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Alexithymia and Burnout in Nursing Students

ABSTRACT

Although previous studies have indicated an association between alexithymia and burnout, they have not controlled for well-established organizational factors, depression and coping mechanisms that could confound the relationship. This study investigated the association between alexithymia and occupational burnout. One hundred eighty three nursing students, were assessed up to 3 months before graduating from their University course. Alexithymia was measured with the Toronto Alexithymia Scale, occupational burnout was measured with the Maslach Burnout Inventory, work-related factors were measured with the Areas of Worklife Survey, depression was measured with Beck Depression Inventory-II, and coping strategies were measured with the COPE Dispositional Inventory. Hierarchical multiple regressions indicated that externally oriented thinking style was significantly associated with personal accomplishment and depersonalization after adjusting for depression, coping, and work-related factors. The results indicate that only a single aspect of the alexithymia construct serves as a possibly independent predisposing factor for specific burnout dimensions.

1. Introduction

Burnout is a syndrome encountered in the workplace and has three dimensions; emotional exhaustion (EE), depersonalization (DP) and reduced personal accomplishment (PA) (Maslach, Schaufeli & Leiter, 2001). The symptoms are specifically related to work and they are experienced by previously mentally healthy individuals. Burnout has a negative impact on job performance, which is manifested by dysfunctional attitudes and behaviours exhibited in the work environment

(Maslach et al., 2001). EE is the core characteristic of burnout. It occurs when employees' energy resources become depleted, making them feel mentally tired and unable to meet their job demands (Maslach et al., 2001). DP refers to the hostile and emotionally cold way that an employee treats the recipients of their services, their colleagues and their job in general (Maslach et al., 2001). Reduced PA refers to poor self-evaluation of one's job performance (Maslach et al., 2001).

Nurses constitute a very high risk group in terms of burnout, as they cope with various chronic occupational stressors, such as working in uncivil or harassing environments (Deery, Walsh & Guest, 2011; Spence Laschinger, Leiter, Day & Gilin, 2009), coping with dying patients and their families, and experiencing inadequate communication with supervisors and colleagues (Chang et al., 2006). Subservience to physicians is another well-documented factor linked to stress (Turner, Keyzer & Rudge, 2007). In addition, nurses must cope with chronic stressors imposed by the nature of their profession, such as moral distress (i.e. implementing decisions which are incompatible with their personal beliefs; Elpern, Covert & Kleinpell, 2005; Meltzer & Huckabay, 2004), compassion fatigue (i.e. depletion of compassionate energy resources; Coetzee & Klopper, 2010) and role strain or conflict (Piko, 2006), which may lead to burnout. Further, nurses are expected to exhibit altruism (Fahrenwald et al., 2005), which has been linked with burnout (Altun, 2002).

Although much research has been conducted on burnout in nurses, it remains a major problem within the profession (Epp, 2012). Burnout among nurses has been associated with low job satisfaction and commitment, absenteeism (Davey, Cummings, Newburn-Cook & Lo, 2009) and greater turnover intentions (Spence Laschinger, Leiter, Day & Gilin, 2009). Given the current global nursing shortage (Oulton, 2006) and the high economic burden associated with it (Contino, 2002), it is

important for hospital management to address the issue of burnout among nurses. Not only will hospitals be able to maintain their workforce, but they also will benefit from having more engaged employees who provide better quality of services and higher levels of patient satisfaction (Vahey, Aiken, Sloane, Clarke & Vargas, 2004). Therefore, in order to tackle burnout and to increase work engagement, organizational and intraindividual factors that contribute to the development of burnout need to be adequately explored and targeted.

According to the job-demands resources model, burnout can be experienced when the job demands are high and the means to accomplish them are limited (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). Six main work characteristics (job demands) have been established as antecedents of burnout across many occupations. These characteristics are increased workload, limited control over work, lack of reward, lack of fairness of the decisions made in the workplace, discrepancy between the individual's values and those of the workplace and reduced sense of community (Leiter & Maslach, 2003).

In addition to the organisational antecedents of burnout, research has also indicated a strong association with intraindividual characteristics, such as depression and coping strategies. Although burnout and depression share some common characteristics, they are distinct from one another (Iakovides, Fountoulakis, Kaprinis & Kaprinis, 2003). However, depression is positively related to EE (Glass & Mc Knight, 1996). Individuals develop burnout when they lack effective coping mechanisms: Even in an unfavorable work environment, active or problem-focused coping strategies can protect individuals from burnout, whereas avoidant or passive coping strategies increase the risk of burnout (Jenaro, Flores & Arias, 2007).

Previous research has shown that alexithymia is an additional risk factor for burnout (Bratis et al., 2009; Mattila et al., 2007). Alexithymia is a personality trait that is characterized by three dimensions- difficulty identifying feelings (DIF), difficulty describing feelings (DDF) and externally oriented thinking (EOT) style (which means that the thinking process is focused on the concrete details of external stimuli rather than the internal experience) (Taylor, Bagby & Parker, 1997). Alexithymic individuals are unable to describe their affect in detail by using either words or images or by referring to their somatic state (Sifneos, 1973). They also lack imagination and the ability to have fantasies (Campos, Chiva & Moreau, 2000; Friedlander, Lumley, Farchione & Doyal, 1997).

The association of burnout with alexithymia has received relatively little attention in the scientific literature, with only three studies (Bratis et al., 2009; DeVente et al., 2006; Mattila et al., 2007) of which we are aware. Bratis et al. (2009) found that alexithymia was positively associated with EE and DP, and it was negatively related to PA. DeVente et al. (2006) conducted a follow-up study on two groups- one experiencing various kinds of work-related stress (burnout, fatigue and stress related to work) and a control group of healthy individuals. Between time 1 and time 2, the participants had received different types of interventions aiming to reduce work-related stress reactions. Those authors found that although alexithymia rates were elevated among the first group at time 1, they had decreased at time 2. Their explanation invoked the notion of secondary alexithymia, which is when a dysfunction in emotion processing develops in order to facilitate better coping with the workplace stressors.

Mattila et al. (2007) found that burnout was significantly associated with all three alexithymia dimensions (DIF, DDF, and EOT style). After controlling for

sociodemographic and health-related factors including depression, they found that DIF was the dimension mostly strongly associated with burnout. The authors of that study suggested that alexithymic individuals are prone to burnout because of inadequate coping strategies, poor social support networks, and inability to manage their own emotions or the emotions of others. This indicates that alexithymia could be a particular risk factor in human services professions where interpersonal skills are vital. The analyses by Mattila et al. indicated that alexithymia had both a direct and an indirect effect on burnout. Regarding the indirect effect the results suggested that alexithymia predisposes for depression, which in turn, gives rise to burnout symptoms. Given that depression appears to be involved in the association between alexithymia and burnout, it is one of the factors that will be controlled for in the current study.

The aim of this study is to explore the association of alexithymia with occupational burnout among nursing students. However, to test the strength of this association, the analysis should control for a set of well-established confounding variables. These variables are the six organizational burnout antecedents noted previously (workload, control over work, reward, discrepancy of values, sense of community and fairness of the decisions made in the workplace; Leiter & Maslach, 2003), depression, which has been identified as a construct that overlaps with burnout and alexithymia (Mattila et al., 2007); and coping strategies, which influence burnout manifestations (Jenaro et al., 2007). The hypothesis of the current study is that alexithymia predicts all three dimensions of burnout (EE, DP, PA), after controlling for eight potentially confounding variables.

2. Methods

2.1 Participants and procedure

The sample of the present study consists of 183 nursing students aged 20-47 years. The data collection procedure lasted for 11 months. All nursing students in the last semester of their studies were eligible to participate in the study. The students were contacted by the authors in person during their lecture class, and they were asked to complete several paper-based questionnaires. All necessary procedures were followed for the protection of human subjects, and participants were informed of the purpose of the study and were assured that all data would be anonymized and that confidentiality would be maintained at all times. All students interested in participating in the study had to sign a consent form, and were provided with the author's (M.K.) email address in case they had any inquiries about participation. To encourage participation, all participants were entered into a lottery, to win one of six small monetary prizes. Ethical approval was obtained from the University.

2.2 Measures

Alexithymia

Alexithymia was measured with the English version of the Toronto Alexithymia Scale (TAS-20), which consists of three subscales: DIF, DDF and EOT style (Taylor, Bagby & Parker, 1992). It has good internal consistency, test-retest reliability and a three-factor structure that is consistent with the construct of alexithymia (Bagby, Parker & Taylor, 1994). Alexithymia was measured as a continuous variable, without any cutoff points. Cronbach's alpha coefficients were 0.87 for DIF, 0.81 for DDF and 0.64 for EOT style.

Burnout

Burnout was measured with the English version of the Maslach Burnout Inventory (MBI) - Human Services Survey (Maslach and Jackson, 1986), consisting of three subscales; PA, DP and EE. It has good psychometric properties (Green, Walkey & Taylor, 1991). Again, there were no cutoff points, and burnout was treated as a continuous variable. Cronbach's alpha coefficients were 0.83 for PA, 0.56 for DP and 0.88 for EE in the present study.

Work-related factors

The six work related factors were measured with the Areas of Worklife Survey (Leiter & Maslach, 2003). It is a valid, standardized measure, consisting of 29 items that evaluate workload, control, reward, community, fairness and values. In the current study, Cronbach's alpha coefficients were 0.68 for workload, 0.37 for control, 0.79 for reward, 0.84 for sense of community, 0.54 for fairness and 0.77 for values.

Depression

Depression was measured with the Beck Depression Inventory-II (BDI-II [Beck, Steer & Brown, 1996]). There were no cutoff points for depression, which was treated as a continuous variable. The BDI-II has high test-retest reliability (Sprinkle et al., 2002); convergent, discriminant and construct validity; internal consistency (Arnau, Meagher, Norris & Bramson, 2001). Cronbach's alpha coefficient for depression in the current study was 0.94.

Coping Strategies

Task coping (problem-focused), social coping (emotion-focused) and avoidance were measured with the COPE Dispositional Inventory. It has good convergent and discriminant validity (Carver, Scheier & Weintraub, 1989). In the current study,

Cronbach's alpha coefficients were 0.89 for task coping, 0.88 for social coping and 0.78 for avoidance.

Sociodemographic factors

Age and gender were requested from the participants of the study; however these variables were used only for reporting purposes and were not included in the analysis. The study sample consisted of nursing students (mean age= 28.88 years, SD= 7.24 years) and thus was regarded as homogeneous with respect to sociodemographic factors such as educational, occupational and financial status.

2.3 Statistical Methods

Three hierarchical multiple regressions were performed in order to evaluate the predictive power of each of the three alexithymia dimensions (DIF, DDF and EOT style) on each of the three burnout dimensions (PA, DP and EE) after controlling for 10 potentially confounding variables (workload, control, reward, community, fairness, values, depression, task coping, social coping and avoidance). Analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity in each of these three regressions.

In each analysis, the six work-related factors, depression and the three coping strategies were entered in the first step of the regression and the three alexithymia dimensions were entered in the second step. The criteria for statistical significance was set at $p < 0.05$ and the calculations were conducted using SPSS® (version 20).

3. Results

From our sample, 165 (90.2 %) of the participants were not alexithymic, 16 (8.7 %) were alexithymic, and 2 (1.1%) did not provide that information, according to the

categorization provided by Taylor, Bagby and Parker (1992). Regarding burnout, according to the categorization provided by Maslach and Jackson (1986), 115 (62.8 %) of the participants reported low EE, 45 (24.6 %) reported moderate EE, 19 (10.4 %) high EE, and 4 (2.2 %) participants did not provide that information; 133 (72.7%) reported low DP, 25 (13.7%) reported moderate DP, 9 (4.9%) reported high DP, and 16 (8.7 %) did not provide that information; 61 (33.3%) reported high PA, 42 (23%) reported moderate PA, 71 (38.8%) reported low PA, and 9 (4.9 %) did not provide that information. Means and standard deviations for all measures can be found in Table 1.

Unadjusted bivariate correlations between each of the variables are shown in Table 2. Each of the three alexithymia dimensions were significantly correlated with all three burnout dimensions, with the exception of a non-significant association between EOT style and EE. Strong bivariate associations were found among all alexithymia dimensions and four organizational antecedents of burnout- workload, fairness of the decisions made in the workplace, sense of community in the workplace and discrepancy between the individual values and those of the workplace. Two alexithymia dimensions (DIF and DDF) were positively associated with depression. Strong bivariate associations were found between all three coping dimensions and alexithymia.

In each of the three multiple regressions, the variables of values, workload, control, community, fairness, reward, depression and three coping strategies (task coping, social coping and avoidance) were entered at Step 1, while the alexithymia dimensions (DIF, DDF and EOT style) were entered at Step 2. The dependent variables in the three analyses were EE, DP and PA, respectively. The results are presented in Table 3. One alexithymia dimension (EOT style) was a significant

predictor of PA and DP. None of the alexithymia dimensions were associated with EE.

Discussion

The main finding of this study was that, after adjusting for work-related risk factors for burnout, depression and coping strategies, only the EOT style dimension of alexithymia was associated with greater DP and reduced PA. This may be due to the tendency to focus on the external events and not on their emotional impact, which predisposes for cynicism. In addition, relying only on external evaluation regarding job performance indicates a sense of low personal achievement in the workplace. The current study results are in contrast to previous studies, which reported associations between alexithymia and all three dimensions of burnout (Bratis et al., 2009; DeVente, Kamphuis & Emmelkamp, 2006) or burnout as a total score (Mattila et al., 2007). The current study results suggest that some of the associations between alexithymia and burnout identified in previous studies may have been artifacts of inadequate control of other factors. The majority of the alexithymia dimensions were associated with workload, fairness of the decisions taken in the workplace, sense of community in the workplace and a discrepancy between the individual values and those of the workplace. In addition, all alexithymia dimensions were associated with the three coping strategies.

One consequence of the fact that alexithymic individuals have difficulties creating profound relationships with others is that they do not have many resources from which to derive social support (Posse, Hällström & Backenroth-Ohsako, 2002). A lack of community or social support in the workplace is one of the main organisational factors associated with burnout (Leiter & Maslach, 2003). Conversely,

employees who feel they are supported by their supervisors or colleagues (i.e. when the sense of community is high), are protected from burnout. The fact that alexithymics lack the capacity to create relationships that would provide them with a sense of community in the workplace, or if they cannot take advantage of it when they receive it, is a possible explanation for the negative association between alexithymia and perceived sense of community in the workplace. Alexithymic individuals perceive that they do not have support from others, not because they work in a socially isolating work environment, but because they are emotionally cold and cannot create meaningful social relationships with others. In such cases, they perceive that communication with their colleagues and supervisors is poor and this gives rise to burnout symptoms. Hence, when the level of sense of community was adjusted for in the current analysis, the association between burnout and alexithymia observed in the initial bivariate analysis was no longer present.

Alexithymic individuals are more likely to burn out because of the use of passive or avoidant coping mechanisms instead of active or problem-focused coping mechanisms (Mattila et al., 2007). The current study explored this possibility by entering coping styles in the analyses as control variables. However, after controlling for coping strategies, some of the associations remained because EOT style was still associated with DP and PA. Hence, coping strategies cannot fully account for the association between alexithymia and burnout.

Depression has been correlated with burnout in other studies, with EE being the dimension driving this association by resembling the sadness and fatigue components of depression (Glass & McKnight, 1996). It is possible that controlling for depression in the current analysis may have eliminated the association between EE

and alexithymia. This is in accordance with findings of Mattila et al. (2007), who found that alexithymia can lead to burnout through the mediating effect of depression.

According to the results of the current study, the more a person's thinking process is externally oriented, the lower is their sense of personal achievement in the workplace. PA is a burnout dimension which is close to the notion of organization based self-esteem (cf. Kinnunen, Feldt & Mauno, 2003) which refers to the extent to which employees consider themselves as competent in their workplace (Pierce, Gardner, Cummings & Dunham, 1989). Employees with high organization-based self-esteem generally rely on internal self-evaluations because they feel confident about themselves. On the contrary, employees with low organization-based self-esteem rely, to a great extent, on external feedback because they are insecure and uncertain about their personal accomplishments at work. They constantly need and ask for external evaluation and they do not count at all on their personal or internal opinion (Brockner, 1988; Pierce & Gardner, 2004). This may explain why EOT style was associated with low PA in the current study.

In addition, the more experienced an employee is in a specific workplace, the more stable and inherently defined is his or her organization-based self-esteem. By contrast, less experienced employees have an unstable organization-based self-esteem that is more dependent on external assessment (Campbell, 1990). The nurses of our sample were students and, consequently, were inexperienced. Therefore, it is possible that another reason for EOT style being associated with low PA is that, due to their professional immaturity, our sample was heavily relying on external feedback regarding their job performance.

In the current study, the more a student nurse's thinking was externally oriented, the more depersonalized (or cynical) he or she was when interacting with colleagues or service users. The three alexithymia dimensions are different from each other but they are interlinked. The ability to identify and describe feelings depends on the ability to distinguish them from bodily sensations of emotional arousal. EOT style mirrors the inability to consciously experience inner thoughts, fantasies or emotions (Taylor et al., 1997). People with externally bound thinking cannot experience their own or others' emotions: thus, they cannot feel close to anyone (Spitzer, Siebel-Jurges, Barnow, Grabe & Freyberger, 2005), and their limited emotional experience translates into limited emotional reactions. This emotional coldness and lack of empathy predisposes them for the DP dimension of burnout.

As stated previously, alexithymic individuals lack emotional awareness and cannot identify how they feel. Thus, the absence of association between EE and alexithymia in the current study may have been a consequence of the inability of alexithymic individuals to recognize and indicate their emotional state on a questionnaire. However, the absence of significant associations between other aspects of alexithymia and burnout could also be linked to the fact that our sample consisted of nursing students. Being so early in their nursing career, they have had relatively limited exposure to the working conditions that could eventually result in the development of burnout. Among our sample, there was a higher proportion of individuals having a tendency to experience low PA, compared with the other two burnout dimensions. Scores on PA in our sample were not statistically different from mean scores reported in previous research on nurses in the UK, but scores on EE and DP were significantly less than the mean scores in the same research (Firth, McIntee, McKeown & Britton, 1985).

The current results were based on a moderately sized and relatively homogeneous sample of nursing students, using well-validated measurement tools. However, the cross-sectional nature of the study limits the possibility for inferring causal mechanisms. Moreover, it relies entirely on self-report data, making it potentially open to subjective biases and vulnerable to the problems of common method variance. We have proposed that the contrast between the current findings and those of previous studies is primarily due to the additional statistical control for organisational factors and coping styles in the current study. However, it should also be noted that the three previous studies (Bratis et al., 2009; DeVente et al., 2006; Mattila et al., 2007) used the MBI-General Survey, while the present study measured burnout with the MBI-Human Services Survey which is tailored to the human services and helping professions (such as nurses). This may imply that the latter is a more sensitive tool in the measurement of burnout compared to the MBI-General Survey which is designed to be used in any occupational environment.

In the future, longitudinal research is needed in order to determine whether alexithymia develops as a way of coping with the negative feelings associated with reduced job performance and cynical behavior towards others (DeVente et al., 2006), or whether it is the inability to cope with stressors that lead the alexithymic individuals to experience low levels of PA and high levels of DP.

The current findings indicate that although organisational factors are important determinants of the development of burnout, personality is also crucial. However, this should not be interpreted as a nurse's weakness. Burnout symptoms seem to be a natural consequence of having to perform daily on highly emotionally demanding environments, such as hospitals. Burnout manifestations are particularly understandable amongst newly qualified and inexperienced nurses, such as the

students of our sample. Younger nurses have not yet developed adequate skills in order to cope with job-induced stressors and they are more prone to DP (Meltzer & Huckabay, 2004). Therefore, it is essential that organizations design work environments and offer interventions that provide nurses with the skills needed to overcome stress reactions such as burnout.

The burnout concept is highly complex and its manifestations may vary on different hospital wards (Görgens-Ekermans & Brand, 2012; Meltzer & Huckabay, 2004) or across different nursing age groups (Meltzer & Huckabay, 2004). Therefore, training that aims to minimize burnout should be tailored to the specific nursing specialties. Student or newly qualified nurses, such as those in our sample, would benefit from being taught how to base their evaluations of professional performance on their own criteria and how to acknowledge the emotional impact of events (i.e. a training programme aimed at reducing EOT style). This would increase feelings of professional competence and decrease emotional detachment. Similarly, training programmes for new nurses should introduce concepts such as burnout, moral distress, compassion fatigue and role conflict (Browning, 2013; Coetzee & Klopper, 2010; Pauly, Varcoe, Storch & Newton, 2009). This would enable nurses to identify problems at an early stage, so they may be discussed with their managers or colleagues to find solutions in a socially supportive organizational climate.

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