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## What fuels the fire: Job- or task-specific motivation (or both)? On the hierarchical and multidimensional nature of teacher motivation in relation to job burnout

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### ABSTRACT

Drawing on a hierarchical (job and task level) and multidimensional conceptualisation of work motivation (intrinsic, identified, introjected, and external regulations), this study examines relationships between motivational regulations and burnout. Participants were 806 French-Canadian teachers working in public elementary and high schools. Results reveal different associations between burnout and the regulations that drive teachers to engage in their overall job or in specific tasks: autonomous regulations (intrinsic and identified) are negatively associated with burnout but more negatively at the job than task level, whereas controlled regulations (introjected and external) are positively associated with burnout but more positively at the task than job level. This study provides valuable insights into how teachers' motivations towards both the job and tasks can foster or prevent burnout symptoms. Implications for theory and research on burnout and work motivation are discussed.

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### KEYWORDS

Self-determination theory; teacher motivation; burnout; hierarchical and multidimensional model; multitrait-multimethod modelling

Burnout refers to a job-related state of psychological strain. Based on the work of Maslach (1982), burnout has been conceptualised in terms of three components: emotional exhaustion, depersonalisation, and reduced personal accomplishment. Emotional exhaustion refers to the feeling of being emotionally overextended and exhausted at work. Depersonalisation refers to negative, cynical, or excessively detached responses to other people at work (also termed cynicism). Reduced personal accomplishment refers to a feeling of loss of efficiency and productivity at work (also termed loss of professional efficacy). Although burnout affects workers across all occupations, it is particularly prevalent among teachers (De Silva, Hewage, & Fonseka, 2015; Schaufeli & Enzmann, 1998). In addition to individual costs (e.g. somatisation, diminished well-being), burnout is associated with organisational costs (e.g. absenteeism, turnover, lower performance; Halbesleben & Buckley, 2004) that can interfere with the school's educational mission (Chang, 2009).

One long-held assumption that continues to guide several studies to this day, and which underpins many folk theories, is that highly motivated employees are at higher risk for

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burnout. This is based on the premise that in order to burn out, employees must first be “on fire” (Maslach, Schaufeli, & Leiter, 2001; Pines, 1993). However, this assumption is incompatible with the consistent finding in the literature that adaptive motivational resources (e.g. achievement motivation, self-efficacy, internal locus of control) are negatively associated with burnout (e.g. Alarcon, Eschleman, & Bowling, 2009; Halbesleben & Bowler, 2007). Furthermore, an emerging body of research has nuanced this position, suggesting that the quality of employees’ motivation – the reasons that drive employees to invest in their work – may render them more (or less) vulnerable to job stress and burnout. More specifically, some studies indicate that teachers who engage in their tasks for the enjoyment and satisfaction or because they fully endorse their importance and value (i.e. autonomous motivation) are less likely to burn out. In contrast, teachers who engage in their tasks in order to avoid internal or external pressures (i.e. controlled motivation) report more burnout (Fernet, Guay, Senécal, & Austin, 2012; Fernet, Senécal, Guay, Marsh, & Dowson, 2008).

With respect to the issues considered in the literature on teacher motivation and burnout, the specificity of the motivational constructs that best capture the relationship between work motivation and burnout remains unclear. This issue is important for both research and theoretical purposes. Whereas burnout is conceived as an individual experience arising from work (Maslach et al., 2001), there is little theorising on the relevant motivation levels (job or task level) and how these levels relate to burnout. A more comprehensive theoretical understanding would shed light on whether teacher burnout is attributable more to motivational disengagement from the job in general or to specific tasks (e.g. teaching, class management). Greater insight into the appropriate specificity levels of motivation to consider would also help teachers and school administrators better understand and prevent burnout.

Drawing on a hierarchical and multidimensional conceptualisation of work motivation, we aimed to better understand the differential relationships between teacher burnout and motivational regulations at the job and task level. Our central proposal is that not only is the quality of teacher motivation (autonomous or controlled) differentially associated with burnout, but that both the job and task level must be taken into account to provide a more accurate and nuanced analysis of the regulations at play. In the following sections, we present the notions associated with the multidimensional nature and hierarchical structure of teacher motivation, constituting the grounds for our research hypotheses.

### Self-determination theory

Self-determination theory (SDT; Deci & Ryan, 1985, 2000) makes an important distinction concerning the multidimensional nature of human motivation: people invest in an activity not only to varying degrees – corresponding to the quantity of motivation – they also do so for various reasons – corresponding to the quality of motivation. More specifically, SDT proposes two main categories of regulation that vary according to the degree of self-determination (i.e. volition and self-endorsement) and that lead to distinct emotional, cognitive, and behavioural outcomes. At work, these regulation types represent the reasons that people invest in their work. *Intrinsic motivation* occurs when individuals accomplish their work for the pleasure and satisfaction they derive from it. *Extrinsic motivation* occurs when the underlying motives are more instrumental. Deci and Ryan (1985, 2000) explain that extrinsic motivation can take diverse forms, because instrumental behaviours can be

self-determined to varying degrees. From lower to higher self-determination, these motivations are external, introjected, and identified regulation. *External regulation* occurs when work is carried out solely for the benefits to be gained (e.g. a supervisor's approval, a tangible reward) or to avoid negative consequences (e.g. a reprimand, getting fired). *Introjected regulation* occurs when people perform their work in order to avoid feelings of anxiety or guilt, or to increase their feelings of self-worth. *Identified regulation* occurs when people do their job out of personal conviction, because they feel it is important, or because it aligns with their personal values. In the present study, although we address all the regulations, we use the term autonomous regulations to represent intrinsic motivation and identified regulation and the term controlled regulations to represent introjected and external regulation.

### **Hierarchical nature of motivation**

Vallerand (1997) proposed a hierarchical model of intrinsic and extrinsic motivation (HMIEM) that structures the motivational regulations at three levels of generality: global, contextual, and situational. In addition to establishing a motivational sequence (antecedent → motivations → outcomes), this model specifies the need to consider the appropriateness of the generality level of the motivational processes for the examined domain of functioning. To illustrate, if the study object is how employees function at the workplace, it would be more relevant to look at motivational processes at the job level (contextual) than at the situational or dispositional level. Some studies support this proposal (see Vallerand & Miquelon, 2016). For example, Gillet, Gagné, Sauvagère, and Fouquereau (2013) examined workplace factors and found correlations of .68 between job satisfaction and work autonomous motivation compared to .26 between job satisfaction and global autonomous motivation, as well as  $-.24$  between turnover intentions and work autonomous motivation compared to  $-.03$  between turnover intentions and global autonomous motivation. Lam and Gurland (2008) found similar results in terms of job satisfaction and identification commitment. Albeit insightful, the HMIEM does not allow fully disentangling the hierarchical contributions of the motivational regulations at the contextual level. In line with other hierarchical conceptualisations (e.g. Shavelson, Hubner, & Stanton, 1976), we propose that contextual motivation can be divided into two components at two specificity levels: individual motivational orientation towards the job (job-level motivation) and individual motivation towards specific tasks (task-level motivation).

*Motivational orientation at work.* Motivation at the contextual level refers to the various reasons that people engage in a specific domain (e.g. work, sport, education). At the workplace, the majority of measures are designed to assess individual motivational orientation at work, and they consider job-related regulations in their entirety, without distinguishing the specific contributions of particular tasks (e.g. Blais Work Motivation Inventory (BWMI); Blais, Briere, Lachance, Riddle, & Vallerand, 1993; MWMS; Gagné et al., 2015). Many studies have supported this conceptualisation of work motivation. The more that people engage in their job for autonomous reasons (intrinsic motivation and identified regulation), the greater their reported job satisfaction (Blais et al., 1993; Gillet et al., 2013) and organisational commitment (Tremblay, Blanchard, Taylor, Pelletier, & Villeneuve, 2009) and the better their psychological well-being (Trépanier, Forest, Fernet, & Austin, 2015) and performance (Fernet, Trépanier, Austin, Gagné,

Forest, 2015). On the other hand, the more that people invest in their job for controlled reasons (introjected and external regulation), the greater their reported psychological stress (Blais et al., 1993), somatisation (Trépanier et al., 2015), turnover intentions (Gillet et al., 2013), and burnout (Fernet, Gagné, & Austin, 2016; Fernet, Trépanier, Austin, & Levesque-Côté, 2016).

*Task-level motivation.* Task-level motivation corresponds to the various reasons that drive people to carry out their tasks at work. Based on the notion of specificity, as posited by diverse motivation theories (e.g. self-efficacy theory, Bandura, 1997; goal setting theory, Locke & Latham, 1990), Fernet et al. (2008) proposed an instrument that accounts for the multidimensional nature of teacher motivation at the task level. This instrument was designed to assess SDT regulation types for six tasks (class preparation, teaching, student evaluation, class management, and administrative and complementary tasks). The basic premise was that teachers' regulations would differ across tasks. To illustrate, one teacher might have a keen interest (i.e. identified regulation) in teaching and preparing lessons, but less interest in administrative and other tasks. Their results indicated that the relationships between the regulations and work-related criteria varied across tasks. For burnout (i.e. emotional exhaustion and depersonalisation), the correlations ranged from  $-.20$  to  $-.42$  for intrinsic motivation, from  $-.06$  to  $-.30$  for identified regulation, from  $.25$  to  $.34$  for introjected regulation, and from  $.20$  to  $.42$  for external regulation. These findings suggest that the relationships between teachers' motivation and burnout depend on not only the regulation types but also on task-specific regulations.

## Hypothesis development

Despite some support for both conceptualisations of work motivation (job and task level), there has been no attempt to integrate them to explain the relationships between motivational regulations and teacher burnout. The research on burnout to date has focused mainly on global aspects of the work context (e.g. workload, lack of social support; Alarcon, 2011; Lee & Ashforth, 1996). Even though this approach neglects the role of specific tasks, it is consistent with the HMIEM (Vallerand, 1997; Vallerand & Miquelon, 2016), which assesses motivation in contextual terms, or in terms of the overall work environment. Because burnout is specific to the job, teachers' motivational orientation would presumably be the optimal level of generality, corresponding to the functioning domain being examined (Vallerand, 1997). Although only a small number of studies have focused on teachers, the research shows that autonomous motivation (at the job level) is negatively associated with burnout, whereas controlled motivation is positively associated (e.g. Fernet et al., 2016). In line with SDT, the HMIEM, and the above-presented empirical studies, we propose the following hypotheses:

*Hypothesis 1a:* Autonomous regulations (intrinsic motivation and identified regulation) at the job level are negatively associated with burnout.

*Hypothesis 1b:* Controlled regulations (introjected and external) at the job level are positively associated with burnout.

Although the HMIEM proposes the study of motivation at different generality levels, the model is relatively silent about the multidimensional nature of task-specific regulations, in other words, task-level motivation. Empirically supported by Fernet et al.'s (2008) study,

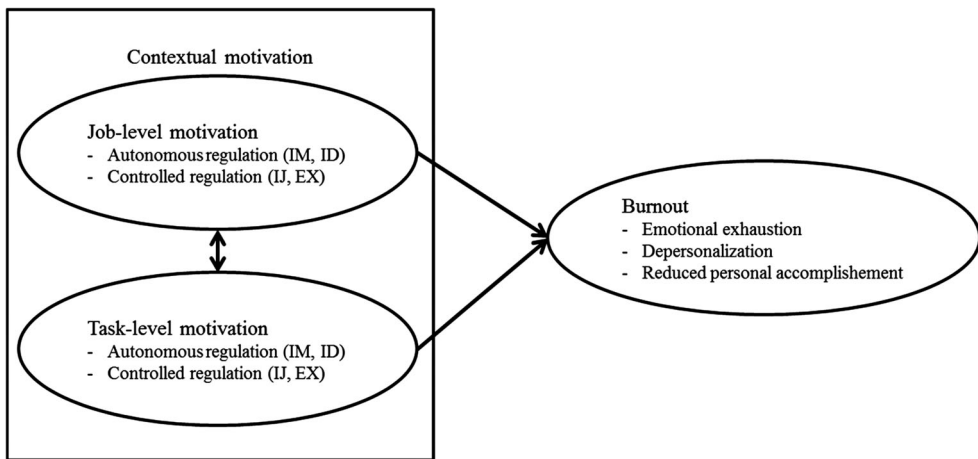
the specific nature of teachers' motivational resources has been largely acknowledged in other motivation theories (e.g. self-efficacy theory, Bandura, 1997; goal setting theory, Locke & Latham, 1990). In particular, the social-cognitive perspective (Bandura, 1997) proposes that teachers' motivation, or the teacher's feeling of being able to accomplish a particular task in a certain situation (i.e. self-efficacy), is a multidimensional, context-specific construct (see also Skaalvik & Skaalvik, 2007; Tschannen-Moran, Hoy, & Hoy, 1998). We should specify that for Bandura, this multidimensional nature does not refer to the quality of teachers' motivational regulations (the feeling of either *wanting* or *having* to perform a task); it refers instead to the perception that one is able to accomplish the many different types of tasks one is asked to perform. The problem remains that, according to this perspective, teachers' motivation should not be assessed with either global contextualised or one-dimensional measures because they involve context-specific judgments and would therefore obscure the construct to be measured (Bandura, 1986; Pajares, 1996). Accordingly, studies of teacher efficacy have generally investigated teacher motivation at the task level. A consistent body of evidence indicates that teachers' motivational resources (teacher efficacy) at the task level are negatively related to burnout (e.g. Skaalvik & Skaalvik, 2007; see also Aloe, Amo, & Shanahan, 2014, for a recent meta-analysis). These findings underscore the relevance of considering teacher motivation with respect to specific tasks. According to this rationale and the empirical results presented above, we propose the following hypotheses:

*Hypothesis 2a:* Autonomous regulations (intrinsic motivation and identified regulation) at the task level are negatively associated with burnout.

*Hypothesis 2b:* Controlled regulations (introjected and external) at the task level are positively associated with burnout.

Due to the complex nature of the regulatory systems, which may operate across a hierarchical structure (Vallerand, 1997) or else selectively across different context-specific tasks (i.e. level-specific) (Bandura, 1997), it remains to determine the appropriate specificity level for the regulations that are associated with burnout. To respond to this challenge, we must consider teachers' motivational regulations simultaneously at the job and task level. However, and despite the fact that domain specificity remains a persistent issue in any cognitive or motivational theory that proposes domain-specific constructs (Pintrich & Schunk, 1996), the integration of these levels has not been empirically evaluated in teachers.

Building on the hierarchical conceptualisation of motivation, we argue that regulations at both the job and task level act on burnout in a complementary manner. This suggests that the relationships between teachers' motivation and burnout depend on not only the regulation types at the job level but also on task-specific regulations. [Figure 1](#) depicts our theoretical proposition, which is that teachers who are more vulnerable to burnout would present lower autonomous motivation and higher controlled motivation towards both the job and tasks. Empirically, this proposal is in line with results indicating that burnout is associated with motivational regulations at the job level (e.g., Fernet et al., 2016) and task level (e.g. Fernet et al., 2008). Finally, it is worth mentioning that this proposal is not inconsistent with Bandura (1997), who contends that motivation operates selectively across different context-specific tasks. Teachers' motivation to perform certain tasks could



**Figure 1.** A hierarchical, multidimensional conceptualisation of motivation in relation to burnout. IM = intrinsic motivation, ID = identified regulation, IJ = introjected regulation, EX = external regulation.

be more central than their motivation to perform other tasks, and would therefore be more strongly associated with burnout than both global contextualised motivation and motivation to perform other, less central tasks.

Based on the above-presented theoretical rationale, we propose the following hypothesis:

*Hypothesis 3.* Autonomous (intrinsic motivation and identified regulation) and controlled regulations (introjected and external) at the job and task level are differently, but concurrently, associated with burnout.

## Method

### *Procedure and participants*

Data were collected as part of a research project on the work-related well-being of school teachers in the province of Quebec, Canada. Quebec's education system consists mainly of public French-language schools. In this study, only elementary (grades 1–6) and high-school (grades 7–11) teachers are considered. We began by approaching the administrations of two school boards containing a total of 103 schools: 84 elementary and 19 high schools.

Of the 2512 teachers approached, 806 (646 women, 160 men) completed the questionnaire, for a 32% response rate. This relatively low response rate is attributable in part to the voluntary participation (no working time allowed to complete the questionnaire), the mail-out procedure, and the fact that the school boards did not grant permission to send follow-up reminders. Participants' mean age was 41.5 years ( $SD = 10.4$ ) and mean years of experience was 15 ( $SD = 10.4$ ); 77% of participants had a life partner and 55% had at least one child. The sample included 570 elementary teachers and 236 high-school teachers. Of the participants, 80% held a permanent position and 87% worked full-time. The sample fairly represented the demographic distribution of elementary and high-school teachers in the school boards, with the exception of teaching level: elementary teachers were slightly overrepresented (70.7% of respondents vs. 62.1% of the school board employees).

## Measures

*Work motivation at the task level.* The Work Tasks Motivation Scale for Teachers (WTMST; Fernet et al., 2008) was used to assess teachers' motivational regulations for specific tasks. The WTMST, which was developed in French, assesses autonomous and controlled regulations for six tasks (class preparation, teaching, student evaluation, class management, and administrative and complementary tasks). Each subscale contains three items addressing possible reasons for engaging in a particular task. Sample items are, "Because I find this task interesting to do" (intrinsic); "Because this task allows me to attain work objectives that I consider important" (identified); "Because I would feel guilty not doing it" (introjected); and "Because my job requires it" (external). Items are scored on a 7-point scale ranging from 1 (does not correspond at all) to 7 (corresponds completely). The original validation of the WTMST provides support for the assessment of teacher motivation towards specific tasks. The scale has good construct validity and internal consistency.

*Work motivation at the job level.* The short version of the BWMI (Blais et al., 1993), also developed in French, was used to assess teachers' motivational regulations at the job level. The short version assesses four types of motivational regulation with three items each, rated on a scale from 1 (do not agree at all) to 7 (agree completely). Each item responds to the question "Why do you do this job?" with a reason for working. The subscales assess intrinsic motivation (three items; for example, "Because I experience satisfaction when my job provides me with interesting challenges"), identified regulation (three items; for example, "Because this is the type of work that I prefer in order to further my career aspirations"), introjected regulation (three items; for example, "Because I absolutely want to do well, and if I don't, I'll be disappointed"), and external regulation (three items; for example, "For the paycheck"). According to Fernet et al. (2010), the short version of the BWMI showed similar internal consistencies to the full version.

*Burnout.* The French-Canadian version (Dion & Tessier, 1994) of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986) was used to assess burnout dimensions. Emotional exhaustion was assessed with nine items (e.g. "I feel emotionally drained from my work"). Depersonalisation was assessed with five items (e.g. "I've become more callous towards people since I took this job"). Personal accomplishment was assessed with eight items (e.g. "I have accomplished many worthwhile things at this job"). Responses to all items were scored on a seven-point frequency scale ranging from 0 (never) to 6 (daily). The psychometric properties (internal consistencies and factorial and construct validity) of the French-Canadian version of the MBI are similar to those of the original version (Maslach et al., 2001).

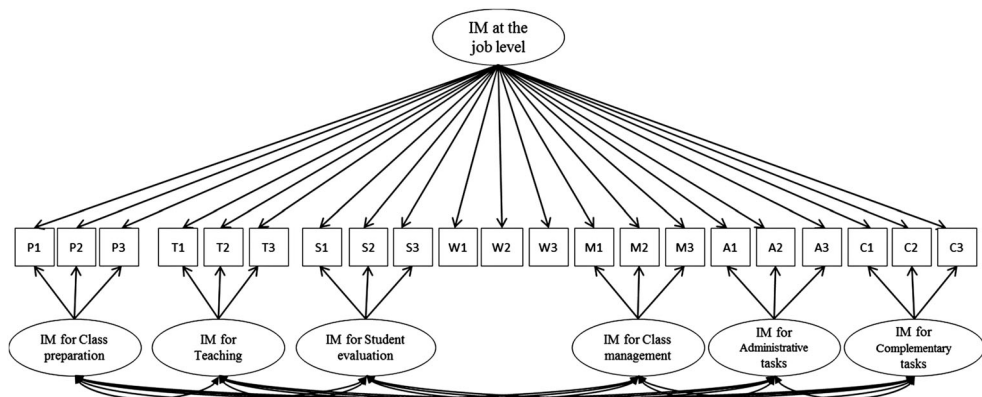
## Statistical analysis

The Correlated Traits-Correlated Method (Minus One) model (Eid, Lischetzke, Nussbeck, & Trierweiler, 2003), or CT-C(M-1), allows testing the hierarchical structure of teachers' motivation while taking into account the regulations that drive teachers to engage in their overall job and in specific tasks. Specifically, the CT-C(M-1) disentangles the variance in autonomous and controlled motivation that is attributable to the job or task level. To illustrate, intrinsic motivation for the job (like the other regulation types) can be considered as



a trait, whereas task-specific intrinsic motivations are considered as deviations from that trait. Intrinsic motivation indicators for the six tasks are therefore caused not only by their own specific latent constructs but also by the more global latent construct reflecting intrinsic motivation at the job level. More precisely, all indicators of intrinsic motivation at job and task level are used to define a single “Trait” factor representing motivation at the job level. Then, six additional specific factors are used to reflect the residual covariance (i.e. not explained by the global trait factor) shared among items related to a specific task. These specific factors thus provide a direct estimate of the task-specific intrinsic motivation properly disaggregated from the more global contextual job-related motivation of the employee. In the CT-C(M-1) model, these six specific factors represent the correlated “method factors,” and the model is designed so as to require one less method factor than they are methods (i.e. here referring to the types of regulations that are assessed). The remaining method factor is left out of the model and serves as a “referent” method, allowing the trait factor to be more clearly anchored into this specific referent method. In the present study, we selected the global ratings of intrinsic motivation at the job level as the referent “method,” thus ensuring that the trait factor directly provided a global assessment of intrinsic motivation. The CT-C(M-1) model allows for the incorporation of multiple correlated trait factors (e.g. intrinsic, identified, introjected, and external regulation), each assessed via multiple methods, in the same model. However, given the complexity of these models and their proneness to convergence issues, we decided to rely on a distinct CT-C(M-1) model for each type of regulation in the present study. The model used to assess intrinsic motivation is illustrated in Figure 2.

The models were tested with *Mplus* (Muthén & Muthén, 2012) using maximum likelihood estimation with robust standard errors (MLR estimation). Goodness-of-fit was assessed with four indices: the Comparative Fit Index (CFI), the Tucker–Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Standardised Root Mean Square Residuals (SRMR). Values above .90 and .95 for the CFI and TLI indicate satisfactory and excellent fit, respectively (Hoyle, 1995), and values of .08 or less for the RMSEA and SRMR are deemed acceptable (Browne & Cudeck, 1993). Missing



**Figure 2.** Correlated traits-correlated method (minus one) model for intrinsic motivation (IM). P1–P3 = items for class preparation, T1–T3 = items for teaching; S1–S3 = items for students evaluation, W1–W3 = items for work motivation, M1–M3 = items for class management, A1–A3 = items for administrative tasks, C1–C3 = items for complementary tasks.

responses (less than 1% in this study) were handled with full-information maximum likelihood estimation, which has demonstrated greater accuracy than traditional methods such as listwise or pairwise deletion (Peugh & Enders, 2004).

## Results

### Preliminary analysis

As presented in Table 1, the CFA models used (one for each regulation) to estimate latent correlations provided satisfactory fit to the data. Descriptive statistics and reliabilities of variables and latent correlations are presented in Table 2. The results show that intrinsic motivation and identified regulation at the job level are negatively associated with burnout dimensions. However, only half the relationships (three of six) between introjected and external regulation at the job level and the burnout dimensions are significant. For intrinsic motivation and identified regulation at the task level, the 36 relationships (2 regulation types  $\times$  6 tasks  $\times$  3 burnout dimensions) are significant, with 35 of the 36 relationships significant for introjected and external regulation. Although these results provide some support for hypotheses 1 and 2, this classical CFA analysis does not account for the hierarchical structure of motivational regulations.

**Table 1.** Fits indices for the tested models.

	$\chi^2$	<i>df</i>	CFI	TLI	RMSEA	SRMR
Total group CFA models						
Intrinsic motivation	1947.194	770	.939	.928	.044 [.041; .046]	.054
Identified regulation	1885.322	770	.912	.896	.042 [.040; .045]	.053
Introjected regulation	1937.916	770	.927	.914	.043 [.041; .046]	.054
External regulation	2100.616	770	.907	.891	.046 [.044; .049]	.058
Total group CT-C(M-1) models						
Intrinsic motivation	1926.814	758	.939	.928	.044 [.041; .046]	.054
Identified regulation	1858.419	758	.913	.896	.043 [.040; .045]	.052
Introjected regulation	1901.828	758	.928	.915	.043 [.041; .046]	.053
External regulation	2001.607	758	.913	.896	.045 [.043; .048]	.054
CT-C(M-1) invariance over teaching levels						
Intrinsic motivation						
(a) No invariance	2758.019	1516	.938	.926	.045 [.042; .048]	.053
(b) FL of MR	2789.288	1548	.938	.928	.045 [.042; .047]	.056
(c) FL of MR + FL of BD	2813.936	1567	.938	.928	.045 [.042; .047]	.058
(d) FL of MR + FL of BD + LC	2831.611	1588	.938	.930	.044 [.042; .047]	.060
Identified regulation						
(a) No invariance	2720.853	1516	.909	.891	.044 [.042; .047]	.054
(b) FL of MR	2728.876	1548	.911	.896	.044 [.041; .046]	.055
(c) FL of MR + FL of BD	2752.877	1567	.910	.897	.043 [.041; .046]	.057
(d) FL of MR + FL of BD + LC	2773.059	1588	.910	.898	.043 [.040; .046]	.059
Introjected regulation						
(a) No invariance	2783.459	1516	.923	.909	.046 [.043; .048]	.056
(b) FL of MR	2803.454	1548	.924	.911	.045 [.042; .048]	.057
(c) FL of MR + FL of BD	2826.499	1567	.924	.912	.045 [.042; .047]	.058
(d) FL of MR + FL of BD + LC	2846.896	1588	.924	.913	.044 [.042; .047]	.059
External regulation						
(a) No invariance	2803.267	1516	.914	.898	.046 [.043; .049]	.056
(b) FL of MR	2854.609	1548	.913	.898	.046 [.043; .048]	.058
(c) FL of MR + FL of BD	2876.198	1567	.913	.899	.046 [.043; .048]	.059
(d) FL of MR + FL of BD + LC	2901.391	1588	.912	.900	.045 [.043; .048]	.065

Note: CFI = Comparative Fit Index; TLI = Tucker–Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardised Root Mean Square Residual; FL = Factor Loadings; LC = latent correlations between regulations and burnout; MR = motivational regulations; BD = burnout dimensions.

**Table 2.** Descriptive statistics, reliabilities, and CFA latent correlations.

	<i>M</i>	<i>SD</i>	<i>Omega</i> 95% CI	Emotional exhaustion	Depersonalisation	Reduced personal accomplishment
<i>Intrinsic motivation</i>						
Job level	5.47	1.17	.871 [.848; .889]	-.42***	-.38***	-.61***
Task level						
Class preparation	4.69	1.41	.930 [.916 ; .941]	-.25***	-.29***	-.34***
Teaching	6.20	0.93	.910 [.881; .929]	-.27***	-.27***	-.39***
Student evaluation	4.05	1.49	.929 [.915; .941]	-.33***	-.28***	-.35***
Class management	2.81	1.71	.952 [.940; .960]	-.29***	-.24***	-.35***
Administrative tasks	2.93	1.51	.926 [.915; .937]	-.33***	-.25***	-.33***
Complementary tasks	3.85	1.79	.992 [.962; .998]	-.35***	-.16***	-.26***
<i>Identified regulation</i>						
Job level	5.45	1.16	.710 [.668; .750]	-.39***	-.35***	-.52***
Task level						
Class preparation	5.99	0.97	.781 [.739; .821]	-.11**	-.30***	-.33***
Teaching	6.48	0.69	.701 [.605; .775]	-.14**	-.27***	-.40***
Student evaluation	5.58	1.32	.885 [.864; .904]	-.17***	-.22***	-.30***
Class management	6.03	1.03	.768 [.714; .805]	-.15**	-.23***	-.38***
Administrative tasks	4.80	1.56	.885 [.867; .900]	-.20***	-.24***	-.29***
Complementary tasks	4.19	1.69	.897 [.811; .911]	-.35***	-.20***	-.30***
<i>Introjected regulation</i>						
Job level	3.41	1.51	.726 [.692; .757]	.15***	.11*	.04
Task level						
Class preparation	3.08	1.81	.889 [.871; .905]	.23***	.14**	.15**
Teaching	2.79	1.90	.853 [.828; .873]	.24***	.18***	.11**
Student evaluation	3.21	1.94	.902 [.883; .918]	.22***	.16**	.12**
Class management	3.16	1.89	.849 [.826; .869]	.27***	.18***	.12**
Administrative tasks	3.11	1.83	.885 [.863; .901]	.25***	.16**	.06
Complementary tasks	2.65	1.71	.908 [.888; .923]	.30***	.18***	.10*
<i>External regulation</i>						
Job level	3.93	1.39	.762 [.726; .793]	.11**	.06	.09
Task level						
Class preparation	3.32	1.45	.594 [.544; .638]	.27***	.23***	.20***
Teaching	3.09	1.70	.737 [.699; .768]	.20***	.18***	.10*
Student evaluation	3.94	1.87	.825 [.796; .846]	.27***	.18***	.14**
Class management	3.50	1.64	.707 [.669; .741]	.24***	.22***	.18***
Administrative tasks	4.51	1.74	.811 [.781; .838]	.32***	.20***	.11*
Complementary tasks	4.18	1.81	.837 [.812; .858]	.39***	.22***	.18**

\* $p < .05$ .\*\* $p < .01$ .\*\*\* $p < .001$ .

### Main analysis

Our hypotheses were formulated under the assumption that motivation can be differentiated by the specificity level, in this case, job and task level. To test this assumption, we performed four CT-C(M-1) models (one for each regulation) to estimate the consistency and method-specificity coefficients for each regulation and to obtain latent correlations between task-specific latent constructs and burnout that exceed the common variance at the job level.

These models provided satisfactory fit to the data (see Table 1). The consistency coefficient indicates the proportion of true variance of indicators that is shared at the job level, whereas the method-specificity coefficient represents the proportion of true variance for the items that is shared at the task level (see Eid et al., 2008, for more details). The consistency coefficients were relatively low: intrinsic motivation (means = .01–.29), identified regulation (means = .03–.17), introjected (means = .02–.22), and external regulations

(means = .02–.25). In contrast, the method-specificity coefficients were relatively high: intrinsic motivation (means .71–.99), identified regulation (means .83–.97), introjected (means .78–.98), and external regulations (means .75–.98). This indicates that the true item variance for all motivational regulations is explained mainly at the task level (71–99%). In addition, the analysis of latent correlations between CFA and CT-C(M-1) models showed that, despite similar correlations between burnout and regulations at the job level, the correlations between burnout and regulations at the task level decreased considerably (mainly for autonomous regulations). Along with the consistency and method-specificity coefficients, these results support the assumption that motivational regulations at the task level differ from those at the job level. Importantly, this allowed us to test our hierarchical hypotheses more stringently.

Hypothesis 1a posits that autonomous regulations at the job level are negatively associated with burnout. In support of this hypothesis, the results in Table 3 show that intrinsic motivation and identified regulation at the job level are negatively associated with

**Table 3.** CT-C(M-1) latent correlations between motivational regulations and burnout.

	Emotional exhaustion	Depersonalisation	Reduced personal accomplishment
<i>Intrinsic motivation</i>			
Job level	-.42 <sup>****a-b-c-d-e</sup>	-.38 <sup>****a-b-c-d-e-f</sup>	-.61 <sup>****a-b-c-d-e-f</sup>
Task level			
(a) Class preparation	-.10 <sup>**</sup>	-.16 <sup>***</sup>	-.11 <sup>**</sup>
(b) Teaching	-.05	-.08	-.07
(c) Student evaluation	-.17 <sup>***</sup>	-.14 <sup>***</sup>	-.11 <sup>**</sup>
(d) Class management	-.17 <sup>***</sup>	-.13 <sup>***</sup>	-.18 <sup>***</sup>
(e) Administrative tasks	-.18 <sup>***</sup>	-.12 <sup>**</sup>	-.10 <sup>**</sup>
(f) Complementary tasks	-.22 <sup>***</sup>	-.04	-.05
<i>Identified regulation</i>			
Job level	-.39 <sup>****a-b-c-d-e</sup>	-.35 <sup>****a-b-c-d</sup>	-.52 <sup>****a-b-c-d-e-f</sup>
Task level			
(a) Class preparation	.03	-.20 <sup>***</sup>	-.16 <sup>**</sup>
(b) Teaching	.02	-.14 <sup>**</sup>	-.21 <sup>***</sup>
(c) Student evaluation	-.05	-.11 <sup>*</sup>	-.14 <sup>**</sup>
(d) Class management	-.01	-.11 <sup>*</sup>	-.21 <sup>***</sup>
(e) Administrative tasks	-.05	-.11 <sup>*</sup>	-.10 <sup>*</sup>
(f) Complementary tasks	-.22 <sup>***</sup>	-.08	-.12 <sup>*</sup>
<i>Introjected regulation</i>			
Job level	.15 <sup>***f</sup>	.11 <sup>*</sup>	-.04 <sup>a-b-c-d-f</sup>
Task level			
(a) Class preparation	.19 <sup>***</sup>	.10 <sup>*</sup>	.17 <sup>***</sup>
(b) Teaching	.20 <sup>***</sup>	.14 <sup>**</sup>	.14 <sup>***</sup>
(c) Student evaluation	.18 <sup>***</sup>	.13 <sup>**</sup>	.15 <sup>***</sup>
(d) Class management	.23 <sup>***</sup>	.15 <sup>**</sup>	.16 <sup>***</sup>
(e) Administrative tasks	.21 <sup>***</sup>	.13 <sup>**</sup>	.09
(f) Complementary tasks	.27 <sup>***</sup>	.15 <sup>**</sup>	.12 <sup>**</sup>
<i>External regulation</i>			
Job level	.09 <sup>**a-c-e-f</sup>	.07 <sup>f</sup>	.08
Task level			
(a) Class preparation	.25 <sup>***</sup>	.21 <sup>***</sup>	.18 <sup>***</sup>
(b) Teaching	.18 <sup>***</sup>	.16 <sup>***</sup>	.07
(c) Student evaluation	.25 <sup>***</sup>	.16 <sup>***</sup>	.12 <sup>*</sup>
(d) Class management	.22 <sup>***</sup>	.21 <sup>***</sup>	.16 <sup>**</sup>
(e) Administrative tasks	.31 <sup>***</sup>	.18 <sup>***</sup>	.08
(f) Complementary tasks	.38 <sup>***</sup>	.21 <sup>***</sup>	.15 <sup>**</sup>

Note: Letters indicate differences between correlations at the job and task level;

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$

emotional exhaustion, depersonalisation, and reduced personal accomplishment. All six relationships were statistically significant.

Hypothesis 1b posits that controlled regulations at the job level are positively associated with burnout. The results for introjected regulation show positive and significant relationships with emotional exhaustion and depersonalisation, but a non-significant relationship with reduced personal accomplishment. For external regulation, a positive and significant relationship was found for emotional exhaustion, but non-significant relationships with depersonalisation and reduced personal accomplishment. Hypothesis 1b is supported for three of the six possible relationships.

According to Hypothesis 2a, autonomous motivation at the task level should be negatively associated with burnout. For intrinsic motivation, this hypothesis is supported for 13 of the 18 relationships. The non-significant relationships involve teaching or complementary tasks. For identified regulation, Hypothesis 2a is rejected for 5 of the 6 relationships involving emotional exhaustion (the only significant relationship involves complementary tasks), but supported for 11 of the 12 relationships involving depersonalisation and reduced personal accomplishment at work. The non-significant relationship involves complementary tasks. In summary, Hypothesis 2a is supported for 26 of the 36 possible relationships.

Hypothesis 2b posits that controlled regulations at the task level are positively associated with burnout. For introjected regulation, this hypothesis is supported for 17 of the 18 relationships. The non-significant relationship involves administrative tasks. For external regulation, Hypothesis 2b is rejected for 2 of the 6 relationships involving reduced personal accomplishment, but supported for the 12 relationships involving emotional exhaustion and depersonalisation. The two non-significant relationships involve teaching and administrative tasks. In summary, Hypothesis 2b is supported for 33 of 36 possible relationships.

Hypothesis 3 posits that autonomous (intrinsic motivation and identified regulation) and controlled regulations (introjected and external) at the job and task level are differently but concurrently associated with burnout. One way to test this hypothesis is to compare models in which correlations are fixed to be equal to those in models without equality constraints. The likelihood ratio test allows determining whether the difference between models is statistically significant.

For autonomous regulations, the results show that intrinsic motivation at the job level is more negatively associated with emotional exhaustion, depersonalisation, and reduced personal accomplishment than is intrinsic motivation at the task level. Only the correlations between intrinsic motivation towards complementary tasks and emotional exhaustion show no significant difference. A similar pattern of results was found for identified regulation. The only differences were for two relationships involving depersonalisation with identified regulation towards administrative and complementary tasks. These two correlations did not differ significantly from the correlation between depersonalisation and identified regulation at the job level. In summary, these results indicate that 32 of the 36 correlations between the burnout dimensions and autonomous regulations are stronger at the job than task level.

For controlled regulation, the results show that introjected regulation at the job level is less positively associated with emotional exhaustion, depersonalisation, and reduced personal accomplishment compared to introjected regulation at the task level. However, not

all correlations differ significantly at the job and task level. For emotional exhaustion, only the relationship involving introjected regulation towards complementary tasks differs significantly, with a lower correlation at the job level. No difference was found for depersonalisation. As for reduced personal accomplishment, the correlation with introjected regulation was lower at the job level than all correlations at the task level (except for administrative tasks). A similar pattern of results was observed for external regulation. The correlations are globally lower at the job than task level. For emotional exhaustion, the correlations involving external regulation towards teaching, student evaluation, and administrative and complementary tasks differ significantly, with a lower relationship for external regulation at the job level. For depersonalisation, only the correlation involving complementary tasks is significantly lower than the correlation at the task level. For reduced personal accomplishment at work, the correlations did not differ significantly between the job and task level. In summary, these results provide support for Hypothesis 3, with 32 of 36 correlations between burnout and autonomous regulations differing significantly at the job and task level and with 12 of 36 correlations involving controlled regulations. These findings support the idea that burnout is associated mainly with autonomous regulations at the job level, with weaker associations at the task level.

### *Supplementary analysis*

To rule out differences between elementary and high-school teachers, we tested for the invariance of the four CT-C(M-1) models across the two subsamples. This test is particularly useful for comparing scores for teachers who are involved in similar tasks but for whom the job realities differ considerably according to teaching level. For example, if a significant relationship is found between intrinsic motivation and emotional exhaustion, but only for elementary teachers, the generalisability of the findings would be considerably lessened. Accordingly, we tested for invariance measurement of motivational regulations (see [Table 1](#), model b), then invariance measurement of burnout dimensions (model c), and finally for invariance of the latent correlations between the motivational regulation and burnout dimensions (model d). For model comparison, we examined changes in fit indices based on the following recommended guidelines (Chen, 2007; Cheung & Rensvold, 2002): a CFI diminution of .01 or less and a RMSEA augmentation of .015 or less between a model and the previous one indicate that the measurement invariance hypothesis should not be rejected. As presented in [Table 1](#), the results provide good support for invariance across teaching level, because the fit indices do not substantially decrease with increasingly stringent equality constraints.

### **Discussion**

The aim of this study was to better understand differential relationships between teacher burnout and motivational regulations. Based on a hierarchical structure of motivational regulations, the results fairly support the predicted associations between burnout and autonomous and controlled regulations at both the job level (Hypothesis 1) and task level (Hypothesis 2). More importantly, the results reveal that regulations at the job and task level are differently but concurrently associated with burnout (Hypothesis 3). Whereas autonomous regulations at the job level are more strongly associated with

burnout compared to those at the task level, controlled regulations are more strongly associated with burnout at the task level than at the job level. To our knowledge, this is the first study to identify the variance in contextualised regulations (job vs. task level) in order to explain burnout in teachers. These findings have promising implications for the research on burnout and work motivation.

### **Implications for research**

#### ***Burnout and the multidimensional and hierarchical nature of teacher motivation***

In addition to qualifying the premise that more highly motivated employees are at higher risk for burnout, accounting for the hierarchical structure of motivational regulations offers new avenues for understanding burnout. Thus, burnout would not reflect only psychological disengagement from the overall job context. For teachers, it would also be closely associated with motivation towards work tasks. Whereas autonomous regulations at the job level could be particularly helpful for preventing burnout, task-specific controlled regulations would foster burnout. One plausible explanation for these findings would be a lack of interest, pleasure, or satisfaction in the task, creating a breach in the teacher's motivation towards the job as a whole, and consequently a risk of burnout. Alternatively, lack of autonomous motivation at the job level could stem from certain tasks.

It is noteworthy that, compared to autonomous regulation, controlled regulation shows a less consistent results pattern. Whereas introjected regulation towards tasks (relative to job level) is more strongly related to reduced personal accomplishment, external regulation towards tasks (relative to job level) is more strongly related to emotional exhaustion. This indicates that reduced personal accomplishment could be due more to pressures felt by teachers when performing specific tasks rather than to a general feeling of having to maintain a positive self-image at work. Similarly, emotional exhaustion would be associated more with the benefits (e.g. approval by others) and losses (e.g. reprimands) involved in the motivational experience associated with certain tasks rather than with general external contingencies such as working for monetary reward. When it comes to depersonalisation, however, introjected and external regulation show no differences with respect to job tasks, suggesting that detachment from others would not be more strongly associated with specific tasks than with the job in general. In addition to the relevance of considering the burnout dimensions separately, these results highlight the need to further investigate the developmental dynamics of motivational regulations at the job and task level in order to better delineate their role in the etiology of burnout.

*The optimal level of specificity of motivational constructs.* While advancing the knowledge on burnout, our study takes a step towards a deeper understanding of work motivation. More precisely, taking into account the specificity of the motivational constructs refines our comprehension of the regulations proposed by SDT (Deci & Ryan, 1985, 2000) as well as their hierarchical structure (Vallerand, 1997; Vallerand & Miquelon, 2016).

Consistent with other hierarchical conceptualisations (e.g. Shavelson et al., 1976), our findings suggest that teachers' contextual motivation can be divided into two components at two specificity levels: motivational orientation towards the job (job-level motivation) and motivation towards specific tasks (task-level motivation). Thus, the various reasons that drive teachers to invest in their job are not experienced in the same way across

different tasks. These results are reflected in the consistency and method-specificity coefficients between regulation at the job and task level and in the pattern of relationships with the burnout dimensions. Taken together, the results indicate that task-specific regulations, and more particularly controlled regulations, capture the specific variance in burnout that exceeds the common variance at the job level. These findings provide support for the premise that motivational regulations at the job and task level act in a complementary manner. This highlights the need to explore in greater depth the task-specific nature of motivational regulations at work, a perspective that has been largely neglected in SDT research, but which could extend (Vallerand's 1997; Vallerand & Miquelon, 2016) hierarchical model.

The particular relationship patterns observed in the present study pose somewhat of a challenge to Bandura's (1997) proposal that global dispositions do not exist. From that perspective, we would not expect to find relationships between global contextualised and work-related outcomes. Nevertheless, we found that not only are motivational regulations distinct at both the job and task level, but also that autonomous regulations at the job level are more closely associated with burnout than are task-specific autonomous regulations. Although these findings suggest that each motivation has its own regulatory system, and that they complement each other in relation to burnout, one could argue that regulations still operate selectively across different context-specific tasks. Indeed, despite the role played by motivational regulations at the job level, task-specific regulations were not uniformly associated with burnout. This compelling finding highlights the need to explore in greater depth the specific antecedents and outcomes of teachers' motivation while taking into account regulations at the job level, a perspective that has been largely neglected in SDT and other motivational theories.

### **Limitations**

This study includes certain limitations that should be mentioned. First, like the vast majority of burnout studies (Schaufeli, 2003), we used a cross-sectional design. This allows only a restricted explanation of a highly complex process of psychological disengagement that occurs over time. In this sense, our results relate motivational correlates of this psychological state without allowing for causal inferences between the variables or related to the burnout process itself. Although some cross-lagged studies have supported the proposal that employee motivation influences burnout rather than the inverse (e.g. Fernet, Austin, & Vallerand, 2012), a reciprocal relationship remains plausible. In order to advance the understanding of this dynamic, future studies should include multiwave longitudinal data and complex modelling, such as in the present study. However, it should be noted that such complex modelling may limit the understanding of the relative contribution of the motivational regulations at play, as in the context of this study in which hypotheses were tested with separate models (one for each regulation). Second, our study investigated only a limited number of variables. Future studies should include work environment variables (e.g. organisational and task stressors) as well as certain consequences of burnout (e.g. school performance) so as to better delineate the role of each motivational regulation. Third, although the sample is fairly representative of the demographic distribution of elementary and high-school teachers in the two school boards, it remains a convenience sample, with a relatively low



response rate (32%). Our results should be replicated in other Canadian provinces and other countries to improve the generalisability. It would also be instructive to explore the hierarchical and multidimensional nature of motivation in relation to burnout in other employment situations.

### **Practical implications**

Despite these limitations, this study offers meaningful insights that could potentially reduce teacher burnout. Our results demonstrate the need to pay closer attention to teachers' autonomous regulations at the job level and controlled regulations at the task level. From an organisational perspective, school administrators are recommended to consider each level of specificity in order to design better targeted interventions. In line with the SDT-based research, which contends that the satisfaction of basic psychological needs is a *sine qua non* condition for the development of autonomous regulations (Deci & Ryan, 2000), it would be advisable to focus on key satisfaction facilitators and barriers. At the job level, it has been shown that job resources (emotional, cognitive, and physical) foster employee motivation through the satisfaction of the basic needs for autonomy, competence, and relatedness (Trépanier et al., 2015). In this sense, the quality of leadership practices (e.g. Eyal & Roth, 2011), the support and trust of colleagues (e.g. Wahlstrom & Louis, 2008), and professional recognition and autonomy (e.g. Fernet, Austin et al., 2012) would constitute effective levers of intervention. In addition, Trépanier et al. emphasise that, besides lack of job resources, the presence of demands at work gives rise to controlled motivation through frustration of psychological needs. In light of the results of the present study, which indicate that controlled regulations at the task level are more strongly associated with burnout than controlled regulations at the job level, it would be relevant to develop interventions designed to identify and reduce the main task-specific stressors. For example, whereas student misbehaviour can be a major source of stress that erodes teachers' feelings of competence in the classroom (Aloe et al., 2014), overload and other stressors might have a stronger impact on the teacher's motivational resources for other tasks (e.g. administrative, complementary). One of the benefits of targeting facilitators in conjunction with barriers is that job resources not only tend to foster the achievement of planned objectives, they can also mitigate the harmful effects of job or task stressors and the associated psychological costs (Bakker & Demerouti, 2007).

In conclusion, we hope that this study draws more attention to the need to consider the multidimensional nature of work motivation in relation to burnout, as it provides a more nuanced understanding of why burnout might reflect the high cost of high motivation. By accounting for the hierarchical nature of motivation in this multidimensional analysis of regulations, we have taken a first tentative step towards advancing the understanding of how motivations at the job and task level are distinctly related to burnout. These findings can serve as a springboard for a more thorough understanding of not only the antecedents of burnout, but also the costs for the individuals and organisations affected.

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