

## Burnout in Chilean public teachers: analysis of the health impairment process

### ABSTRACT

**Objective:** This study examined the health damaging process proposed by the Work Demands-Resources model, in a sample of Chilean high school teachers. **Material and method:** Specifically, the direct effect of work demands (time pressure, ambiguity in the teachers' role, and problematic interaction with students) and work resources (training opportunities, control over work environment and social support) were analyzed with respect to burnout levels (emotional exhaustion, depersonalization, and achievement failure), in 303 municipal teachers. Additionally, the interactions between demands and resources, which may also affect burnout levels, were studied. **Results:** Multiple regression analysis showed a positive association between work demands and burnout. Problematic interactions with students and time pressures were among the main demands that affected teachers. A negative association between work resources and burnout was observed only in the main aspects of burnout (emotional exhaustion and depersonalization). Likewise, work resources moderated the effect of work demands only in the achievement failure variable. **Conclusions:** This study highlights the results obtained with the Work Demands and Resources model, and discusses practical implications for this model in teacher wellbeing research in Chile.

**Key words:** mental health, burnout, teachers.

### RESUMEN

**Objetivo:** El presente estudio examinó el proceso de daño a la salud propuesto por el modelo de Demandas-Recursos del Trabajo en una muestra de profesores chilenos de enseñanza media. **Material y método:** Específicamente, se analizó el efecto directo de las demandas (presión de tiempo, ambigüedad de rol e interacción problemática con estudiantes) y los recursos del trabajo (oportunidades de formación, control sobre el trabajo y apoyo social) en los niveles de burnout (desgaste emocional, despersonalización y falta de logro) de 303 profesores municipales. Adicionalmente se examinaron si las interacciones entre las demandas y los recursos afectan los niveles de burnout. **Resultados:** Análisis de regresión múltiple evidenciaron la asociación positiva entre las demandas del trabajo y burnout. Dentro de las principales demandas que afectaron a los docentes se encontraron interacción problemática con estudiantes y presión de tiempo. La asociación negativa entre los recursos del trabajo y burnout se observó solamente en las dimensiones nucleares de burnout (desgaste emocional y despersonalización). Asimismo, los recursos del trabajo moderaron el efecto de las demandas laborales sólo en la dimensión falta de logro. **Conclusiones:** El estudio destaca los resultados obtenidos dentro del modelo de Demandas y Re-

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*curso del Trabajo y discute las implicaciones prácticas de este modelo para la investigación sobre el bienestar docente en Chile.*

**Palabras clave:** salud mental, burnout, profesores.

## INTRODUCTION

During the last years, several countries and organisations have expressed their concern about the health situation of teachers<sup>1</sup>. High rates of stress, sick leaves and health complaints are some common indicators of ill-health in the teaching population<sup>2,3</sup>. Scholars have related teachers' health problems, and their associated consequences, to the characteristics of the teaching profession and the changes that they have experienced over the last three decades.

First, currently, teachers around the world face increasing levels of workload. This phenomenon has to do not only with the diversity of their duties but also with the amount of required tasks<sup>4</sup>. The lack of time emerges as one of the main problems threatening the attainment of the educational goals, but it also has direct repercussions in teachers' health<sup>5</sup>.

Second, the broad range of tasks teachers need to accomplish give rise to another important topic that also affects their wellbeing: role ambiguity. Nowadays, there is lack of clarity regarding the actual role of teachers, who need to meet explicit and tacit demands coming from different stakeholders (i.e. principals, parents and society). This situation turns into an important source of stress when the expectations are not clear<sup>6</sup>.

Third, aside from the stressors described above, teachers also face demands related to the relationship with the students and particularly student misbehaviour<sup>7</sup>. This topic is particularly worrying in the case of teachers working with risk students, which is the common case of public teachers. Among these students, misbehaviour may turn into aggression towards other students but also towards teachers<sup>8</sup>. This phenomenon has captured the attention of scholars due to the increase in its occurrence and its impact in teachers' mental health<sup>9,10</sup>.

From this perspective, teachers working in

public, municipal schools are particularly vulnerable to stress and negative health outcomes. Besides dealing with general demands, also prominent in other occupations (i.e. time pressure and role ambiguity), they also face discipline issues. In this context, public teachers represent an interesting and relevant topic for the field of occupational health psychology. Based on the previous arguments, the present study focuses on a sample of municipal Chilean school teachers. Particularly, we analyze how the aforementioned job aspects influence burnout. We therefore rely on the Job Demands-Resources model<sup>11</sup>.

### The job demands-resources model

The JD-R states that every occupation may have specific risk factors related to job stress. However, irrespective the occupation, job characteristics are classified in two main categories: job demands and job resources<sup>11</sup>. *Job demands* are defined as those psychological, physical, social or organisational job aspects that require sustained emotional, cognitive or physical effort and involve psychological and/or physiological costs. These costs might result in negative health effects such as burnout<sup>12</sup>. In the case of school teachers, evidence reveals that among the main demands affecting their wellbeing are time pressure, discipline problems and work conflict<sup>13</sup>. Accordingly, the present study included three job demands that have been found important predictors of negative health outcomes: time pressure, role ambiguity and student aggression.

The second group of job characteristics proposed by the JD-R corresponds to job resources. These are defined as those psychological, social, physical or organisational work factors, which can: (1) diminish job demands and their related psychological and physiological costs, (2) foster learning, development and employee

Table 1. Mean Descriptive statistics (means and standard deviations), alpha coefficients and intercorrelations emotional exhaustion.

	Mean	SD	$\alpha$	1	2	3	4	5	6	7	8	9	10
<b>Outcomes</b>													
1. Emotional exhaustion	2.56	1.33	.91	—	.46**	-.28**	.23**	.45**	.244**	-.02	-.26**	-.27**	-.17*
2. Depersonalization	1.38	1.11	.69	.46	—	-.47**	.19**	.24**	.290**	-.60**	-.06	-.16**	-.15*
3. Personal accomplishment	1.16	.84	.76	.76	-.20**	—	-.20**	-.04	-.157**	.33**	.10	.23**	.07
<b>Job demands</b>													
4. Role ambiguity	2.24	.70	.79	.79	—	—	—	.38**	.232**	-.01	-.46**	-.62**	-.28**
5. Time pressure	2.99	.57	.82	.82	—	—	—	—	.248**	.26**	-.23**	-.30**	-.08
6. Student aggression	2.85	.81	.89	.89	—	—	—	—	—	.03	-.11	-.14*	-.11
<b>Job resources</b>													
7. Training	3.58	.49	.91	.91	—	—	—	—	—	—	.06	.06	.14*
8. Decision authority	2.63	.58	.64	.64	—	—	—	—	—	—	—	.61**	.38**
9. Social support management	2.55	.66	.85	.85	—	—	—	—	—	—	—	—	.38**
10. Social support colleagues	2.96	.55	.84	.84	—	—	—	—	—	—	—	—	—

\*p &lt; 0.05. \*\*p &lt; 0.01.

growth and (3) are instrumental in accomplishing job goals. The relevance of job resources is thus not restricted to their role in dealing with job demands, but they are also important in their own right. Indeed, job resources have an intrinsic and extrinsic motivational potential<sup>14</sup>. In the teaching practice, the availability of job resources (i.e. supportive environment, job autonomy and training) has been related to teachers' health<sup>5,15</sup>. Consequently, the current study analyzed four job resources: decision authority, training opportunities, social support management and social support colleagues.

According to the JD-R, job demands and job resources elicit two interrelated psychological processes: a health impairment process and a motivation process. The *health impairment process* takes place when employees are exposed to chronic job demands, which drain their mental and physical resources and consequently lead to burnout and health problems<sup>11</sup>. *Burnout* is defined as the final phase in the adaptation stress process. This syndrome is composed of three dimensions: emotional exhaustion, depersonalization and lack of personal accomplishment<sup>12</sup>. *Emotional exhaustion* is defined as feelings of depletion of emotional and

physical resources. Workers feel drained and without emotional resources because of demands at work. *Depersonalization* refers to hostile, negative or distant responses to the work. It is expressed as detached attitudes toward the job. *Lack of personal accomplishment* corresponds to feelings of being unproductive, having low accomplishment and competence in one's work and in the organization<sup>12</sup>.

Although mainly high job demands have been associated with the health impairment process, the lack of job resources has also been found an important predictor of burnout (particularly of depersonalization) and negative health outcomes<sup>16</sup>. Furthermore, job resources play a crucial role in the *motivation process*. Because of their, either intrinsic or extrinsic motivational potential, job resources promote engagement and related positive outcomes at work<sup>17</sup>.

Although the JD-R model is relatively recent, there is a growing body of research lending support to relations of job demands and job resources as suggested in the JD-R<sup>11</sup>. Several studies have provided evidence for both the health impairment process and the motivation process: High job demands (such as workload, emotional demands) have been associated with health

Table 2. Results of step 3 of the hierarchical regression analysis.

	Emotional exhaustion			Depersonalization			Lack of personal accomplishment		
	B	SE B	β	B	SE B	β	B	SE B	β
Gender	-4.17	.93	-.17*	1.07	.40	.09	-.13	.40	.01
Job demands									
Role ambiguity	-.26	.53	-.14	.43	.27	.02	.15	.03	.03
Time pressure	5.29	.44	.45**	1.18	.22	.26**	.39	.07	.07
Student aggression	1.68	.43	.19**	.86	.22	.24**	.78	.14	.14**
Job resources									
Training opportunities	-.76	.41	-.12*	-.74	.21	-.22**	-1.23	-.23	-.23**
Decision authority	-.22	.53	-.20**	.07	.27	.05	.15	.03	.03
Social support management	-.87	.59	-.06	-.08	.30	-.03	-.70	-.13	-.14*
Social support colleagues	-.16	.43	-.01	-.10	.22	-.06	-.21	-.04	-.04

\*p < 0.05. \*\*p < 0.01.

problems<sup>2</sup>, turnover intentions<sup>14</sup>, absenteeism<sup>16</sup>, low job performance<sup>18</sup> and negative attitudes toward organisational change<sup>19</sup> through burnout. The availability of job resources has been related to organizational commitment<sup>2</sup>, intentions to stay in the current job, extra-role performance and feelings of competence<sup>17</sup> and positive evaluations toward organisational change<sup>19</sup>.

As explained in the previous paragraphs, the work environment of Chilean municipal teachers is quite complex, and it has been considered harmful for their mental health<sup>1</sup>. Although the value of investigating motivational factors at the workplace is clearly recognized, the present study seeks to contribute to the understanding of which job aspects explain negatives health

outcomes among Chilean school teachers. Therefore, this study focuses on the health impairment process.

In addition to the main effects of job demands and job resources, the JD-R states that the interaction among job demands and job resources also plays an important role in the development of burnout<sup>20</sup>. Specifically, the buffer hypothesis proposes that job resources may offset the negative consequences of job demands on health. This statement agrees with the buffer hypothesis of the JD-C<sup>21</sup>. However, the latter is more restrictive, since it is limited to two variables: job control and job demands. The JD-R expands this approach, encompassing different kinds of job demands and job resources. As such, JD-R

Table 3. Main and interaction effects of role ambiguity, training opportunities, decision authority, support management and support colleagues.

		Emotional exhaustion	Depersonalization	Lack of personal accomplishment
Independent variables	Effect tested			
Role ambiguity, training opportunities	Main effect Role ambiguity	-.01	.09	.04
	Main effect Training opportunities	-.06	-.13**	-.22**
	Interaction	-.04	-.05	-.04
Role ambiguity, decision authority	Main effect Role ambiguity	-.02	.08	.03
	Main effect Decision authority	-.02	.01	.03
	Interaction	-.00	.03	.09**
Role ambiguity, support management	Main effect Role ambiguity	-.02	.08	.03
	Main effect Support management	-.06	-.03	-.16*
	Interaction	-.02	.03	.12*
Role ambiguity, support colleagues	Main effect Role ambiguity	-.02	.08	.03
	Main effect Support colleagues	-.01	-.02	-.04
	Interaction	-.05	-.03	.07*

\*p < 0.05. \*\*p < 0.01.

scholars acknowledge that the variables which offset the effect of job demands will depend on the characteristics of every occupation<sup>20</sup>. There is already some evidence for the buffer hypothesis in teachers<sup>15,22</sup>.

To summarize, based on the literature this study aimed to analyze the health impairment process in a Chilean sample of municipal school teachers. The following hypotheses are addressed:

*H1*: Job demands will be positively associated with burnout.

*H2*: Job resources will be negatively associated with burnout.

*H3*: Job resources will moderate the relation between job demands and burnout. More specifically, the association between job demands and burnout will be stronger when job resources are weak.

## METHOD

### Design and sample

The present study corresponds to a secondary analysis of a sample of teachers working for municipal schools. The sample was composed of 303 secondary teachers from 16 schools randomly selected from a sample frame provided by the Chilean Ministry of Education.

The schools were contacted by mail and telephone. The data were gathered via a paper and pencil individual questionnaire. A covering letter explaining the study accompanied the questionnaire. After having the consent of the teachers, questionnaires were filled out during collective sessions.

The response rate was 83%. Regarding the background variables, fifty-six percent of the respondents were female, while 44% were male. More than half of the sample (63%) was between 40 and 59 years old, married or cohabiting (68%) and had at least one child (74.6%). Concerning the tenure of the participants, there were two extreme groups: the younger teachers, which had worked less than six years as a teacher (18.5%) and the older teachers, which had more than fifteen years in the teaching profession (57.5%). Finally, forty-eight percent of the teachers reported to have an additional job, 21.9% of them working in a different occupation.

## INSTRUMENTS

Variables were divided in four groups: demographic characteristics, health outcomes, job demands and job resources.

*Demographic characteristics.* The background variables correspond to: gender (male = 1, female = 0), age (less than 30 years old, between 30 and 39 years old, between 40 and 49 years old, and older than 50 years old), marital status (single, married, in a relationship, divorced and widow), number of children (one or more children = 1, no children = 0), educational level (more than 2 years of initial training = 1, less than 2 years of initial training = 0) and years of teaching experience (from 6 to 9 years, from 10 to 19 years, from 11 to 19 years and more than 20 years). The criterion to consider the background variables was that in previous studies they were found to be important predictors of burnout<sup>23</sup>.

*Health outcomes.* The Maslach Burnout Inventory<sup>24</sup> was used to measure the three dimensions of burnout: emotional exhaustion (10 items), depersonalization (5 items) and personal accomplishment (7 items). Each item has seven answer categories ranging from 0 (never) to 6 (every day). Principal Component Analysis (PCA) confirmed the one-dimensional structure of each of the subscales. The reliability of the scales were acceptable to good (emotional exhaustion .91; depersonalization .69 and personal accomplishment .76).

*Job demands.* Three indicators of job demands were measured using the Spanish version of the Leiden Quality of Work Questionnaire<sup>25</sup>: time pressure (7 items), role ambiguity (4 items) and student aggression (3 items). The items were rated on a 4-point scale (1 = strongly disagree, 4 = strongly agree). Construct validity was tested by means of PCA. All the job demands were entered in the same PCA. Results showed the items loaded on the expected factors. Internal consistency of the three scales was good (time pressure = .82, role ambiguity = .79 and student aggression = .89).

*Job resources.* Four job resources from the Spanish version of the Leiden Quality of Work Questionnaire<sup>25</sup> were included: training (3 items), decision authority (6 items), social support from management (4 items) and social

Table 4. Main and interaction effects of time pressure, training opportunities, decision authority, support management and support colleagues.

		Emotional exhaustion	Depersonalization	Lack of personal accomplishment
Independent variables	Effect tested			
Time pressure, training opportunities	Main effect time pressure	.44**	.21*	.06
	Main effect training opportunities	-.06	-.13**	-.22
	Interaction	-.00	.00	.05
Time pressure, decision authority	Main effect time pressure	.44**	.21**	.06
	Main effect decision authority	-.02	.01	.02
	Interaction	-.01	.02	.09*
Time pressure, support management	Main effect time pressure	.45**	.21**	.05
	Main effect support management	-.07	-.02	-.14*
	Interaction	-.03	.04	.10**
Time pressure, support colleagues	Main effect time pressure	.44**	.21**	.06
	Main effect support colleagues	-.01	-.02	-.04
	Interaction	-.01	.03	.12*

\* $p < 0.05$ . \*\* $p < 0.01$ .

support from colleagues (5 items). Items were rated on a 4-point scale (1 = totally disagree, 4 = totally agree). PCA including all items of the job resources confirmed the construct validity of the four job resources, which were all characterised by a one dimensional structure. The reliability of the scales ranged from fair to good (training = .91, decision authority = .64, social support from the management = .85, social support from colleagues = .84).

### STATISTICAL ANALYSES

In order to test hypotheses the main effects of job demands and job resources on burnout (hypothesis 1 and 2), hierarchical regression

analyses were performed for each outcome variable (emotional exhaustion, depersonalization and personal accomplishment). In the first step of the analysis, the demographic variables were entered (gender, age, relationship status, initial education, and if they have children). Then, in the second step, three job demands were included: role ambiguity, time pressure and student aggression. Next, in the third step, five job resources were entered: training, decision authority and two kinds of social support: from management and from colleagues.

The hypothesis 3, namely the buffer role of job resources, was also tested by using hierarchical regression analyses; however, in this

case one regression analysis for each interaction effect was performed. In total 36 regressions were calculated. The first step of each of these regression analyses included the background variables. The particular job demand and job resource were entered in the second and third step, respectively. The interaction effect between these particular job demands and job resources was added in the fourth step.

## RESULTS

Table 1 displays the descriptive statistics and correlations between the variables. As expected,

the dimensions of burnout related to each other: while emotional exhaustion and depersonalisation related positively, personal accomplishment related positively to the other two subscales. Most job demands and job resources related to the burnout dimensions in the expected direction.

### Primary analysis

#### *Emotional exhaustion*

As displayed in Table 2, in the group of background variables, there was one main effect: Female teachers reported higher level of emotional exhaustion than male teachers. In the second

Table 5. Main and interaction effects of student aggression, training opportunities, decision authority, support management and support colleagues.

			Emotional exhaustion	Depersonalization	Lack of personal accomplishment
Independent variables	Effect tested				
Student aggression, training opportunities	Main effect	Student aggression	.15*	.16**	.15**
	Main effect	Training opportunities	-.06	-.13**	-.22**
	Interaction		-.06	-.05	-.07*
Student aggression, Decision authority	Main effect	Student aggression	.14**	.15**	.14*
	Main effect	Decision authority	-.02	.13	.03
	Interaction		-.06	-.03	-.01
Student aggression, support management	Main effect	Student aggression	.14**	.14**	.14**
	Main effect	Support management	-.06	-.06	-.12**
	Interaction		-.06	-.06	-.02
Student aggression, support colleagues	Main effect	Student aggression	.13	.15**	.14**
	Main effect	Support colleagues	-.01	-.16	-.04
	Interaction		-.07*	-.04	.02

\*p < 0.05. \*\*p < 0.01.



step, it was examined whether the job demands (i.e. role ambiguity, time pressure and student aggression) related positively to emotional exhaustion (hypothesis 1). The results revealed two statistically significant main effects. As expected, high levels of time pressure and student aggression were associated with high levels of emotional exhaustion. In the third step, it was examined whether job resources (i.e. training opportunities, decision authority, social support from management and from colleagues) related negatively to emotional exhaustion (Hypothesis 2). This assumption was partially confirmed, since two resources were significant predictors of emotional exhaustion. Specifically, two main effects were found for decision authority and social support management: teachers who were autonomous and had supportive principals, obtained lower scores on emotional exhaustion. The interaction effects between job demands and job resources were examined in a different regression model (see Tables 3, 4 and 5). The results provided only little support for Hypothesis 3 suggesting that job resources would play a buffering role. Only one out of 12 interactions was statistically significant. Particularly, the effect of student aggression was moderated by social support from colleagues.

### *Depersonalization*

As indicated in Table 2, in the first step of the analysis, none of the demographic variables were significant predictors of depersonaliza-

tion. In the second step, in line with Hypothesis 1, the positive associations of the different job demands (i.e. role ambiguity, time pressure and student aggression) and depersonalization was analyzed. The regression analyses showed two main effects: time pressure and student aggression. As predicted, high levels of time pressure and student aggression were significantly related to high scores on depersonalization. In the third step Hypothesis 2 was tested, namely, that job resources (i.e. training opportunities, decision authority, social support from management and from colleagues) would relate negatively to depersonalization. This assumption was partially supported, since one main effect was found. Teachers who perceived more opportunities to update their knowledge and skills reported lower levels of depersonalization. The buffer hypothesis of job resources (Hypothesis 3) was not supported, since no significant effects were observed (see Tables 3, 4 and 5).

### *Lack of personal accomplishment*

Table 2 shows that none of the demographic variables was a significant predictor of lack of personal accomplishment. In the second step, in line with Hypothesis 1, the associations between job demands (i.e. role ambiguity, time pressure and student aggression) and personal accomplishment were examined. Significant main effects were found for role ambiguity and student aggression. As expected, both job demands showed positive associations with per-

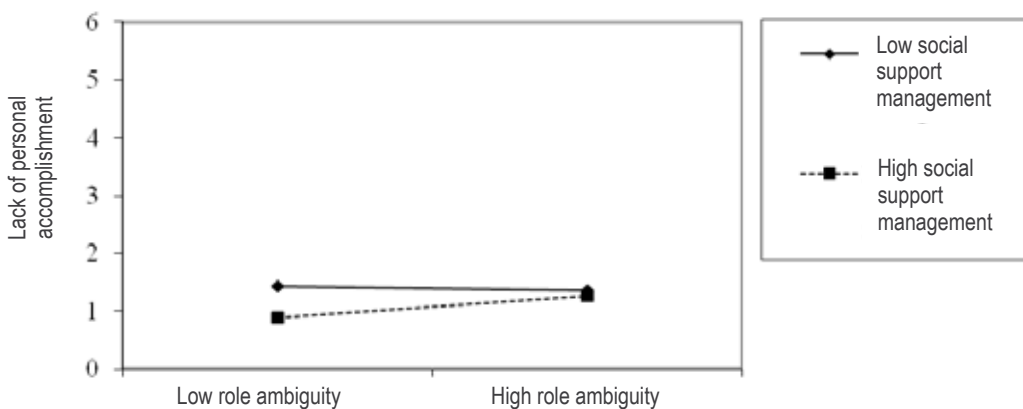


Figure 1. Interaction between role ambiguity and social support management in the prediction of lack of personal accomplishment.

sonal accomplishment. The third step analyzed the negative relationship between job resources (i.e. training opportunities, decision authority, social support from management and from colleagues) and lack of personal accomplishment as suggested in Hypothesis 2. The results revealed two main effects on training opportunities and social support from management. As predicted, low scores on training opportunities and social support from management were associated with high scores on lack of personal accomplishment. Finally, the interactions between job resources and job demands were examined, as outlined in Hypothesis 3. As noted in Tables 3 to 5, seven out of 12 interactions were significant. However, high job resources, unexpectedly, were not associated with lower levels of lack of personal accomplishment, when job demands were high. As indicated in Figure 1, the major differences were found between those with low and high levels of job resources. Teachers with high job resources experienced lower levels of lack of personal accomplishment, compared to those with fewer job resources. The buffer hypothesis was, however, confirmed in training opportunities. As displayed in Figure 2, teachers who scored high in student aggression reported low levels of lack of personal accomplishment when training opportunities are high.

## DISCUSSION

The present study examined the health impairment process proposed by the JD-R model in a sample of Chilean secondary teachers. Besides their contribution to the achievement of educational goals, in Chile, teachers support and help risk students. Public secondary teachers thus play an important role for the school communities. Therefore, through the analysis of the health impairment process, this study may shed light on the job aspects that are relevant for teachers' health. As such, these findings can facilitate the promotion of better work environments.

From the JD-R perspective, job demands and job resources play an important role in the development of burnout and health problems<sup>11</sup>. In line with the JD-R's health impairment process, we assumed that job demands are positively related to burnout (Hypothesis 1). The

results of this study provide support for this assumption. Indeed, all the job demands (role ambiguity, time pressure and student aggression) showed at least one association with the burnout dimensions. Teachers working under high levels of time pressure and student aggression obtained high scores on emotional exhaustion and depersonalization. Additionally, student aggression was significantly associated with lack of personal accomplishment.

These findings are in line with previous studies, which indicate that work overload and student aggression are important sources of stress for school teachers<sup>5,15</sup>. The results also correspond with the assumptions of Latin American studies<sup>1</sup> indicating that teachers need to meet different tasks, and not all of them correspond to their formal duties<sup>26,27</sup>.

One possible explanation for the important role of student aggression may be the context where public teachers work. Indeed, some scholars propose that teachers working in public schools are exposed to the most vulnerable student population<sup>28</sup>. Therefore, aside from the common demands of the teaching practice, public teachers have to deal with high levels of dropout rates, serious social problems outside the schools as well as within the classroom<sup>4</sup>. This study points out that this situation has serious repercussions for their mental health.

Besides the main effects of time pressure and student aggression, the data revealed that role ambiguity was also significantly related to depersonalization. This result is in line with studies on teacher burnout<sup>5</sup>. These findings suggest that clarifying the duties and responsibilities of secondary teachers, may decrease feelings of depersonalization.

Based on the JD-R model, we also propose that a lack of job resources plays a role in the burnout process (Hypothesis 2). The data partially supported this assumption. Social support from management and training opportunities were the most important job resources. Teachers who reported supportive principals obtained lower scores on emotional exhaustion and scored higher on personal accomplishment. These results are in line with previous findings, which highlighted the role of the supervisor/manager<sup>20</sup>.

Since not all job resources were negatively

associated with burnout, these findings support the idea that not all resources are equally relevant for all workers. In the case of teachers, decision authority was only significantly associated with one of the three burnout dimensions. Particularly, lower levels of decision authority were only related to high levels of emotional exhaustion. According to Van der Doef and Maes<sup>3</sup>, the conceptualization of decision authority and the characteristics of the sample may explain the mix results on burnout and stress research.

Finally, the JD-R also proposes that the interaction between job demands and job resources explains burnout. Specifically, in this study the buffer hypothesis of job resources was tested (hypothesis 3). Eight out of 36 interactions were found significant. Seven of them were observed in the dimension lack of personal accomplishment. However, with the exception of training-student aggression, the interactions were in the reverse direction. Indeed, job resources did not buffer the effects of job demands on personal accomplishment. In conditions of high job resources, teachers were more vulnerable to the occurrence of job demands. While teachers experiencing many job resources feel more competent than teachers relatively lacking job resources, they report similar levels of personal accomplishment under conditions of high demands.

In general, a possible explanation for these results is provided by the match hypothesis<sup>29</sup>.

This hypothesis proposes that the extent to which resources buffer the effect of job demands will depend on the match between the requirements/demands and the available resources. Therefore, not all the resources buffer all the demands. Accordingly, the job resources in this study (i.e. decision authority, social support) may not be the most adequate to compensate the impact of job demands (i.e. role ambiguity, time pressure and student aggression) on burnout<sup>15,30,31</sup>. Although the buffer hypothesis was generally not confirmed, main differences were observed between teachers with high job resources and those without. Indeed, teachers with high levels of decision authority, training and social support management and colleagues reported higher levels of personal accomplishment compared to those with low levels of resources. These findings reinforce the assumption that a lack of job resources influences wellbeing<sup>5</sup>.

Overall, the results of the present study have theoretical and practical implications. Theoretically, this study reveals that Chilean school teachers are affected by similar job characteristics that influence teachers from other countries<sup>5,15</sup>. This suggests that the teaching profession deals with similar demands, such as time pressure or discipline problems, disregarding cultural contexts. From the practical point of view, important contributions can be made in the field of job design. Prevention plans against stress and burnout in teachers should consider the increa-

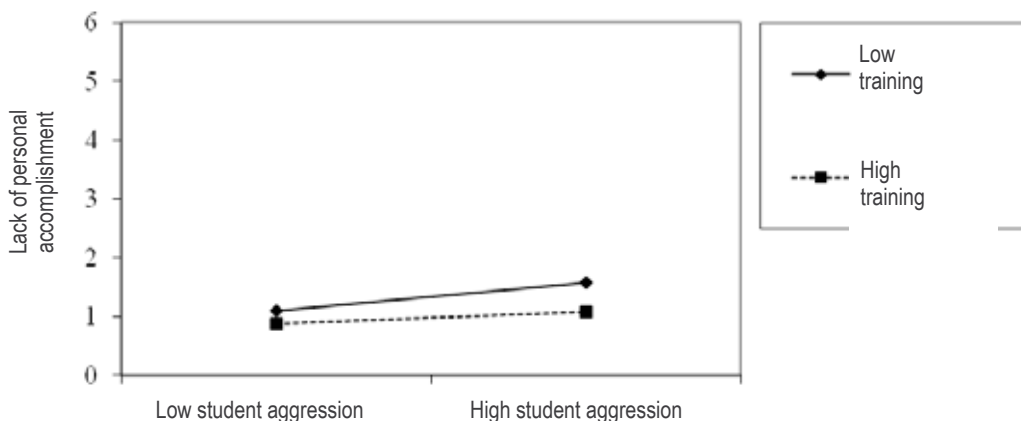


Figure 2. Interaction between student aggression and training in the prediction of lack of personal accomplishment.

se of resources such as social support, training opportunities and job control and also decrease key demands, such as time pressure and student aggression. However, when promoting job resources is important to consider that they do not always buffer the effect of job demands. Therefore, it is important to make an adequate selection of resources, which match the demands at work. Most importantly, it is thus important that public policies consider that teachers exposed to adverse job conditions (such as time pressure, student aggression and lack of training opportunities) are particularly vulnerable to face burnout symptoms and health problems in general.

### Limitations

The present study has several limitations that must be considered in interpreting these results. First, due to the cross-sectional design, it was not possible to draw causal conclusions. Longitudinal studies are needed to analyze how job characteristics interact across time. Second, findings may be biased by common method variance. Although the implications of using the same methods in organisational research are still discussed<sup>31</sup>. Future studies should integrate different kinds of assessments (such as observers or records). Third, for practical reasons some relevant variables were not included (i.e. task variety). Future research should try to include other key variables for workers' wellbeing.

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