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Burnout-depression overlap: A study of New Zealand schoolteachers

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Abstract

We examined the overlap of burnout with depression in a sample of 184 New Zealand schoolteachers. Burnout and depressive symptoms were strongly correlated with each other (r = .73; disattenuated correlation: .82) and moderately correlated with dysfunctional attitudes, ruminative responses, and pessimistic attributions. All the participants with high frequencies of burnout symptoms were identified as clinically depressed. Suicidal ideation was reported by 36% of those participants. Three groups of teachers emerged from a two-step cluster analysis: "low burnout-depression," "medium burnout-depression," and "high burnout-depression." The correlation between the affective-cognitive and somatic symptoms of depression was similar in strength to the burnout-depression correlation. Consistent with recent results obtained in Europe and the U.S., our findings suggest that burnout is a depressive syndrome.

Keywords: burnout; depression; explanatory style; nosology; rumination; stress

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Burnout has been conceived of as a long-term, negative affective state consisting of emotional exhaustion, physical fatigue, and cognitive weariness (Shirom & Melamed, 2006; Toker & Biron, 2012). Burnout is considered a product of chronic, unresolvable stress at work (Hobfoll & Shirom, 2001; Maslach et al., 2001) and has been associated with a variety of adverse health outcomes (e.g., coronary heart disease; Toker et al., 2012). By contrast with an individual experiencing acute, resolvable (work) stress, an individual with burnout feels constantly overwhelmed, drained, and helpless (see Bianchi et al., 2015a). Although burnout is not recognized as a diagnostic category in either the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association [APA], 2013) or the International Classification of Diseases (World Health Organization, 2016), it has been established as a justification for sick leave in several countries, for example, Sweden and The Netherlands (Schaufeli et al., 2009). Burnout has been extensively studied over the last decades (Bianchi et al., in press).

Depression is primarily characterized by two core symptoms, anhedonia (i.e., loss of interest or pleasure) and depressed mood (APA, 2013). Additional symptoms include weight/appetite alteration, sleep disturbance, psychomotor perturbation, fatigue or loss of energy, feelings of worthlessness or excessive or inappropriate guilt, cognitive impairment (e.g., in terms of concentration and decision-making), and suicidal ideation (APA, 2013). A formal diagnosis of major depressive disorder implies that five (or more) of the aforementioned symptoms have been present during the same two-week period; at least one of the symptoms has to be either depressed mood or anhedonia (APA, 2013). From an etiological standpoint, depression has been related to the experience of unresolvable stress (Gilbert, 2006; Pizzagalli, 2014; Pryce et al., 2011; Willner et al., 2013), including unresolvable stress experienced in the occupational domain (e.g., Niedhammer et al., 2015; Schonfeld, 2001; Wang, 2005).

Depression has been associated with various dispositional correlates and risk factors, such as dysfunctional attitudes (i.e., pathological perfectionism and need for approval), ruminative responses, and pessimistic attributions (Alloy et al., 2006; Bianchi & Schonfeld, in press; Michl et al., 2013; Mor & Winquist, 2002). Depression is a major public health problem (Cuijpers et al., 2014; Kessler et al., 2005). In the 2011/2012 New Zealand Health Survey, 14% of New Zealand adults had been diagnosed for a depression at some point in their lives, with a prevalence reaching 18% in New Zealand women (New Zealand Ministry of Health, 2012).

Over the last few years, an increasing number of studies has suggested that burnout is a depressive syndrome and not a distinct condition (Bianchi et al., 2015a, 2015b). Burnout and depression have been found to overlap in terms of etiology, symptoms, course, cognitive biases, personality-related vulnerabilities, and allostatic load (e.g., Ahola et al., 2014; Bianchi & Laurent, 2015; Bianchi & Schonfeld, in press; Bianchi et al., 2015c; Bianchi et al., in press; Hintsa et al., in press; Rössler et al., 2015; Schonfeld & Bianchi, 2016; Wurm et al., 2016). In addition, burnout and depression have both been associated with impaired work performance, absenteeism, and job turnover (Ahola et al., 2008; Bültmann et al., 2006; Lerner & Henke, 2008; Lexis et al., 2009; Swider & Zimmerman, 2010; Toppinen-Tanner et al., 2005). Current research's external validity, however, is limited by the fact that the studies examining burnout-depression overlap have been mainly carried out in Europe and the U.S. Moreover, whether burnout should be considered a depressive syndrome remains an object of debate (Maslach & Leiter, 2016; Bianchi et al., 2015b, in press). The problem thus requires further inquiry in its own right. In the era of globalization, the characterization of burnout has become a central issue for clinical psychology, occupational medicine, and psychiatry.

The aim of the present study was to examine the overlap of burnout with depression in the New Zealand context. The association of burnout with depression was investigated both directly (e.g., raw and corrected-for-attenuation correlations) and indirectly, through the

examination of how burnout and depression were related to dysfunctional attitudes, ruminative responses, and pessimistic attributions—three dispositional factors that have been linked to depression in past research (Alloy et al., 2006; Bianchi & Schonfeld, in press; Michl et al., 2013; Mor & Winquist, 2002). In order to address the issue of burnout-depression overlap from an extended perspective, we approached the relationship between the two constructs both dimensionally (i.e., as continua) and categorically (i.e., as taxa).

Building on past research conducted in Europe and the U.S., we hypothesized that burnout and depression would show substantial overlap in the present study. More specifically, we expected (a) burnout and depressive symptoms to be strongly correlated and to show similar patterns of association with dysfunctional attitudes, ruminative responses, and pessimistic attributions, (b) individuals with high frequencies of burnout symptoms to be identified as clinically depressed, and (c) burnout and depressive symptoms to cluster together. Some burnout researchers have assumed that burnout and depression cannot be viewed as one single entity because the two constructs share significant, yet limited variance (Schaufeli & Enzmann, 1998; Toker & Biron, 2012). In order to test this assumption, we additionally examined the extent to which the burnout-depression correlation differed in strength from the correlation between the affective-cognitive and somatic symptoms of depression. We reasoned that if the aforementioned assumption is valid, then the burnout-depression correlation should be markedly weaker than the correlation between the affective-cognitive and somatic symptoms of depression, given that the affective-cognitive and somatic symptoms of depression constitute a unified entity. Conversely, if the burnout-depression correlation turned out to be similar in strength to the correlation between the affective-cognitive and somatic symptoms of depression, then there would be no apparent obstacle to viewing burnout and depression as one entity.

Methods

Study participants and data collection

Using the public databases of the New Zealand Department of Education (http://www.education.govt.nz/), we contacted school administrators throughout the country. We asked them to transmit a link to an Internet survey to the teachers working in their schools. The Internet survey included measures of burnout, depression, dysfunctional attitudes, ruminative responses, and pessimistic attributions as well as a generic sociodemographic questionnaire. Evidence indicates that online questionnaires are as reliable and valid as traditional, paper-and-pencil questionnaires (Gosling et al., 2004; Jones et al., 2008). Being a schoolteacher was the only eligibility criterion for taking part in this study. We focused on schoolteachers because (a) burnout-depression overlap has been studied among schoolteachers in Europe and the U.S. and (b) schoolteachers have been thought to be strongly affected by burnout (Maslach et al., 2001).

A total of 184 schoolteachers completed the survey (77% female; mean age: 43; mean length of employment: 15 years). We note that our recruitment procedure did not allow us to estimate our study's response rate. Indeed, we had no information about the number of teachers who actually got access to our survey via school administrators. However, as emphasized by Kristensen (1995), while sample representativeness is a key issue in descriptive studies, its importance in analytical studies such as ours is limited. The crux of the issue for us here was to have a sample comprising teachers who were low, intermediate, and high on the burnout and depression scales that we employed.

The study was conducted in accordance with ethical guidelines of the Declaration of Helsinki (World Medical Association, 2013). The participation in the study was entirely voluntary. A participant could stop completing the survey at any moment for any reason should

he/she so choose. Full confidentiality was guaranteed to each participant. The study was approved by the Institutional Review Board of the University of Franche-Comté.

Measures

Burnout was assessed with the 14-item version of the Shirom-Melamed Burnout Measure (SMBM), one of the most widely used measures of burnout (Shirom & Melamed, 2006). The SMBM includes three subscales: emotional exhaustion (Cronbach's alpha = .82; sample item: "I feel I am unable to be sensitive to the needs of coworkers and students."), physical fatigue (Cronbach's alpha = .92; sample item: "I feel physically drained."), and cognitive weariness (Cronbach's alpha = .93; sample item: "My thinking process is slow."). The SMBM grades the frequency of burnout symptoms on a 1-7 scale, from *never or almost never* to *always or almost always*. The SMBM showed strong internal consistency in the present study (Cronbach's alpha = .95). In contrast to other popular measures of burnout such as the Maslach Burnout Inventory-General Survey (MBI-GS; Maslach, Jackson, & Leiter, 1996), the SMBM has been elaborated within a theory-driven approach to burnout (Shirom & Melamed, 2006) and is in the public domain. By allowing different facets of the depletion of workers' resources to be examined, the SMBM focuses on the putative core of burnout—exhaustion—, the only characteristic that is common to all conceptualizations of the syndrome (Kristensen, Borritz, Villadsen, & Christensen, 2005).

Depression was assessed with the 9-item depression module of the Patient Health Questionnaire (PHQ-9; Kroenke and Spitzer, 2002; Cronbach's alpha = .84). The PHQ-9 is a dual-purpose instrument. First, it allows the investigator to grade the severity of depressive symptoms, based on a 4-point scale (from 0, for *not at all*, to 3, for *nearly every day*). Second, based on a dedicated algorithm (Kroenke & Spitzer, 2002), it allows the investigator to establish a provisional diagnosis of major depression in reference to the criteria provided in the DSM-5

(APA, 2013). The PHQ-9 algorithm notably takes into account the primacy of anhedonia ("Little interest or pleasure in doing things.") and depressed mood ("Feeling down, depressed, or hopeless.") in the characterization of major depression. When administered to a sample of 3,000 primary care patients, the PHQ-9 showed: (a) a sensitivity going from 86% with a cutoff score of 15, to more than 99% with a cutoff score of 10; (b) a specificity going from 91% with a cutoff score of 10, to more than 99% with a cutoff score of 15 (Kroenke & Spitzer, 2002). The PHQ-9 has been increasingly employed in depression research in the last decade.

Dysfunctional attitudes were assessed with the Dysfunctional Attitude Scale Short Form version 1 (DAS-SF1; Beevers et al., 2007; Cronbach's alpha = .87). The DAS-SF1 comprises 9 items (e.g., "If I don't set the highest standards for myself, I am likely to end up a second-rate person."); its score range is 0-3 (from *totally disagree* to *totally agree*).

Ruminative responses were assessed with the Ruminative Responses Scale refined version (RRS; Treynor et al., 2003; Cronbach's alpha = .81). The RRS comprises 10 items (e.g., "Think 'What am I doing to deserve this?'"). Participants rated each questionnaire item on a scale from 1 (*almost never*) to 4 (*almost always*).

Pessimistic attributions were assessed with the Depressive Attributions Questionnaire (DAQ; Kleim et al., 2011; Cronbach's alpha = .94). The DAQ comprises 16 items; its score range is 0-4 (from *not at all* to *very strongly*). The DAQ quantifies the internal (e.g., "When bad things happen, I think it is my fault."), stable (e.g., "When bad things happen to me, I am sure it will happen again."), and global (e.g., "When something bad happens, I think of the problems this will cause in all areas of my life.") character of the respondent's causal attributions regarding negative life events as well as the level of helplessness of the respondent (e.g., "I feel helpless when bad things happen.").

A generic sociodemographic questionnaire was additionally administered, in which information regarding the participants' sex, age, and length of employment was collected.

Data analyses

Data were processed using correlation analysis, two-step cluster analysis—with burnout and depression as classification variables—, analysis of variance (ANOVA), and Tukey's post-hoc test. By relying on such analyses, we were able to process data both dimensionally and categorically.

In order to examine the extent to which the burnout-depression correlation differed in strength from the correlation between the affective-cognitive and somatic symptoms of depression, we divided the PHQ-9 into two subscales. The affective-cognitive subscale combined items 1, 2, 6, 7, and 9 (Cronbach's alpha = .76). The somatic subscale combined items 3, 4, 5, and 8 (Cronbach's alpha = .71).

An aim of our categorical analyses was to specifically investigate the overlap of burnout with depression at the high end of the burnout continuum. Consistent with past research (Bianchi & Schonfeld, in press; Schonfeld & Bianchi, 2016), we used a mean SMBM score of 5.5/7.0 as a cut-point to isolate participants with high frequencies of burnout symptoms. An SMBM score of 5.5/7.0 corresponds to burnout symptoms experienced on average more than "quite frequently."

In order to identify the participants who were likely to be clinically depressed, we relied on the diagnostic algorithm of the PHQ-9 (see Kroenke & Spitzer, 2002; see also Bianchi et al., 2014). The strong psychometric properties of the PHQ-9 make it a relevant case-finding instrument in depression research (Kroenke & Spitzer, 2002).

Results

The correlations among the main study variables are displayed in Table 1. Burnout and depressive symptoms were strongly correlated ($r = .73$). When corrected for attenuation, the correlation reached .82. Burnout symptoms correlated .71 with the affective-cognitive and .62 with the somatic subscale of the PHQ-9. Depressive symptoms correlated .45 with the emotional exhaustion, .73 with the physical fatigue, and .68 with the cognitive weariness subscale of the SMBM. Burnout and depressive symptoms were each moderately correlated with dysfunctional attitudes, ruminative responses, and pessimistic attributions.

Of the 184 schoolteachers included in the study, 14 (about 8%) reported burnout symptoms at high frequencies (mean SMBM score $\geq$ 5.5). Each of these 14 schoolteachers was identified as clinically depressed based on the diagnostic algorithm of the PHQ-9. Of the 14 schoolteachers with high frequencies of burnout symptoms, 12 (about 86%) scored 15 or higher on the PHQ-9 (score range: 13-24), a score at which immediate initiation of pharmacotherapy and/or psychotherapy has been recommended (Kroenke & Spitzer, 2002). Suicidal ideation was reported by five (36%) of the schoolteachers with high frequencies of burnout symptoms.

Insert Table 1 about here

Three distinct groups of teachers emerged from the cluster analysis (Figure 1), identifiable as "low burnout-depression" ($n = 56$; 30%), "medium burnout-depression" ($n = 82$; 45%), and "high burnout-depression" ($n = 46$; 25%). Burnout and depressive symptoms had similar weights in cluster construction. The silhouette measure of cohesion and separation indicated good cluster quality (values ranged between 0.50 and 1.00). ANOVAs and post-hoc

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tests (a) confirmed that the three groups differed from each other in terms of burnout (F [2, 181] = 205.44, $p < .001$, partial $\eta^2 = 0.69$) and depressive (F [2, 181] = 304.09, $p < .001$, partial $\eta^2 = 0.77$) symptoms, (b) revealed that the three groups differed from each other in terms of dysfunctional attitudes (F [2, 181] = 17.32, $p < .001$, partial $\eta^2 = 0.16$), ruminative responses (F [2, 181] = 14.16, $p < .001$, partial $\eta^2 = 0.14$), and pessimistic attributions (F [2, 181] = 19.48, $p < .001$, partial $\eta^2 = 0.18$), and (c) showed that the three groups did *not* differ from each other in terms of sex, age or length of employment. The characteristics of the identified clusters are displayed in Table 2.

Insert Figure 1 about here

Insert Table 2 about here

Discussion

The aim of the present study was to examine the overlap of burnout with depression in the New Zealand context. In order to do so, we relied on a sample of 184 schoolteachers. Schoolteachers have been assumed to be strongly affected by burnout (Maslach et al., 2001). Consistent with recent studies carried out in Europe and the U.S., we observed substantial overlap of burnout with depression.

First, we found a strong correlation between burnout and depressive symptoms ($r = .73$; disattenuated correlation: .82). Associations of such magnitudes are likely to be observed

between different measures of the same construct. For example, Kung et al. (2013) reported correlations between the PHQ-9 and the Beck Depression Inventory-II of .81 in a sample of 287 outpatients and .67 in a sample of 338 inpatients. Shirom and Melamed (2006) reported correlations between the SMBM and the MBI-GS of .74 ($n = 198$) and .79 ($n = 236$) in two different groups of workers. In addition, burnout and depressive symptoms were found to be similarly correlated with dysfunctional attitudes, ruminative responses, and pessimistic attributions, three dispositional risk factors for depression (Alloy et al., 2006; Bianchi & Schonfeld, in press; Michl et al., 2013; Mor & Winquist, 2002).

Second, our results showed that 100% of the schoolteachers exhibiting burnout symptoms at high frequencies met the criteria for a provisional diagnosis of major depression. This finding is suggestive of a problematic overlap between burnout and depression—despite the small subsample involved ($n = 14$)—, in line with the results of recent European and U.S. studies. Burnout-depression overlaps of 90% and 86% were found by Bianchi et al. (2014) and Schonfeld and Bianchi (2016), respectively, in studies of French and U.S. schoolteachers. It should be underscored that burnout was assessed with the SMBM in Schonfeld and Bianchi's (2016) study and with the MBI in Bianchi et al.'s (2014) study. This suggests that burnout overlaps with depression regardless of whether it is assessed with the SMBM or the MBI. That 36% of the individuals presenting with high frequencies of burnout symptoms in our sample reported some degree of suicidal ideation underlines the severity of the burnout phenomenon and is of public health concern.

The profiles that emerged from our cluster analysis further suggested that burnout and depressive symptoms were grouped together in the affected individuals. Individuals with low levels of burnout symptoms reported low levels of depressive symptoms; individuals with medium levels of burnout symptoms reported medium levels of depressive symptoms; lastly, individuals with the highest levels of burnout symptoms were also the ones reporting the highest

levels of depressive symptoms. Our results are consistent with the findings from two longitudinal studies conducted in Finland and France (Ahola et al., 2014; Bianchi et al., 2015c), in which burnout and depressive symptoms were found to increase or decrease in parallel over time, rendering the exclusion of burnout from the spectrum of depression unwarranted.

It has been suggested that burnout and depression cannot be viewed as one entity because of their limited common variance (Schaufeli & Enzmann, 1998; Toker & Biron, 2012). In the present study, we found that the correlation between burnout (as operationalized by the SMBM global score) and depression (as operationalized by the PHQ-9 global score)—$r = .73$— was similar in strength to the correlation between the affective-cognitive and somatic symptoms of depression—$r = .68$. Given that the affective-cognitive and somatic symptoms of depression are considered to form a unified entity with a correlation of .68, there is no obstacle to viewing burnout and depression as one entity with a correlation of .73.

The idea that burnout is distinct from depression still prevails among some researchers (e.g., Maslach & Leiter, 2016). It is worth noting, however, that more than 40 years after the introduction of the burnout construct in the research literature (see Maslach et al., 2001), the *rationale* underlying the burnout-depression distinction remains unclear. For instance, burnout has been hypothesized to be a product of unresolvable (job) stress. It turns out that unresolvable stress (either job-related or not) is known to play a key causal role in depression (Gilbert, 2006; Pryce et al., 2011; Willner et al., 2013). As an illustration, Pizzagalli (2014) noted: "…although severe stressors have been generally linked to increased risk of depression, chronic stressors and events characterized by perceived (a) lack of control, (b) inability to escape or resolve the aversive situation (e.g., entrapment), or (c) loss of status (e.g., humiliation) appear to be particularly depressogenic…" (p. 406). In a similar vein, according to Sapolsky (2004), "it is impossible to understand either the biology or psychology of major depressions without recognizing the critical role played in the disease by stress" (p. 271). In terms of etiology, it is

hence very difficult to understand where the difference between burnout and depression is supposed to lie. It has been frequently suggested that burnout is singularized by its job-related character. However, this argument has been shown to be inapplicable given that (a) depression can be job-related as well and (b) the job-related character of a given condition is not nosologically discriminant in itself—a job-related depression remains a depression (Bianchi et al., 2015a, 2015b). In terms of the clinical picture, the distinctiveness of burnout is unfortunately not clearer. Burnout has actually been associated with *all* the symptoms of depression (Bianchi et al., 2015a; Schaufeli & Enzmann, 1998). As suggested by the present study, it is virtually impossible to find an individual with high frequencies of burnout symptoms who does not also present with the characteristics of clinical depression. All in all, time may have come to define burnout as a depressive syndrome.

Arguably the "social focus" of burnout research (Maslach et al., 2001) contributed to directing the attention of investigators to the supra-individual factors influencing occupational health (e.g., organizational/managerial factors). *Switching from burnout to depression does not imply any neglect of such factors.* As previously emphasized, depressive syndromes have long been related to the experience of unresolvable psychosocial stress and understood within the framework of the interaction between the individual and his/her social environment. Researchers and practitioners interested in the specific link between depression and work can assess the extent to which the individual *attributes* his/her depressive symptoms to his/her working conditions (see Rydmark et al., 2006; see also Kristensen et al., 2005).

The study has at least four limitations. First, we assessed burnout using the SMBM, a measure of burnout that reflects an "exhaustion-only" view of burnout. However, other measures of burnout are available (e.g., the MBI-GS) and should be tested in the future. Second, we identified likely cases of major depression using the PHQ-9, a self-report measure. Although the PHQ-9 has been specifically designed from a diagnostic perspective and shown to be well-

suited for case-finding (Kroenke & Spitzer, 2002; Martin-Subero et al., in press), the method of reference for diagnosing depression is the clinical interview (APA, 2013). Third, our study was cross-sectional. This design only allowed us to provide a "snapshot" of the burnout-depression association; a diachronic view of how the two entities behaved toward one another was out of reach. Fourth, our procedure of recruitment did not permit us to assess the representativeness of our sample with regard to the New Zealand schoolteacher population. This being said, we note with Kristensen (1995) that the issue of sample representativeness is of minor importance in analytical studies such as ours (as opposed to descriptive studies). What matters most in analytical studies is the availability of the variables of interest at various levels among the participants. This criterion was met in our study: the median scores were 7.50 for the PHQ-9, with observed scores ranging from 0 to 24, and 3.64 for the SMBM, with observed scores ranging from 1.07 to 6.50.

Given the success of the burnout label among both the scientific community and the public (Bianchi et al., in press), clarifying the nosological status of the burnout syndrome has become an important topic in clinical psychology, occupational medicine, and psychiatry. To our knowledge, the present study is the first to address the issue of the burnout-depression association in the New Zealand context. Consistent with past research conducted in Europe and the U.S., we found evidence for an overlap of burnout with depression, both dimensionally and categorically. The fact that 100% of the schoolteachers at the high end of the burnout continuum reported clinical levels of depressive symptoms is particularly noteworthy. Overall, our findings support the view that burnout is part of the spectrum of depression. Thus, our results do not plead for an elevation of burnout to the status of (distinct) nosological entity. We recommend that burnout be parsimoniously defined as a depressive syndrome.

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Conflicts of interest

The authors state that there are no conflicts of interest.

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Table 1. Means, standard deviations, and correlations between the main study variables ($N = 184$).

		1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Burnout symptoms	–												
2.	Depressive symptoms	.73	–											
3.	Dysfunctional attitudes	.39	.49	–										
4.	Ruminative responses	.37	.43	.45	–									
5.	Pessimistic attributions	.47	.48	.63	.65	–								
6.	Sex	.06	-.00	.09	-.04	.02	–							
7.	Age	-.05	-.03	-.12	-.11	-.15	.00	–						
8.	Length of employment	-.01	.00	-.04	-.06	-.13	-.04	.78	–					
9.	BO-EE	.77	.45	.17	.23	.27	.13	.03	-.03	–				
10.	BO-PF	.94	.73	.41	.35	.47	.00	-.07	.01	.59	–			
11.	BO-CW	.93	.68	.40	.36	.47	.08	-.06	-.02	.63	.81	–		
12.	DEP-AFF-COG	.71	.93	.47	.40	.49	.04	-.04	-.05	.48	.70	.66	–	
13.	DEP-SOM	.62	.91	.43	.37	.38	-.05	-.00	.06	.35	.64	.58	.68	–
M		3.64	8.84	1.20	2.21	1.19	0.23	43.13	15.28	2.91	4.12	3.51	3.96	4.88
SD		1.20	5.29	0.57	0.54	0.89	0.42	11.31	10.81	1.29	1.36	1.31	3.05	2.73

Notes—All correlations whose absolute value exceeds .13 are significant at $p < .05$ or less. Sex was coded 0 for women and 1 for men. *M*: mean; *SD*: standard deviation. BO-EE: emotional exhaustion dimension of burnout; BO-PF: physical fatigue dimension of burnout; BO-CW: cognitive weariness dimension of burnout; DEP-AFF-COG: affective-cognitive symptoms of depression; DEP-SOM: somatic symptoms of depression.

Table 2. Characteristics of the identified clusters.

	Cluster 1		Cluster 2		Cluster 3	
	Low burnout-depression		Medium burnout-depression		High burnout-depression	
	$n = 56$ (30%)		$n = 82$ (45%)		$n = 46$ (25%)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Burnout symptoms	2.31	0.54	3.82	0.56	4.96	0.93
Depressive symptoms	4.30	2.59	7.66	2.37	16.48	2.80
Dysfunctional attitudes	0.95	0.44	1.17	0.55	1.56	0.60
Ruminative responses	1.96	0.45	2.23	0.50	2.50	0.59
Pessimistic attributions	0.79	0.59	1.13	0.83	1.78	0.99
Sex	0.18	0.39	0.28	0.45	0.20	0.40
Age	44.64	12.40	41.59	11.26	44.02	9.82
Length of employment	14.64	12.04	15.46	10.87	15.74	9.20

Notes—Sex was coded 0 for women and 1 for men. *M*: mean; *SD*: standard deviation.

Figure 1. Cluster plot.