

Full Length Research Paper

Indicators of subjective and psychological wellbeing as correlates of teacher burnout in the Eastern Cape public schools, South Africa

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This study aims to assess subjective and psychological wellbeing correlates of teacher burnout. To achieve this, a cross-sectional randomised survey that targeted teachers in public schools in the Eastern Cape, South Africa was used. The main outcome variable was teacher burnout as indexed in measures of depersonalisation and emotional exhaustion. Correlation and hierarchical regression analyses were conducted to identify significant predictors of teacher depersonalisation and emotional exhaustion. Results reveal measures of subjective and psychological wellbeing added significantly to the explained variance in teachers' feelings of depersonalisation and emotional exhaustion. The current study suggests that indicators of subjective and psychological wellbeing can be evaluated for inclusion in burnout prevention interventions in teachers.

Key words: Teacher stress and burnout, psychological wellbeing, subjective wellbeing, wellness, work and health.

INTRODUCTION

International and South African studies indicate that despite efforts by researchers to understand teacher burnout, it is still widely prevalent in the teaching professions (Kokkinos, 2006; Hall et al., 2005; Jackson and Rothman, 2006). Burnout is recognised as a critical psychological symptom of the stress-strain relationship in teaching (Ahola et al., 2006). Various studies have linked burnout to various health problems, among which are poor mental health and depression and behavioural problems such as absenteeism (Blix et al., 1994; Ahola et al., 2006; Farber, 1990). These studies suggest that presence of burnout results in poor mental health and therefore diminishes good mental health status such as having positive subjective and psychological wellbeing.

However, no studies were found that reported on relationship between burnout and subjective and psychological wellbeing in teachers.

There are various definitions of burnout given in the literature, but commonly burnout is described as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment (Byrne, 1999; Maslach and Jackson, 1986). Emotional exhaustion refers to feelings of being emotional overextended and a strong reduction of one's emotional resources. Depersonalization refers to a negative, callous and detached attitude towards people that one works with, for example students, patients or clients. Reduced personal accomplishment is accessed through a person's negative self-evaluation in relation to his or her job performance (Maslach et al., 2001). Furthermore, Farber (1990) distinguishes between three types of burnout: wear-out, wherein an individual gives up, feeling depleted in confronting stress; classic burnout, wherein an individual

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works increasingly hard in the face of stress; and being under-challenged, wherein an individual is faced not with excessive degrees of stress per se (e.g., overload), but rather with monotonous and unstimulating work conditions. Burnout is also conceptualised within stress theories such as the Person-Environment Fit Stress Model by French et al. (1982), the Transactional Theory of Stress and Coping by Lazarus and Folkman (1983), and Karessek's Job Demand vs Job Control Model (1979). These theories conceptualize burnout as a by-product of an imbalance between job or environmental demands on the one hand and the ability to meet these demands on the other, mitigated by a person's job control and decision latitude.

The identified stress theories report on various environmental or job factors as potential stressors and a limited number of changeable personal factors that can make the teacher cope or not cope with the environmental factors (Kyriacou and Sutcliffe, 1987a, b; Manthei and Gilmore, 1996; Tennant, 2001; Stansfeld et al., 1997; Dalgard et al., 2007; Caplan, 1987; French et al., 1982; Harrison, 1985; Borg and Riding, 1991; Chaplain, 1995; Laughlin, 1984; Raschke, et al., 1985). Among teachers, however, burnout is generally accepted as an occupational reality that comes with the profession. Typically, burnout is believed to be more prevalent in professions where individuals work with other people, such as in policing, health services and counselling work environments. Furthermore, Farber (1990) distinguishes between three types of burnout: wear-out, wherein an individual gives up, feeling depleted in confronting stress; classic burnout, wherein an individual works increasingly hard in the face of stress; and being under-challenged, wherein an individual is faced not with excessive degrees of stress per se (for example, overload), but rather with monotonous and unstimulating work conditions. Burnout is also conceptualised within stress theories such as the Person-Environment fit stress model by French et al. (1982), the Transactional Theory of Stress and Coping by Lazarus and Folkman (1983), and Karessek's Job Demand vs Job Control Model (1979). These theories conceptualize burnout as a by-product of an imbalance between job or environmental demands on the one hand and the ability to meet these demands on the other, mitigated by a person's job control and decision latitude.

The identified stress theories report on various environmental or job factors as potential (Kyriacou and Sutcliffe, 1987; Tennant, 2001; Santavirta et al., 2007; Van Bijl and Oosthuizen, 2007).

Commonly reported environmental predictors of burnout include lack of time and workload pressures (Borg and Riding, 1991; Laughlin, 1984), disruptive student behavior and student problems (Borg et al., 1991; Chaplain, 1995), problems with school administration and staff (Borg and Riding, 1991; Smith and Bourke, 1992). Student behavior problems have generally been identified as the greatest source of stress and burnout for both

primary and secondary teachers (Borg et al., 1991; Chaplain, 1995; Laughlin, 1984; Raschke et al., 1985). Low self-esteem, external locus of control and low teacher efficacy are the most common personal predictors of burnout in teachers (Byrne, 1999; Dunham, 1976; Fejgin et al., 1995; Kyriacou and Sutcliffe, 1987a, b). Teacher efficacy has been defined as a teacher's judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated (Tschannen-Moran et al., 1998). It is closely related to self-efficacy, which is defined by Bandura (1997) as a personal belief in the personal ability to organise and execute course of action. Teacher efficacy, locus of control, and self esteem are reported to be negatively related to burnout in teachers (Dorman, 2003). In addition, the personality trait of neuroticism has been related to a higher incidence of burnout (Schaufeli and Enzman, 1998; Maslach et al., 2001).

Most studies into the correlates of teacher burnout have focused on the misfit between teacher's personal attributes such as self esteem, self-efficacy and locus of control, and the working environmental demands on the teacher. None have focused on key strengths such as having subjective and psychological wellbeing despite these factors being reported in other studies to have health promoting effect during psychological distress (Ploubidis et al., 2006). For example, Ploubidis et al. (2006) reported a positive relationship between psychological wellbeing and mental health. Also, in a meta-analysis of prospective studies on positive psychological wellbeing and mortality, Chida and Steptoe (2008) reported a positive correlation between positive psychological wellbeing and health status of cardiovascular patients, and a reduced death rate in patients with renal failure and with HIV infection among those that reported more positive scores on indices of psychological wellbeing.

In these studies, positive psychological wellbeing has been assessed by a limited number of constructs such as presence of positive feelings, happiness, life satisfaction, hopefulness, and optimism. These constructs are part of an array of wellbeing constructs. Literature on wellbeing can be categorised into two related perspective, namely subjective wellbeing, which is associated with the hedonic approach, and psychological wellbeing, which is associated with the eudaimonic approach.

More generally, subjective well-being is defined in terms of affective and cognitive evaluations of life satisfaction (Diener et al., 1990). It is composed of general life satisfaction, satisfaction with important domains of life such as work, and experiencing more positive emotions and moods than negative ones in the course of daily living (Diener et al., 1999). According to Diener et al. (1999), important to remember that subjective well-being focuses on self-evaluation and not some external statistics or correlates but rather concerns the

thoughts and feeling of the individual. Psychological well-being has been defined by Ryff (1989) as a multi-dimensional construct that relate to different social, psychological and physiological aspects of life, which are interrelated with each other and which determine each other. These dimensions are: personal growth, autonomy, environmental mastery, self-acceptance, purpose in life, and personal relations. Personal growth relates to being open to new experiences as well as having continued personal growth. Autonomy refers to peoples' sense of self-determination, independence, and freedom from norms. Environmental mastery means the person's ability to manage life and his/her surroundings. Self-acceptance is defined as a positive attitude towards oneself and one's past life. Purpose in life is given when people have life goals and the belief that one's life is meaningful. Personal relations refer to high quality, satisfying relationships with others.

The main aim of the present study is to investigate whether subjective wellbeing and psychological wellbeing constructs are correlated with teacher burnout. The subjective wellbeing factors considered here are life satisfaction, positive affect, and negative affect. The psychological wellbeing constructs of interest are the multidimensional constructs identified by Ryff (1989). This is important for the development of burnout prevention interventions. It is expected that these constructs will be negatively correlated to burnout and will also help to explain the variance of core burnout dimensions (emotional exhaustion and depersonalization) in teachers. In addition, the role of more traditional correlates of burnout will be identified, among which self-esteem, locus of control, and teacher efficacy.

METHODS

Participants

The data for this report were drawn from a bigger study on health and wellness needs assessment done in 2008 with teachers and support employees of the Department of Education in the Eastern Cape Province, South Africa. Only teachers at primary and high schools were selected for this specific study. The Eastern Cape Province is the second biggest province with 168 966 km² area that touches the Indian Ocean. The estimated population is 6 527 747 and the main inhabitants are isiXhosa speakers (83.4%) of the Nguni tribe. It is 60% rural and has about 5757 public schools in 23 districts. The total number of teachers in the province is about 62000 of which about 72% are females (Stats SA, 2007 and Eastern Cape Department of Education officials, 2008).

The study participants were primary and high school teachers coming from both the rural and urban areas of the province. The provincial Department of Education drew a list of 15808 permanent public service and college/school educators with details about name, gender, age, school, occupation and contact address from the payroll system, which was used as the sample frame. The sample frame was organized according to 23 school districts in both rural and urban areas. Furthermore, the sample frame was grouped into large, medium and small district categories in addition to grouping as either urban or rural. We then randomly selected nine

districts from these clusters which we used to draw a final sample of 1300 participants (868 teachers and 423 non teachers).

Study design and procedure

A quantitative cross-sectional survey study was conducted to assess the relative importance of selected determinants of teacher burnout in a large sample of primary and high school teachers in the Eastern Cape. The questionnaire was administered in one of two ways: a) questionnaires that are filled in by participants themselves, and b) questionnaires that are completed by the interviewer via a guided interview with participants. Interviewers were selected from the staff of the Integrated Employee Wellness Unit of the Department of Education. The interviewers were selected by the Department of Education, according to guidelines given to the department by the project team. The guidelines included ability to fluently read and write English and isiXhosa understanding of employee health and wellness as well as access to transport. Preference was to be given to those with previous experience in community research and /or have a degree in social sciences.

The interviewers engaged with the questionnaire and gave feedback to the developers for further improvement in being able to work effectively and efficiently with the questionnaire. A follow-up session provided the interviewers with training in how to administer the questionnaire. Interviewers were also taught how to administer the questionnaires individually or in group format and complete the written questionnaire used for the data collection.

Using the employee contact details provided by the Department of Education, the targeted participants were called on their mobiles or schools for appointment. Those approached and being available were given the questionnaire individually or as a group if more than one from the same school. The interviews took place at schools. If a participant was not available as planned, substitute participants were given the questionnaires whenever possible. These substitutes were drawn from a backup list randomly generated from the same school for this eventuality. The interviewers brought back the completed questionnaires to the project and research team for capturing and analysis. The first capturing was done in Excel and after data cleaning, it was transferred to SPSS for analysis.

Assessment instrument

A self-report questionnaire was used to assess burnout, personality characteristics, environmental stressors, and subjective and psychological wellbeing variables. Apart from questions concerning gender, date of birth, relationship status, employment, and weekly hours of volunteer work, measures were based on Likert-type items with five response options, ranging from 1= strongly agree to 5 = strongly disagree. For each measure, scores on separate items that showed sufficient internal consistency (Cronbach's alpha [α] > 0.60) were averaged into one single index (unless otherwise indicated). Scores were recoded such that higher scores reflect a stronger presence of the concerned variable. Previously reported instruments were used to measure the study variables and ensure measurement validity. However, shorter versions of the scales were chosen to reduce the amount of time needed to fill in the questionnaire as much as possible and therefore increase the response rate as much as possible. In case the shorter scale versions showed poor internal consistencies, new scales were created by combining variables as explained in each instance where this happened.

Burn-out

Feelings of burnout were measured by assessing the dimensions of

emotional exhaustion and depersonalization with six items from the short version of the Maslach Burnout Inventory scale (Maslach, 1996). Emotional exhaustion was assessed with three items ($\alpha = 0.64$): "I feel emotionally drained from my teaching", "I often feel too emotionally tired to work", and "I fell run down and drained of emotional energy". Depersonalization was also assessed with three items ($\alpha = 0.65$): "My sympathy towards students is limited", "I do not really care what happens to some students", and "It is not my responsibility whether a student academically progress or not". The third dimension of burnout syndrome, namely personal accomplishment was dropped because of poor consistency with the other items.

Teacher efficacy

The study initially tried to measure teacher self-efficacy and teacher self-esteem separately using two subscales with three items from scales reported in Dorman (2003). Internal consistency measures were, however, poor and a decision was made to combine the two scales and create a new variable labeled teacher efficacy with four items ($\alpha = 0.69$). The four items were: "I contribute significantly to the academic progress of my students", "I am confident to use different teaching methods", "I feel good in my job as a teacher", and "People usually follow my ideas".

Locus of control

Three items from Rotter's (1982) locus of control scale were used to measure locus of control ($\alpha = 0.63$). The items were: "Decisions related to the school are made without me", "I feel that I have little influence over the school events that happen to me", and "My influence over school related decisions is limited."

Role problems

The study sought to independently measure role ambiguity, role conflict and role overload (Dorman, 2006), but a new scale with four items from the role ambiguity and conflict subscales called role problems was created to improve internal consistency. The role problem items were ($\alpha = 0.68$): "I never know what I will have to deal with at school tomorrow", "I can predict what will be expected of me at school tomorrow", "It is difficult to satisfy the conflicting demand of students, parents and administration", and "I feel that I can never satisfy all people involved in a conflict."

Work pressure

High work pressure is reported in the literature as having a positive correlation with teacher stress and burnout (Dorman, 2003). In this study it was measured by two items ($r = 0.54$), namely, "Teachers at my school have to work long hours to complete all their work", and "There at my school have to teach too many hours."

Positive work environment

Nine items from subscales used for school and classroom environment measurement used in Dorman (2003) were combined into one measure of positive work environment due to overlapping and poor consistency in the subscales. The example of items used are "The climate at my school is characterized by friendliness and discipline", "The class starts always on time at my school", and "Access and security is well managed at my school". The new scale

showed acceptable internal consistency ($\alpha = 0.78$).

Subjective wellbeing

The satisfaction with life scale (SWLS) developed by Diener (1985) was used to assess life satisfaction with five items (for example "In most ways my life is close to my ideal", "The condition of my life are excellent", "I am satisfied with life"; $\alpha = 0.80$). Positive affect and negative affect were measured by 12 items each from the positive affect negative affect scale (PANAS) scales (Watson et al., 1988 b). Reliability was $\alpha = 0.85$ for positive affect (example items were words like "cheerful", "enjoyed things", "happy"), and $\alpha = 0.80$ for negative affect (example items were "tense", "afraid" and "worried").

Psychological wellbeing

The present study used twenty-four items of the short version of the Ryff's psychological wellbeing scale (Ryff, 1989 a,b). These items sought to measure the six dimensions of: personal growth, autonomy, environmental mastery, self-acceptance, purpose in life, and personal relations. To test the proposed six factor structure a principle component analysis with varimax rotation was computed. Three-factors were extracted, each with an Eigenvalue greater than 1. This structure differed from the predicted six dimensional structure reported in Ryff's Psychological Wellbeing scale (Ryff 1989a; b), as well as empirically found structures. Given that the aim of this study was not to test for validity of the six dimensions but an overall measure of teacher's sense of psychological wellbeing, it was therefore decided to compute an overall psychological wellbeing score. The scale without items referring to the dimensions of autonomy ("it is difficult for me to voice my opinions on controversial matters") and self acceptance ("my attitude about myself is probably not as positive as most people feel about themselves") revealed a satisfactory internal consistency with $\alpha = 0.76$.

Data analysis

The software package SPSS Version 17.0 (SPSS, Chicago, IL) was used to identify significant correlates of teacher burnout dimensions of depersonalisation and emotional exhaustion. Frequencies were conducted to describe demographic and descriptive variables. Bivariate correlations were calculated between study measures to assess univariate associations between the burnout dimensions of depersonalisation and emotional exhaustion and the other study measures. Variables that showed significant bivariate correlations with teacher burnout were added to a hierarchical multiple regression analysis stepwise to explore the unique contribution of each variable in explaining variance in the measures of depersonalisation and emotional exhaustion feelings respectively. The first set of variables entered were those from Person-Environment theories, namely positive work environment, work pressure, external locus of control, teaching efficacy and self esteem, and work content/role problems (role conflict and ambiguity). We referred to this analysis as Model 1 in this paper. The second set of variables added were subjective wellbeing variables reflected as life satisfaction, positive affect and negative affect. We called this second entry Model 2 in this paper. The third and last entry was addition of variables representing psychological wellbeing and this was measured and entered as a psychological wellbeing index. We called this last entry as Model 3, which was the most expanded model of the three models. In each step, the Enter method was used to allow all predictors to be entered simultaneously within a step. A significance level of 5% was used throughout.

RESULTS

In total 610 out of 868 targeted teachers were available to participate in the surveys and no further replacements could be made. However, only 562 surveys were considered valid and included in the survey. A total of forty eight surveys were excluded in the final surveys. Twenty-two surveys were excluded because they were filled with the assistance of a research team member and a further 26 had missing information. While race was not a participation criterion, all the participants were black. Of the 562 participants, 395 participants were female and 144 were males.

Twenty-two participants did not indicate their gender. On average the participants were 43.5 years old (range 24 to 65). Means, standard deviations and correlation coefficients are reported in Table 1.

A positive correlation was found between the measures of depersonalization and emotional exhaustion ($r = 0.51$; $p < 0.001$). For depersonalization, a negative correlation with positive work environment was expected but in this study a positive univariate association was found ($r = 0.33$, $p < 0.01$). Also, positive correlations between depersonalisation and teacher efficacy ($r = 0.16$, $p < 0.01$), life satisfaction ($r = 0.29$, $p < 0.01$), and positive affect ($r = 0.15$, $p < 0.01$) were not expected. However, a strong positive correlation between depersonalisation and role problems was confirmed ($r = 0.52$, $p < 0.01$). External locus of control, work pressure and negative affect correlated positively with depersonalisation as expected with the strongest correlation seen with locus of control ($r = 0.57$, $p < 0.01$).

There was also a strong negative correlation between depersonalisation and psychological wellbeing ($r = -0.48$, $p < 0.01$).

For emotional exhaustion, a strong positive association was found for role problems ($r = 0.63$, $p < 0.01$), external locus of control ($r = 0.51$, $p < 0.01$), burnout ($r = 0.51$, $p < 0.01$), and negative affect ($r = 0.44$, $p < 0.01$). Positive correlations were not expected but weak correlations were found between emotional exhaustion and a positive work environment ($r = 0.12$, $p < 0.01$) and life satisfaction ($r = 0.13$, $p < 0.01$). No significant correlations between emotional exhaustion and teacher efficacy and positive affect were found.

There was a moderate positive correlation between emotional exhaustion and work pressure ($r = 0.29$, $p < 0.01$). In addition, there was an expected strong negative correlation between emotional exhaustion and the measure of psychological wellbeing ($r = -0.49$, $p < 0.01$).

The main objective of the study was to assess psychological wellbeing and subjective wellbeing correlates of teacher burnout. In line with this objective, two separate hierarchical regression analyses were conducted to explore the unique contributions of the study variables in explaining the measures of depersonalization and emotional exhaustion.

Depersonalisation

Table 2 shows individual and group (model) contributions of the study variables in explaining feelings of depersonalisation. Model 1, which included only Person-Environment fit variables such as positive work environment, external locus of control, role problems, work pressure, and teacher efficacy explained 44% of the variance in the measure of depersonalisation. External locus of control was the strongest predictor ($\beta = 0.35$, and $SE = 0.04$, $p < 0.001$), followed by positive work environment, role problems factors ($\beta = 0.30$, $SE = 0.05$, $p < 0.001$), and work pressure ($\beta = 0.08$, $SE = 0.04$, $p < 0.001$). Teacher efficacy impacted negatively on depersonalisation ($\beta = -0.11$, $SE = 0.06$, $p < 0.01$). These results were in line with our expectations. Adding the subjective wellbeing variables (that is life satisfaction, positive affect and negative affect) in step two of the regression process (model 2), showed an improvement from 44 to 46% in the explained variance of the depersonalisation measure. The significant contributors in model 1 above were carried over to model 2. In addition, only life satisfaction and negative affect components of subjective wellbeing had a significant association with depersonalisation. External locus of control and positive work environment showed the strongest unique association with depersonalisation ($\beta = 0.32$, $SE = 0.04$, $p < 0.001$ and $\beta = 0.29$, $SE = 0.06$, $p < 0.001$ respectively). Life satisfaction ($\beta = 0.11$, $SE = 0.04$, $p < 0.01$) and negative affect ($\beta = 0.07$, $SE = 0.04$, $p < 0.05$), both subjective wellbeing factors also contributed. These results prove the utility of adding subjective wellbeing measures in predicting teacher feelings of depersonalisation.

Model 3, which had all study variables increased the explained variance from 46 to 49% showing a significant contribution of psychological wellbeing ($\beta = -0.26$, $SE = 0.08$, $p < 0.001$), which was the only variable added. Only teaching efficacy and negative affect were not carried over from model 2 to model 3 with locus of control being the strongest correlate of depersonalisation ($\beta = 0.28$, $SE = 0.04$, $p < 0.001$).

Emotional exhaustion

Analysis of regression report in Table 3 shows individual and group (model) contribution in explaining teacher emotional exhaustion dimension of burnout. This table also shows a comparison of the three steps of the hierarchical regression, which in the study represents models 1, 2 and 3 respectively. Model 1 Person-Environment fit variables positive work environment, external locus of control, role problems, work pressure and teacher efficacy explained 43% of teacher emotional exhaustion with the highest contribution due to role problems ($\beta = 0.47$, $SE = 0.04$, $p < 0.01$). A very small

Table 1. Correlates of depersonalization and emotional exhaustion burnout dimensions (means, STD deviations and inter-correlations) N = 562.

Variable	1	2	3	4	5	6	7	8	9	10	11	
Psychological wellbeing	1											
Role problems	-0.421**	1										
Positive work environment	-0.129**	0.096*	1									
Teacher efficacy	0.051	0.077*	0.586**	1								
Locus of control	-0.400**	0.594**	0.203**	0.166**	1							
Work pressure	-0.145**	0.257**	0.043	0.085*	0.241**	1						
Life satisfaction	-0.015	0.203**	0.428**	0.415**	0.213**	0.074*	0.054	1				
Negative affect	-0.350**	0.375**	0.027	0.079*	0.363**	0.073*	0.502**	0.089*	1			
Positive affect	0.102**	0.068	0.414**	0.440**	0.123**	0.061	-0.091*	0.556**	-0.046	1		
Depersonalisation	-0.478**	0.516**	0.331**	0.159**	0.566**	0.216**	0.378**	0.297**	0.291**	0.146**	1	
Emotional exhaustion	-0.499**	0.625**	0.121**	0.053	0.510**	0.288**	0.574**	0.134**	0.442**	0.026	0.513**	1
Mean	3.53	2.74	3.32	3.71	2.84	3.44	2.56	3.23	2.62	3.49	2.19.	2.69
Standard deviation	0.43	0.89	0.70	0.65	0.92	0.97	0.97	0.95	0.90	0.81	0.94	0.91

*, ** Correlation is significant at the 0.05 and 0.005 levels, respectively.

Table 2. Summary of hierarchical regression analysis for variables predicting teacher depersonalization. (N = 562).

Variable	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	B	B	SE B	β
Positive work environment	0.41	0.05	0.30***	0.39	0.06	0.29***	0.31	0.05	0.23***
Locus of control	0.35	0.04	0.35**	0.09	0.04	0.32***	0.28	0.04	0.28***
Role problems	0.29	0.04	0.28***	0.26	0.04	0.25***	0.20	0.04	0.19***
Work pressure	0.09	0.03	0.35*	0.09	0.04	0.08*	0.08	0.04	0.07*
Teacher efficacy	-0.15	0.06	-0.11	-0.19	0.06	-0.13**	-0.11	0.06	-0.07
Life satisfaction				0.11	0.04	0.11**	0.12	0.04	0.12**
Positive affect				-0.04	0.05	-0.03	0.01	0.05	-0.01
Negative affect				0.07	0.04	.0.07*	0.02	0.04	0.02
Psychological wellbeing							-0.57	0.08	-0.26***
R-Squared		0.44			0.46			0.49	
R-Squared change		0.44			0.02			0.03	
F-Change		6.03***			3.99*			47.53***	

*p<0.05; **p<0.01; ***p<0.001.

negative and insignificant association was recorded for teacher efficacy.

Addition of subjective wellbeing determinants (life satisfaction, positive affect and negative

affect), in step two of the regression process, in the study named Model 2, showed an improvement

Table 3. Summary of hierarchical regression analysis for variables predicting teacher emotional exhaustion y (N = 562).

Variable	Model 1			Model 2			Model 3		
	B	SE:B	β	B	SE:B	β	B	SE:B	β
Positive work environment	0.09	0.05	0.07	0.13	0.05	0.09*	0.06	0.05	0.05
Locus of control	0.19	0.04	0.19***	0.14	0.04	0.14***	0.09	0.04	0.09*
Role problems	0.48	0.04	0.47***	0.42	0.04	0.41***	0.37	0.04	0.36***
Work pressure	0.14	0.04	0.13***	0.15	0.04	0.14***	0.14	0.04	0.13***
Teacher efficacy	-0.09	0.06	-0.06	-0.09	0.06	-0.06	-0.03	0.06	-0.02
Life satisfaction				-0.01	0.04	-0.01	0.00	0.04	0.00
Positive affect				-0.03	0.05	-0.03	-0.01	0.04	-0.01
Negative affect				0.23	0.04	0.23***	0.19	0.03	0.19***
Psychological wellbeing							-0.49	0.08	-0.22***
R-Squared		0.43			0.47			0.51	
R-Squared change		0.43			0.05			0.03	
F-Change		80.97***			15.69***			37.47***	

from 43 to 47% of the teacher emotional exhaustion feelings explained. All the factors that explained model 1 above were carried over to model 2 with negative affect component of subjective wellbeing being significant ($\beta = -0.23$, $SE = 0.04$, $p < 0.01$). These results once again prove the utility of adding subjective wellbeing measures in predicting teacher feelings of burnout as measured by emotional exhaustion.

Model 3 which had all the variables in this study improved the variance explained from 47 to 51%, with psychological well-being showing a significant contribution ($\beta = -0.22$, $SE = 0.08$, $p < 0.001$). Again all the Person-Environment fit factors that appeared in model 1 and model 2 have been retained in model 3 as significant. The results showed that role problems have a unique contribution to emotional exhaustion ($\beta = 0.36$, $SE = 0.04$, $p < 0.01$). The subjective wellbeing factor retained was negative affect ($\beta = -0.19$, $SE = 0.03$, $p < 0.01$).

DISCUSSION

This is the first study that attempts to explain teacher burnout using determinants from Person-Environment fit, subjective and psychological wellbeing. Depersonalisation and emotional exhaustion are two dimensions of burnout identified by Maslach et al. (1996). This study explored whether these core burnout dimensions can be better explained by adding subjective and psychological wellbeing factors into the traditional Person-Environmental fit model used in teacher burnout studies. The retention of these factors in model 3 in both depersonalisation and emotional exhaustion indeed added significant contribution to the explained variance in both measures of teacher burnout.

Positive work environment, locus of control, role problems, work pressure, life satisfaction and psychological wellbeing explained significant variance in the measure of depersonalisation as

expected while teacher efficacy, positive affect and negative affect were not significant. Also, the nature of the relationship between these predictors and depersonalisation was as expected from literature except in the case of positive work environment and life satisfaction where a negative relationship was expected instead of the positive relationship found. In instances where teachers feel their work environment has a negative impact on them it is expected that they might depersonalise and therefore create a psychological distance with learners as a way of coping with the stressors in the work environment. Also the presence of work pressure, role problems such as lack of role clarity together with external locus of control are known to be associated with chronic stress, which is known as a precursor to depersonalisation and other burnout dimensions (Maslach, 1988). It can therefore be expected that teachers will depersonalise under these conditions. External locus of control increases

depersonalization, indicating that the more the teachers feel that they are not involved in the decision making processes at their school the more they depersonalize.

Interesting results were that depersonalization was found to be positively associated with positive school environment and life satisfaction (as subjective wellbeing). A closer look at the items by which depersonalization was measured (that is, "It is not my responsibility whether a student academically progresses or not", "My sympathy towards students is limited", "I do not really care what happens to some students") indicates that depersonalization refers to the understanding teachers have about their responsibilities. Depersonalization is a strategy for teachers to deal with possible threats which, however, has long term negative outcomes since depersonalization impacts on emotional exhaustion (Malsach and Leiter, 1997). One could therefore speculate that the positive relationship between positive school environment and depersonalization means that students who do not comply with the school rules or threaten the positive school environment are "excluded" by the teachers' reaction of depersonalization which creates a psychological distance with perceived problematic students.

One could further speculate that the positive relationship between life satisfaction and depersonalization means that students who do not comply with the rules of the teachers/ or threaten teachers' life satisfactions are "excluded" by the teachers' reaction of depersonalization. One could further assume that given depersonalization represents a potential coping strategy of teachers to respond to students' threats (towards the school or towards the teachers' life satisfaction) it is more likely to find these patterns among teachers who deal with older students (high school) than with younger students (primary school). Depersonalisation could be used as a way of preserving life satisfaction in a threatening environment.

With regard to emotional exhaustion, positive work environment and teacher efficacy are traditional predictors of emotional exhaustion, but in this study there were no significant relationships recorded. This could mean that while the working environment might be less than ideal for optimum teaching, it is either not serious enough to result in emotional exhaustion or teachers have developed coping strategies that neutralise its impact. This is plausible given the relationship between positive work environment and depersonalisation as a coping strategy reported above. Teacher efficacy has been consistently insignificant in the teacher burnout syndrome in this study as it showed small and insignificant positive relationship with both depersonalisation and emotional exhaustion.

Locus of control, role problems, work pressure, negative affect and psychological wellbeing significantly predicted emotional exhaustion as expected while life satisfaction and positive effect were not significant. The

results show that the more teachers perceive role problems such as role conflict or role ambiguity, the higher they score on emotional exhaustion, while increased reports of psychological wellbeing were associated with less emotional exhaustion. In addition, negative affects increases emotional exhaustion. However, a closer look at the measures suggests these relationships since items overlap to certain extent. Also work pressure increases emotional exhaustion.

As predicted, the inclusion of the wellbeing perspective into the base model (traditional Person-Environment fit model) did help to better understand the determinants of teacher burnout as reflected by emotional exhaustion and depersonalisation. These findings suggest that the presence of positive emotions can lead an individual to be creative and resourceful in coping with work stressors, what is defined by Fredrickson (2001) as the broaden and build theory. It can be assumed that the presence of negative emotions will result in the opposite affect, whereby mastering of the environment and personal growth could be restricted. Also, it is reasonable to assume that dimensions of psychological wellbeing such as autonomy, life purpose, self acceptance and positive relations with others indicate greater access to internal and external coping resources to deal with stressors at work.

Conclusion

The significance of the study is in the prevention of depersonalisation and emotional exhaustion among teachers. The positive relationship between negative affect and emotional exhaustion for instance suggests that health promotion planners or the human resource managers can screen for negative affect to identify potentially at risk individuals. Furthermore, interventions targeted at reducing or eliminating negative affect can be investigated further given the findings of this study. This is also true on the possible role of psychological wellbeing when it comes to both depersonalisation and emotional exhaustion.

The limitations of the study are mainly related to measurement items as a number of variables had to be combined due to problems with internal consistency. The lack of a comparative study in teacher burnout also made it difficult for the study team to compare results of the study with exactly similar studies somewhere. The main aim of the study was however not to validate any constructs or measurement tools, but to assess whether subjective wellbeing and psychological wellbeing can help to explain burnout among Eastern Cape teachers. Further studies focusing on teacher's understanding of stress and burnout, role conflict, role ambiguity and work affect are suggested on top of studies designed to replicate these results in other settings outside teachers in the Eastern Cape province, South Africa.

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