contacts.

Measures

All measures in the questionnaire, which were either originally developed in French, or previously validated in French, were administered in French at each time point. Validity and reliability of the French–Canadian version of these measures are similar to those of the original version and have been supported in prior studies (Author, 2008, 2012, 2015, 2016).

Burnout. Emotional exhaustion (nine items; e.g., “I feel emotionally drained from my work”; α between .89 and .93) and depersonalization (five items; e.g., “I’ve become more callous toward people since I took this job”; α between .67 and .77), which form the core components of burnout across conceptualizations (Kalliath et al., 2000; Schaufeli & Salanova, 2007), were measured using the Maslach Burnout Inventory (Maslach & Jackson, 1986; French version by Dion & Tessier, 1994). Indeed, researchers have shown that a two-factor model including only emotional exhaustion and depersonalization was more appropriate, based on methodological and conceptual rationales (Kalliath

et al., 2000; Author, 2022). For instance, Author (2021) reported moderately high positive correlations between depersonalization and emotional exhaustion ($r = .51$), but an almost null correlation with reduced sense of accomplishment ($r = -.02$ to $-.03$), consistent with the idea that this third component of burnout is conceptually distinct (also see Hawrot et al., 2017; Lee & Ashforth, 1996; Szigei et al., 2017). This is consistent with the original definition of burnout that only included the two core symptoms of emotional exhaustion and depersonalization (Hakanen & Schaufeli, 2012; Maslach, 1993), and the observation that accomplishment remains unaffected for many burned-out employees (Schaufeli et al., 2001). More generally, numerous studies have questioned the validity of reduced sense of accomplishment as a third burnout dimension because it could rather reflect a personal characteristic (Cordes & Dougherty, 1993) or an outcome of burnout (Kim & Burić, 2020). Excluding this last component from the present study was also deemed necessary to avoid conceptual overlap between our measure of burnout and one of its theoretical predictors (self-efficacy). Responses were provided on a 0 (never) to 6 (daily) scale.

Teacher self-efficacy. The discipline subscale of the Classroom and School Context Teacher Self-Efficacy Scale (Friedman, 2003; French version by Author, 2005) was used to measure teacher self-efficacy (three items; e.g., “I believe I easily overcome student interruptions in class”; α between .76 and .84 at T4). Responses were provided on a 1 (never) to 6 (always) scale.

Students’ inattention. Teachers’ ratings of students’ inattention (eight items; e.g., “Students in my class are indifferent, and I have to work hard to get them interested”; α between .71 and .87) were assessed using the Pupil Behavior Patterns Scale (Friedman, 1995; French version by Author, 2012). Responses were provided on a 1 (never) to 4 (very often) scale.

Principal’s negative leadership behaviors. Teachers reported their perceptions of their principal’s leadership behaviors using three items adapted from the Supervisory Style Inventory (Blais et al., 1991; originally developed in French). The items used in this study focus on negative leadership behaviors (laissez-faire, depreciative, and controlling; e.g., “I am very closely monitored by my school principal” [controlling]; α between .66 and .71)¹. Responses were provided on a 1 (do not agree at all)

¹ Although these values are within the lowest range of acceptability, it is important to mention that they are based on only three items each. Knowing that reliability is negatively impacted by the number of items forming a

to 7 (agree very strongly) scale. This measure has been found to be valid and reliable in assessing teachers' perceptions of leadership across cultures (Author, 2008, 2012; Levesque et al. 2004).

Intentions to leave. Teachers' intentions to leave their current job were assessed using three items (O'Driscoll & Beehr, 1994; French version by Author, 2015; e.g., "I'm thinking about leaving my job"; α between .84 and .85) rated on 1 (strongly disagree) to 7 (strongly agree) scale.

Somatization. Somatization was assessed with six items (e.g. "Faintness or dizziness"; α between .75 and .79) from the somatization subscale of the Brief Symptom Inventory (Derogatis & Melisaratos, 1983; French version by Fortin & Coutu-Wakulczyk, 1985). Responses were provided on a 0 (not at all) to 4 (excessively) scale in reference to the past week (seven days).

Lifestyle habits. Teachers were asked to indicate the total number of sedative and sleeping pills taken in the past week (seven days), as well as the number of hours they spend physically exercising over the same period of time (one week).

Analyses

Preliminary Measurement Models

The burnout trajectories, as well as their associations with the predictors and outcomes, were estimated using factor scores (providing a partial correction for unreliability) obtained as part of preliminary measurement models (in which their measurement invariance was established; Millsap, 2011). For the burnout measure, these factor scores were: (a) taken from a bifactor measurement model to simultaneously assess respondents' global burnout levels (G-factor), while taking into account the specificity of each burnout subscale (e.g., Doherty et al., 2020); and (b) estimated in standardized units ($M = 0$, $SD = 1$) to simplify interpretations. In contrast, for the predictor and outcome variables, factor scores were taken from more typical correlated factors models while retaining their natural measurement units (to ensure consistency with the single indicator outcome measures). Details on these preliminary analyses, their longitudinal invariance, factor correlations, and reliability estimates can be consulted in the online supplements.

scale (e.g., Streiner, 2003), it is noteworthy that these coefficients would be higher if they were based on a larger number of items. This observation reinforces the importance of relying on an approach providing a way to achieve some level of correction for unreliability in the estimation of the GMM models, such as our reliance on factor scores (partially controlled for unreliability) in the present study.

Growth Mixture Models (GMM)

All analyses were conducted using Mplus 8.4 (Muthén & Muthén, 2019) using the robust maximum likelihood robust (MLR) estimator. Models were estimated using 6000 random start values, 1000 iterations, 500 second stage optimizations, and 100 final optimizations (Hipp & Bauer, 2006). Missing responses were handled using Full Information Maximum Likelihood (FIML; e.g., Enders, 2010): 951 teachers provided 2297 occasion-specific ratings (with an average of 2.42 occasion-specific ratings by participant), and 141 participants (14.83 %) completing all four time points, 389 (40.90 %) completing three time points, 146 (15.35 %) completing two time points, and 275 (28.92 %) completing a single time point. Missing responses were very rare among participants within each occasion of measurement (0% to 1.0% across items at T1 to T4). Attrition analyses revealed a small, but statistically significant correlations between age ($r = .188$), tenure ($r = .205$), and number of children at home ($r = -.135$) and the likelihood of being lost to attrition at the last time point (later analyses confirmed that none of these variables played a role in profile prediction). None of the other variables considered in the present study (including earlier burnout levels measured at T1-T3) were associated with the likelihood of attrition.

Linear² GMM including one to five (solutions stopped converging or converged on improper solutions after this point) global burnout trajectories were contrasted. In linear GMM, repeated measures are summarized via random intercepts and random slope factors. The random intercept factor reflects the initial level of the trajectories (the occasion-specific measures are linked to this factor by loadings of 1). The random slope factor reflects the rate of change of these trajectories as a function of time (the occasion-specific measures are linked to this factor by loadings reflecting the passage of time in yearly units). In the current investigation, loadings on the slope factor were fixed to a value of 0 (T1: Initial level), .3 (T2: Four months after T1), .6 (T3: Eight months after T1), and 7 (T4: Seven years after T1)³.

² To verify whether burnout dynamics could differ over the short- and long-term, we considered alternative solutions relying on a quadratic (curvilinear) or latent basis (non-linear) parameterization. However, none of these alternative solutions resulted in profiles displaying evidence of curvilinearity or non-linearity.

³ When participants differ on more than one time metric (such as occasion of measurement, tenure, or age), it remains adequate to rely on uniform time codes when (Mehta & West, 2000): (1) the regression of the slope on the other metric is equal to zero; and (2) the regression of the intercept on the other metric is equal to the slope.

Ideally, all parameters (intercepts and slope means, intercept and slope variance-covariance, and time-specific residuals) should be freely estimated across profiles (Author, 2011, 2016). However, this free estimation often results in improper solutions or fails to converge due to overparameterization (Author, 2016), which supports the need to rely on simpler models (e.g., Bauer & Curran, 2003). When this happens, as in the present study, equality constraints should be progressively implemented across profiles (Author, 2016). We were able to allow the means, variance, and covariance of the intercept and slope factors defining the trajectories, as well as the time-specific residuals of these trajectories, to vary across profiles. We had, however, to constrain the time-specific residuals to equality over time (homoscedasticity) based on the traditional multilevel operationalization of growth models (Li & Hser, 2011). The process used to select the optimal number of profiles is described in Section 1 of the online supplements.

Predictors and Outcomes. Predictors and outcomes were integrated to the final solution. In this study, predictors and outcomes were also specified as factor scores reflecting their longitudinal trajectories, saved from preliminary latent curve models (following a method proposed by Author, 2011). These factor scores thus reflect the intercept (initial level at T1), linear slope (rate of change per year), and quadratic slope (reflecting curvilinear trends). An intercept-only model (reflecting stable trajectories) was retained for sleeping pills consumption and involvement in physical activity, a linear (intercept and linear slope) model was retained for teachers' self-efficacy, intentions to leave, and sedative consumption, and a quadratic model (intercept, linear slope, and quadratic slope) was retained for students' inattention, principals' negative leadership behaviors, and teachers' somatization. Details on the preliminary analyses are described in Section 1 of the online supplements.

In a second step, a similar sequence of models was estimated to verify the role played by the linear slope of the predictors' trajectories, starting from the model retained in the first step. More precisely, we verified whether these linear slopes (reflecting changes over time in predictor levels) could predict profile membership and the slope of the burnout trajectories in a way that was identical, or differed, across profiles. Finally, a third set of models was estimated to verify whether the quadratic slopes of the predictor trajectories played a role in the prediction of burnout trajectories beyond the role already

Both conditions were met for age and tenure.

played by the intercept and linear slopes. More precisely, we verified whether these quadratic slopes could predict profile membership and the slope of the burnout trajectories in a way that was identical, or differed, across profiles. These alternative models were contrasted using the aforementioned information criteria (where a lower value indicates a better model fit; Author, 2016, 2017).

Outcomes levels were finally contrasted across profiles using then Mplus' Auxiliary (DCON) function (Asparouhov & Muthén, 2014; Lanza et al., 2013). This approach makes it possible to compare the profiles, defined in a probabilistic manner, in relation to a variety of outcomes.

Results

Unconditional Models

Hypothesis 1 stated that qualitatively and quantitatively distinct burnout trajectories would be identified in this study, and more specifically expected Low-Stable, Low-Increasing, High-Stable, and High-Decreasing trajectories. The results supported a three-profile solution (see Section 2 and Table S9 of the online supplements for details on this selection). This solution is illustrated in Figure 1, and had a moderate to high classification accuracy, ranging from 59.7% to 93.7% across profiles and matching the moderate entropy value (.641). Specific parameter estimates from this solution are reported in Tables S10 and S11 of the online supplements.

Profile 1 characterizes 46.06% of the teachers presenting initially moderate global levels of burnout following slightly decreasing trajectories over time (Moderate)⁴. Profile 2 represents 39.86% of the teachers characterized by initially low global levels of burnout following slightly increasing trajectories over time (Low). Finally, Profile 3 characterized a smaller proportion of teachers (14.08%) presenting initially high global levels of burnout following slightly decreasing trajectories over time (High). Although less obvious, another key difference between the profiles appears when considering the time-specific residuals, which reflect the extent to which individual scores tend to deviate from their model-estimated linear trajectories. These state-like deviations can be interpreted as the extent to which individual scores tend to follow smooth and stable linear trajectories over time (low time-

⁴ In Figure 1, this decreasing tendency is only apparent after T3, even though all trajectories are linear. The appearance of non-linearity is related to the fact that time intervals were equally spaced in the drawing of the Figure to better capture the evolution of these trajectories across the first three time points (four months between T1 and T2; four months between T2 and T3), whereas the last time point (T4) was taken seven years after T1.

specific residuals) or to follow more unstable trajectories characterized by multiple fluctuations around these linear trajectories (high time-specific residuals) (Author, 2013, 2017). In this study, the size of these time-specific residuals increased as a function of profile-specific levels of burnout, so that the Low burnout profile is not only characterized by low burnout trajectories, but also by more stable trajectories, whereas the High burnout profile is characterized by more unstable burnout trajectories, with the Moderate burnout profile falling in between. These findings partially support Hypothesis 1.

Predictors

The results revealed a lack of effect of the demographic controls and supported a model in which the slopes of the predictors trajectories had an effect on the slopes of the burnout trajectories that did not differ across profiles (see Section 2 of the online supplements for additional details). Table 1 presents the results from the retained model. Hypothesis 2 stated that teachers' self-efficacy (initial levels and change) would be associated with profiles characterized by lower initial levels of burnout, and by stable or decreasing levels of burnout trajectories. Our results indicate that initial levels of self-efficacy predicted a higher probability of membership into the Low and Moderate burnout profiles relative to the High burnout one, and into the Moderate burnout profile relative to the Low burnout one. Initial levels of self-efficacy also predicted lower burnout levels at the beginning of the study beyond these effects on profile membership. Change in levels of self-efficacy, however, shared no associations with burnout trajectories. These findings partially support Hypothesis 2.

Hypothesis 3 stated that teachers' perceptions of students' inattention and of principals' negative leadership behaviors (initial levels and change) would be associated with profiles characterized by higher initial levels of burnout, and by stable or increasing levels of burnout over time. Our results indicated that initial levels of students' inattention also predicted a lower probability of membership into the Low burnout profile relative to the High burnout one. Initial levels of students' inattention also predicted higher initial levels of burnout, and more pronounced decreases in burnout levels over time. Moreover, increases in students' inattention over time predicted more marked increases in burnout levels (slope factor). Finally, initial levels of principals' negative leadership behaviors (but not changes over time in these levels) predicted higher initial levels of burnout and more pronounced decreases in burnout over time. These findings partially support Hypothesis 3.

Outcomes

Hypothesis 4 stated that profiles characterized by higher initial levels of burnout and by stable or increasing burnout levels over time would be associated with higher and increasing levels of somatization, intentions to leave, and sedatives and sleeping pills consumption over time, as well as with lower and decreasing levels of involvement in physical activity. Likewise, Hypothesis 5 stated that profiles characterized by lower initial levels of burnout and by stable or decreasing burnout levels over time would be associated with lower and decreasing levels of somatization, intentions to leave, and sedatives and sleeping pills consumption over time, as well as with higher and increasing levels of involvement in physical activity. Our results reveal profiles clearly differentiated from one another on the outcomes in a way that slightly differs across outcomes (see Table 2). Initial levels of intentions to leave were the highest in the High burnout profile, then in the Moderate burnout profile, and finally in the Low burnout profile. Furthermore, whereas intentions to leave increased over time in the Low burnout profile, they decreased over time in the Moderate and High burnout profiles (more pronounced in the High burnout profile). As illustrated in Figure 2, the increasing and decreasing tendencies observed in the various profiles were not strong enough to counteract the differences observed initially, leaving the High burnout profile to experience the highest intentions to leave throughout the course of the study. The second highest levels of intentions to leave were then observed in the Moderate burnout profile, and the lowest were finally observed in the Low burnout profile.

Initial levels of somatization were the highest in the High burnout profile, then in the Moderate burnout profile, and finally in the Low burnout profile. Furthermore, whereas somatization levels increased over time in the Low and High burnout profiles, they decreased over time in the Moderate burnout profile. Somatization trajectories were also characterized by a slight quadratic (curvilinear) trend (mainly reflecting an acceleration of change after T3). This trend was more pronounced in the Moderate burnout profile, then in the Low burnout profile, and finally in the High burnout profile. As illustrated in Figure 2, the High burnout profile evidenced the highest levels of somatization, and these levels kept on increasing over time. In contrast, the Moderate burnout profile presented moderate somatization levels that decreased over time to reach a level lower than that of the Low burnout profile at the end of the study. Indeed, although the Low burnout profile presented initially low levels of

somatization, these levels increased over time to reach a level higher than that of the Moderate burnout profile at the end of the study.

Initial levels of sedative consumption were the highest in the High burnout profile, and the lowest in the Low and Moderate burnout profiles. Although sedative consumption trajectories tended to display a slight increase over time, this increase did not differ across the three profiles. Levels of increases over time in sedative consumption did not differ across the three profiles. As illustrated in Figure 2, the level of sedative consumption of the High burnout profile remains higher than that of the other profiles over the course of the study.

Finally, levels of sleeping pills consumption were the highest in the High burnout profile, and the lowest in the Low and Moderate burnout profiles. In contrast, levels of involvement in physical activity over time were the highest in the Low burnout profile, and the lowest in the Moderate and High burnout profiles. Considered together, these findings generally support Hypotheses 4 and 5.

Discussion

The detrimental effects of burnout have been largely documented in past studies (Bakker & de Vries, 2020; Goering et al., 2017), especially among teachers (Capone & Petrillo, 2020). However, with few exceptions (Mäkikangas et al., 2020), past studies failed to consider the longitudinal dynamic nature of burnout among teachers, especially over extended periods spanning many years. It is an important concern given that burnout is viewed as a *chronic* psychological state of resource depletion likely to impact a large number of teachers at any given time in their career (Hakanen et al., 2006), along with substantial costs for teachers themselves (e.g., psychological distress, diminished well-being; Capone et al, 2019), and the organizations (e.g., absenteeism, turnover; Billingsley & Bettini, 2019), that can interfere with the school's educational mission (e.g., low student motivation and academic achievement; Madigan & Kim, 2020). Our study sought to address this limitation by identifying teachers' burnout trajectories over a period of seven years. We also considered the role of personal resources and job specific-stressors in relation to these trajectories. Finally, the associations between these burnout trajectories and a variety of work-related and personal outcomes were considered.

Longitudinal Trajectories of Burnout

While demonstrating the longitudinal dynamic nature of burnout, our empirical results suggested that only a limited number of profiles characterizes teachers' burnout trajectories over a seven-year period. Importantly, these three trajectories are aligned with those identified in prior research (e.g., Mäkikangas et al., 2020), and afford new insights into the developmental nature of burnout among teachers. For instance, in a sample of white-collar professionals, Mäkikangas et al. (2020) identified three longitudinal profiles representing burnout trajectories over a period of eight years. Interestingly, these profiles are very similar to those identified in the current research, displaying low and stable burnout levels (78% of the sample), high and increasing burnout levels (12%), and a last profile with more moderate burnout levels showing non-linear trajectories that differ across burnout components (10%). Indeed, the present study revealed three highly similar profiles of teachers presenting initially moderate levels of burnout following slightly decreasing trajectories (Moderate: 46.06%), initially low levels of burnout following slightly increasing trajectories (Low: 39.86%), and initially high levels of burnout following slightly decreasing trajectories (High: 14.08%).

It is noteworthy that the Low burnout profile was also the one displaying the most stable trajectory, whereas the High burnout profile displayed the most unstable trajectory, with the Moderate burnout profile falling in between. Lee and Lee (2018) also identified a well-adjusted trajectory presenting low and stable burnout levels among a sample of students. These results are interesting as they share a similarity with results obtained previously among adults (Mund & Neyer, 2016) and students (Author, 2013, 2017) in the self-concept area, which have led to the development of the self-equilibrium hypothesis. According to this hypothesis, the ability to maintain high levels of self-esteem (notably affected in burnout; Ho, 2016) is conditioned on the presence of a strong core (i.e., stable) sense of identity, without which self-esteem levels are expected to become low and unstable over time. The present results suggest that a similar process might be involved in the ability to maintain low levels of burnout over time among teachers. Nevertheless, the fluctuations observed remained minimal, which is aligned with previous results showing that membership into burnout profiles generally remained stable over time (Kirves et al., 2014). Importantly, by failing to find evidence of non-linearity, our results clearly highlight similarities between the short- (four months) and long- (seven years) term dynamics of burnout. Clearly, our results reinforce the need to further investigate the mechanisms at

play in these trajectories, as well as their generalizability to a broader range of cultures.

Predictors of Burnout Trajectories

Our results also demonstrated that burnout trajectories were independent from teachers' stable demographic characteristics (level of education, tenure, school level, work schedule, sex, marital status, and number of children at home), thus reinforcing the possible role of changing individual and work-related characteristics. In this regard, our results shed new light on some factors that seem to contribute to the development of teachers' burnout. More precisely, our findings confirmed the effects of job stressors (students' inattention and principal's negative leadership behaviors) and personal resources (teachers' self-efficacy) on teachers' burnout trajectories. First, initial self-efficacy levels predicted a higher probability of membership into the Low and Moderate burnout profiles relative to the High burnout profile. Initial self-efficacy levels also predicted lower initial burnout levels beyond these effects on profile membership. These results match previous cross-sectional results suggesting that teachers' self-efficacy acts as a protective individual resource against burnout (Aloe et al., 2014a; Shoji et al., 2016). Despite some previous tentative longitudinal evidence suggesting that teachers' self-efficacy might help alleviate feelings of burnout (e.g., Author, 2012), this is the first investigation to show a clear relation between teachers' self-efficacy and burnout trajectories. Thus, teachers who feel confident in having the skills necessary to successfully perform their tasks (Cherniss, 1993; Skaalvik & Skaalvik, 2017) are more likely to display low to moderate burnout trajectories over time.

However, initial levels of self-efficacy also surprisingly predicted a higher probability of membership into the Moderate burnout profile relative to the Low burnout one. Given that, from a theoretical standpoint, the degree of self-efficacy should decrease the probability of experiencing burnout (Markova, 2021), we propose a provisional explanation for this somewhat unexpected result. While self-efficacy is based on the exercise of agency, it is possible that teachers characterized by high self-efficacy may be more inclined to invest more energy in their work, especially when facing classroom management difficulties (Capone & Petrillo, 2020). The larger research on self-efficacy (e.g., Shoji et al., 2016) suggests that, when confronted with a challenging situation, individuals characterized by high self-efficacy are more proactive and innovative than others, and more likely to adopt bolder solutions to face these situations. This high involvement in a job that already requires

strong commitment, such as teaching (Rickert & Skinner, 2021; Valdes et al., 2020), should contribute to reduce their emotional resources, in turn slightly increasing their burnout (Hobfoll, 2002).

Alternatively, from a developmental perspective, it is plausible that the benefits of self-efficacy might take longer to manifest, being largely influenced by experiences of mastery (Schiefele & Schaffner, 2015). Through mastery experiences, teachers would come to feel more self-efficacious and less exhausted over the course of their career, as suggested by the decreasing tendency observed among teachers belonging to the Moderate profile after T3 (i.e., seven years after T1). Additional investigations are required to clarify this question and attain a more precise understanding of the development of teachers' burnout and self-efficacy, including the possible moderating role of teachers' emotional investment in their work and exposure to stressful situations that pose a challenge to their sense of self-efficacy.

Second, initial levels of students' inattention predicted a higher probability of membership into the High burnout profile relative to the Low burnout one, as well as higher initial levels of burnout beyond these associations with profile membership. In addition, increases in students' inattention predicted more marked increases in teachers' burnout levels over time. These findings thereby accentuate that exposure to students' misbehaviors, such as inattention in the classroom, contribute to increase the risk of burnout among teachers (Aloe et al., 2014b). These effects may be explained by a decrease in teachers' self-efficacy emerging from the impression of being unable to nurture and maintain students' interest (Bandura, 1997; Friedman, 1995). Teachers' judgments about students' misbehaviors may also influence their experiences of distinct unpleasant emotions (e.g., frustration, anger), eventually increasing their risk of burnout (Chang, 2009).

Third, initial levels of principals' negative leadership behaviors predicted higher initial levels of teachers' burnout. These behaviors are known to elicit, among teachers, feelings of distrust and anxiety with regard to their exchanges with the direction (Chan & McAllister, 2014), variables themselves associated with higher burnout (Xu & Yang, 2018). While there is burgeoning evidence of the detrimental effect of principal's negative leadership behaviors (e.g., *laissez-faire*) on teachers' burnout (Eyal & Roth, 2011; Slemp et al., 2020), the current findings complement this focus on how these behaviors relate to burnout trajectories over the course of a career.

Finally, and unexpectedly, initial levels of students' inattention in the classroom and of exposure to principals' negative leadership behaviors predicted decreases over time in teachers' levels of burnout. Although unexpected, these results make sense from a professional identity perspective (Assunção Flores & Day, 2006), as well as according to SCT (Bandura, 1997). Indeed, when considering students' inattention, it should also be possible for teachers to learn and improve their teaching practices as a result of these early experiences of exposure to students' inattention in the classroom. Likewise, early experiences of exposure to principals' negative leadership behaviors might convey to teachers the impression that this is part of the job, leading them to become more resilient and better able to cope with such behaviors over time. Although these possibilities are supported by our results, it would be interesting to verify whether these findings would be replicated, and even would appear more pronounced, among samples of teachers entering the profession.

Outcomes of the Burnout Trajectories

The present results clearly demonstrate the associations between burnout trajectories and various work-related (intentions to leave) and personal (somatization, sedatives and sleeping pills consumption, and involvement in physical activity) outcomes. Thus, membership into the High burnout profile was linked to higher initial levels of intention to leave the profession, sedative use, sleeping pills consumption, and somatization, as well as more pronounced increases in teachers' somatization levels. In contrast, members of the Low burnout profile displayed the highest levels of involvement in physical activity. These results are generally aligned with previous research (Gerber et al., 2020; Goering et al., 2017) in relation to the detrimental effects of burnout on job and individual functioning. Such results are not surprising given that burnout entails feelings of mental distance from work and energy depletion (Maslach et al., 2001). Teachers experiencing high burnout are indeed described as disillusioned and worn-out, and are depicted as having lost the connection with their work (Maslach & Jackson, 1986), which can increase their probability of suffering from maladaptive individual and work-related consequences.

However, it should be acknowledged that teachers characterized by profiles with higher burnout levels also displayed more pronounced decreases over time in their levels of intentions to leave the occupation. This finding suggests that the positive association between burnout and intentions to leave

could be limited to teachers' initial experiences of burnout, which over the long term might serve to transform the type of bond that they share with their occupation from an initially affective connection to a more instrumental one characterized by feelings of entrapment (Author, 2016; Meyer & Allen, 1997). Thus, it might become harder for teachers to think about leaving their occupation as instrumental benefits (i.e., side bets: Becker, 1960; Powell & Meyer, 2004) accumulate, leading to increases in the costs of leaving the occupation. This phenomenon is likely to be further reinforced by prolonged states of burnout, which are known to lead to a depletion of the psychological resources that teachers would need to successfully navigate a change of occupation (Stanley et al., 2013).

These results regarding somatization are particularly interesting as they provided further information about the shape of the longitudinal trajectories. More specifically, our results showed that the Moderate burnout profile presented moderate levels of somatization that declined over time to reach a level lower than that of the Low burnout profile at the end of the study, supporting the value of adopting a dynamic perspective. Although unexpected, this result can reflect to some extent the long-term adaptive nature of the Moderate burnout profile where decreases in burnout were complemented by corresponding decreases in somatization. This could reflect teachers who achieve an "optimal" adaptation to environment through a more challenging process, than those from the Low burnout profile, to become more effective at meeting the demands of a profession which slowly becomes part of their identity (Assunção Flores & Day, 2006). These results are encouraging as they suggest that, in this highly demanding occupation, challenging situations might strengthen psychological resilience and adaptability of teachers over the course of their career. It would be interesting to pursue this line of research by considering other positive and negative work-related (e.g., organizational commitment, presenteeism) and individual (e.g., life dissatisfaction, work-family conflict) outcomes.

Limitations and Future Directions

First, the present research relied on self-report measures, which come with an increased risk of social desirability and self-report biases. Future investigations could also consider adopting a broader multidimensional perspective for the measurement of teachers' self-efficacy, students' behaviors, and principals' leadership to widen the scope of the findings. This would make it possible, for instance, to investigate additional dimensions of teacher self-efficacy (e.g., instructional, organizational efficacy),

while simultaneously considering positive (e.g., autonomy support) and negative types of leadership behaviors in the development of burnout trajectories. Future studies could also include objective indicators of teachers' behaviors (e.g., turnover), as well as multiple informants' ratings (e.g., students, peers). Second, this study involved a sample of Canadian teachers who were followed over a seven-year period. Other investigations will be needed to confirm the generalizability of the identified trajectories, and their associations with additional predictors and outcomes across different cultures and countries. Third, a strength of this study lies in the consideration of a seven-year period, the measurement sequence was more intensive at the start of the study (three time points during the first year) than later (more than six years between T3 and T4). Thus, although this allowed us to clearly establish baseline trajectories and long-term change, it made it impossible for us to specifically consider how this long-term change unfolded. It would be interesting for future studies to more intensively investigate long-term trajectories to enrich the current results.

Fourth, it is possible, given the long-term nature of the current research, that some of the teachers presenting high levels of burnout might have withdrawn from this study before the last data collection, although various verifications conducted as part of preliminary analyses suggest that this is not the case (i.e., attrition was slightly more prevalent in the Low burnout profile, and for older/more tenured employees). Unfortunately, the methods currently available to handle missing following a "not at random" process (Enders, 2011) proved to be too computationally complex to be used in combination with GMM. However, the nature of the trajectories observed within each of the profiles seems to be more consistent with a "regression to the mean" effect, where more extreme (high or low) levels of burnout seem to become less extreme over time than with losing the more highly burnout teachers through attrition. Indeed, this non missing at random data process would have resulted in a regression to the mean effect limited to the High burnout profile. Our results are thus more consistent with the idea that teachers might have developed a better balance at work: Having managed, over time, to find a greater equilibrium between their needs and the demands of their work, leading them to experience more normative levels of the negative emotions measured by burnout questionnaires over time. Future research should thus more attentively consider these various perspectives. Finally, although we considered individual and social predictors of teachers' burnout trajectories, upcoming investigations

should incorporate other predictors from the larger school environment (e.g., parents, the community).

Practical Implications

Although additional research is needed to replicate our findings and shed greater clarity on the psychological mechanisms underpinning each of the burnout trajectories identified in this study, by uncovering these trajectories, as well as some of their predictors and outcomes, our findings provide insights on possible interventions to promote teachers' well-being. Importantly, all three trajectories identified in the present study, despite showcasing a slow tendency to become less extreme over time, remained quite stable over a relatively long period of time (7 years), thus suggesting that burnout is unlikely to resolve itself in the absence of intervention, and that even low levels of burnout could benefit from intervention to help them remain as low as possible. In particular, educational institutions and principals ought to focus on teachers characterized by high burnout levels as these levels are likely to persist over time and are accompanied by higher risks of impaired functioning (e.g., intentions to leave and somatization) that will prove costly for the teachers and their institutions over the long term.

Furthermore, our results also allowed us to uncover specific facets of teachers' work environment that may help nurture more desirable trajectories, or to prevent more problematic burnout trajectories and their consequences. **The vision and actions of system leaders and school board members frequently determine whether principals can be effective in leading school improvement. Indeed, school board (or districts) can create the conditions that make it possible for principals to be more effective in leading school improvement. Yet, school boards may also fail to help create such favorable conditions. For instance, in some school boards, administrators try to own all the problems and enforce all solutions through top-down strategies. In others, administrators transfer all problems to the principal, offering little or no sense of direction or support, but still demanding results. Thus, in order to best manage any change initiative likely to help prevent burnout among teachers, school leaders and board members need to find the appropriate balance between central control and local autonomy (Leithwood & Janzi, 2008). Likewise, changes in the need-supportive conditions of the school board to foster more positive leadership behaviors and skills among principals may be useful to help teachers cope with job stressors and burnout (Slemp et al., 2018). More specifically, school board leaders may display a clear vision of what constitutes a good school and create a framework in which**

the principals have autonomy to work with the school staff and teachers on an improvement agenda while being able to capitalize on collaborative support from the school board. School board actions should also establish the conditions necessary for principals to create a different kind of school. For instance, they could expect and support the principal to become the school's instructional leader, and they could communicate the vision and strategic plan of the school to the public in a visible manner that provides a context to help principals' decisions to be supported by parents and the larger community.

Principals could also try to be less damaging through values statement, awareness campaigns, and leadership training programs (Hogan et al., 2011). More specifically, principals should create their own vision and goals of the school that are, in themselves, necessary to create a powerful learning experience for teachers and students. Under these conditions, principals should make decisions within the boundaries of a strategic framework and have control over the schedule and placement of personnel within the school. They should also be able to allocate resources for the improvement of their school, and to select professional development that is aligned with their school improvement plans. Furthermore, the principal and teachers should also collaboratively design and implement solutions tailored to the unique needs of their own students and communities (e.g., relevant, rigorous, hands-on learning activities and programs to ensure that every student is connected with a goal and an adult who will serve as a mentor). To increase principals' awareness of their leadership behaviors, comprehensive assessments of their behaviors could be implemented. Then, principals with undesirable behaviors should be supported (e.g., training, mentoring, coaching) to become more autonomy-supportive or transformational, because these behaviors are likely to foster favorable perceptions of the workplace, including more resources and fewer demands, and to exert a lasting impact on teachers' burnout trajectories (Author et al., 2015; Sarmah et al., 2022).

More adaptive trajectories of burnout can also be promoted using strategies aimed at increasing self-efficacy, which can be implemented at the teacher, school, and even teacher education levels. These strategies can involve more effective cognitive emotion regulation strategies (e.g., perspective-taking, positive reappraisal; Burić et al., 2017). School leaders and professional learning facilitators have also a role in nurturing self-efficacy among teachers by helping them to develop pedagogical

content knowledge (the integration of subject expertise and skilled teaching of that particular subject) as well as competence and confidence in the implementation of strategies to bring about desirable outcomes for students. In this regard, Bandura's (1997) four sources of SE, namely mastery experience, vicarious experience, social persuasion, and the interpretation of physiological and emotional states might prove particularly helpful (Dixon et al., 2020).

Finally, seeking to increase teachers' classroom management skills to deal more efficiently with challenging situations in the classroom may also be helpful for more adaptive burnout trajectories, as such training have been shown to result in a reduction of burnout (Dicke et al., 2015). For instance, teachers may make a habit of demonstrating behavior they want to see (e.g., being polite, let others speak uninterrupted), as many studies show that modelling effectively teaches students how to act in different situations (Diorio et al., 2020). Teachers may also encourage students to help build classroom expectations and rules by asking them what they believe should and should not fly in terms of appropriate behavior (e.g., acceptable noise levels). Then, they can print and distribute the list of rules that the class discussion generated and go through the list with their students. Doing so emphasizes that teachers respect students' ideas and intend to adhere to them (Ingemarson et al., 2020).

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