

Burnout amongst urban secondary school teachers in Namibia

Authors:

Dap Louw¹
Evy George¹
Karel Esterhuysen¹

Affiliations:

¹Department of Psychology,
University of the Free State,
South Africa

Correspondence to:

Dap Louw

Email:

louwda@ufs.ac.za

Postal address:

PO Box 339, Bloemfontein
9301, South Africa

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Orientation: Burnout seems to be particularly common amongst professionals who help and enable people to cope with the demands of their daily lives.

Motivation for the study: The study focused on the magnitude and nature of burnout amongst Namibian teachers as well as the influence of biographical factors on their levels of burnout. Another aim was to determine the extent to which the results of this study correlate with research findings in other countries.

Research design, approach and method: The researchers used a non-experimental research method. The study involved more than 300 secondary school teachers from the Windhoek region of Namibia. They administered the Maslach Burnout Inventory (MBI) and a biographical questionnaire to achieve the goals of the study.

Main findings: The main findings of the study were that the participants experienced similar levels of burnout compared to teachers in other countries. This was especially true for emotional exhaustion. Teaching experience was the biographical variable that yielded the most significant positive correlation with burnout.

Practical/managerial implications: The education authorities should address the emotional needs of secondary school teachers in Namibia urgently. They should introduce effective burnout intervention and prevention programmes. These programmes could result in higher levels of job satisfaction and educational effectiveness. They could also lead to increased general fulfilment and better teacher retention.

Introduction

Burnout has become a widely researched phenomenon since Freudenberg (1974) first used the term to describe the symptoms of physical, psychological and behavioural exhaustion that occurs in the work situation.

Burnout can occur in all professions. However, it seems to be particularly common amongst professionals who help and enable people to cope with the demands of their daily lives (Gavish & Friedman 2010; McCormick, 2011; Pines, 2002; Rakovec-Felser, 2011). Therefore, professionals like teachers, doctors and mental health workers should have special professional skills and an exceptional ability to deal with the stressors they incur because of the emotionally demanding nature of their professions. If they do not, the result is often emotional exhaustion, depersonalisation and a reduced sense of personal accomplishment. These, according to Brouwers, Tomic, and Boluijt (2011) and Maslach (1982), are the classical symptoms of burnout.

Biographical variables

The most frequently researched biographical variables that researchers have noted as potential causal factors for burnout are gender, age and teaching experience, marital status and level of education.

Gender

Beer and Beer (1992) maintain that men and women experience burnout in similar ways. The essential differences lie in what they experience as stressors. For men, the sources of stress centre on the work environment and relate to the gap they experience between individual and environmental demands. Women find that time is the major source of stress. Time management, in coping with their family and career demands, becomes difficult and causes role conflict.

The research that Decker and Borgen (1993) conducted supports the significance of gender differences in burnout. A study amongst primary and secondary school teachers in Greece

found that women teachers experienced higher levels of occupational stress compared to men (Antoniou, Polychroni & Vlachakis, 2006). Most studies report higher levels of emotional exhaustion (a component of burnout) amongst women and higher levels of depersonalisation (another component of burnout) amongst men (Purvanova & Muros, 2010; Smit, 2007).

Age and teaching experience

There appears to be a clear relationship between age and burnout. Smit (2007) reports that, of all the demographic variables, age links most consistently to burnout.

Research shows that younger employees are the most susceptible to burnout (Antoniou, Polychroni & Walters, 2000; Luk, Chan, Selwyne, Cheong & Ko, 2010). Young teachers, who are new in the profession, tend to be idealistic and are often very anxious to perform and achieve professionally (Gibbs, 2010; Friedman, 2000). When they fail to reach their students, they feel undervalued and unappreciated in their performance. They feel more anxious and inadequate and become vulnerable to burnout (Daniel & Schuller, 2000; Tynjälä & Heikkinen, 2011).

Byrne (1998), Hughes (2001) and Vanheule (2001) suggest that teachers, who stay in the profession after they become disillusioned, ultimately burn out after before their 10th consecutive teaching year. This suggests that burnout increases with age and the length of time they spend teaching whilst feeling intrinsically unhappy. However, Burke and Greenglass (1993) found that age was not significant in teacher burnout.

Marital status

Research yielded differing results about marital status and burnout. Those who are unmarried (especially men) seem to be more prone to burnout compared to those who are married (Erşan, Doğa & Doğan, 2011; McDermott, 1984; Maslach & Jackson, 1985). On the other hand, Sears and Navin (1983) found no significant correlation between marital status and burnout.

Level of education

Teachers with higher levels of education tend to have higher expectations about what they want to achieve. Failing to meet these expectations makes them prone to burnout (Maslach, 1982). In addition, Altun, Çağlar and Yazici (2011) and Schaufeli and Enzmann (1998) found that employees with higher levels of education are more susceptible to burnout.

Although there is no known research on teacher burnout in Namibia, personal experience and conversations with teachers in Namibian schools suggested that there is a similar situation there. The authors accept that the variables responsible for teacher burnout in other countries may also apply in Namibia.

However, another additional and unique factor that has made a significant contribution to the Namibian context is its independence in 1990. Namibia was a mandate of South

Africa after 1915. Therefore, it was also subject to the apartheid system. After independence, there have been many changes in the education system. Most of these transformations aimed to rectify the injustices of apartheid and were necessary. However, a lack of efficient preparation for these changes made it difficult for teachers to cope in many cases.

Against this background, the present study focused on the magnitude and nature of burnout amongst Namibian teachers. It also aimed to determine the extent to which they correlate with research findings in other countries.

Research design

Research method

Participants

The researchers decided, for practical reasons, to include only teachers from secondary schools in Windhoek, the capital of Namibia. The director of the Windhoek region, one of the education regions in Namibia, granted permission for the study. The researchers randomly selected 480 teachers from the 17 state schools in Windhoek to participate in the study.

The researchers included teachers and management body members in the sample. A covering letter, which explained the purpose of the study to the participants, accompanied each set of questionnaires. The questionnaires consisted of a biographical questionnaire and the Maslach Burnout Inventory (MBI). The researchers contacted the principals of the schools about the study. They delivered the sets of questionnaires personally to the participating schools where they were distributed to the teachers and collected after completion.

A total of 337 participants responded. This is a response rate of 70%. The researchers measured all biographical variables the study investigated, with the exception of age, using a nominal scale. For the analyses that follow, the researchers decided to divide the teachers' ages into 30 and younger, 31–40 and older than 40. The average age of the research group was 37.62 and had a standard deviation of 8.95. The youngest teacher in the research group was 23 and the oldest 60.

The researchers calculated information about the distribution of the 337 teachers on the seven biographical variables using the SAS computer program (SAS Institute, 1985). Table 1 gives the distribution.

One should note that, for practical reasons, the researchers grouped some of the original categories of a specific biographical variable so that they could use them meaningfully in the analyses.

Table 1 shows that approximately two thirds of the participants were women, most of whom were married. There were slightly more teachers from the average resourced than from the above-average resourced schools. The different categories of participants in the group had relatively equal periods of experience. Most participants were not in management positions. Approximately two thirds of the group held a bachelor degree or higher.

TABLE 1: Frequency distribution of biographical variables.

Biographical variables	<i>F</i>	%
Gender		
Male	112	33.2
Female	225	66.8
Age		
30 and younger	85	25.2
31–40	136	40.4
Older than 40	116	34.4
Marital status		
Married	210	62.3
Single	127	37.7
School area		
Average resourced (less resourced)	186	55.2
Above-average resourced	151	44.8
Teaching experience		
5 years and less	87	25.8
6–10 years	72	21.4
11–15 years	83	24.6
More than 15 years	95	28.2
Highest academic qualification		
Diploma or lower	119	35.3
Bachelor degree or higher	218	64.7
Rank		
Non-management	286	84.9
Management	51	15.1

F, frequency.

TABLE 2: Cronbach's alpha coefficients for the subscales of the Maslach Burnout Inventory.

Questionnaire construct	α coefficients
Emotional exhaustion	0.9128
Depersonalisation	0.7442
Personal accomplishment	0.8105

α , Cronbach alpha.

Measuring instruments

The researchers used the measuring instruments that follow to achieve the empirical aims of the study:

Biographical questionnaire: The researchers used a self-compiled questionnaire to collect data on gender, age, marital status, school area, teaching experience, qualifications and rank.

The Maslach Burnout Inventory: The researchers measured teacher burnout using the MBI (Maslach & Jackson, 1986; Maslach, Jackson & Leiter, 1996).

The MBI is fairly reliable and valid. For example, Cronbach alpha coefficients that range between 0.70 and 0.90 have been reported for the three subscales (Maslach, Jackson & Leiter, 1996; Wheeler, Vassar, Worley & Barnes, 2011). Researchers have reported similar psychometric properties for South Africa (Jeena, 1998; Mostert & Rothman, 2006; Sadiwalla, 2004; Rutsch, 1997; Van der Linde, Van der Westhuizen & Wissing, 1999).

Because the MBI was standardised in the United States of America (USA) and no psychometric information was available for Namibians, the researchers decided to determine the reliability of the MBI for the present study

by investigating its internal consistency for this population. They did this by calculating Cronbach's alpha coefficients using the SPSS computer program (SPSS Incorporated, 1983). Table 2 gives the coefficients.

The coefficients in Table 2 show that the subscales of the MBI produce acceptable to high internal consistent measures. This made it a valid instrument for this study. The researchers formulated the hypothesis that follows.

The biographical variables of gender, age, marital status, type of school, teaching experience and academic qualifications have a significant influence on the average burnout scores of Namibian teachers.

Statistical procedures

The researchers compared the levels of burnout of the teachers using all seven biographical variables.

As Table 2 shows, the researchers divided some of the biographical variables (gender, marital status, school area, qualifications and rank) into only two categories, whereas they divided age and teaching experience into three categories. Consequently, the researchers used different statistical procedures to test the hypothesis.

When there were only two categories for a specific biographical variable, the researchers used the Hotelling T^2 test for independent groups (Tabachnick & Fidell, 1989). For the variables for which they obtained statistically significant T^2 values, they evaluated the differences further using *post hoc t*-tests.

When there were more than two categories for a biographical variable, the researchers performed a multivariate variance analysis (MANOVA). When they obtained a significant result (F value) with the MANOVA analysis, they followed it with a one-way analysis of variance. Because they considered more than two categories (subgroups) per biographical variable, they used the Scheffé procedure to determine which of the average scores on the dependent variables of the subgroups showed a statistically significant difference. With MANOVA analyses, the assumptions that follow are the basis of statistical inferences:

- the data set will have to originate from a multi-variate normal population
- the data set will have equal subgroup covariance matrices
- the subgroups are a collection of the various independent data sets (Du Toit & Stumpf, 1982).

With regard to the first assumption, we can accept with relative certainty that the data set comes from a multi-variate normal population. The lowest number of observations per level of the three independent variables is 51 and conforms to the central limit theorem (Huysamen, 1993). Therefore, we can assume that the means of the subpopulation have approximate multivariate normal distributions.

To determine whether the data set satisfies the conditions for the second assumption, that of equal subgroup covariance matrices, the researchers used a section of the SAS-DISCRIM procedure (SAS Institute, 1985). When one obtains a significant value with this procedure, it indicates uneven subgroup covariance matrices. The researchers used both the 1% and the 5% levels of significance in this study.

As far as the third assumption is concerned, it appears from the research design that the subgroups were mutually independent.

Results

Before discussing the results that are relevant to the research hypothesis, the researchers will discuss briefly the descriptive statistics (means and standard deviations) of the relevant dependent variables for the research group to provide background. They will then investigate the burnout profiles.

Descriptive statistics

Table 3 presents the results on burnout. The results of the Namibian teachers' higher level of emotional exhaustion (compared to depersonalisation and personal accomplishment) correspond with those of teachers in the USA (Maslach & Jackson, 1986; Schermuly, Schermuly & Meyer, 2011), South Africa (Van der Linde, Van der Westhuizen & Wissing, 1999) and Turkey (Gursel, Sunbul & Sari, 2002). This is also true for personal accomplishment. However, the findings suggest lower depersonalisation in Namibian teachers when compared to the results of Maslach and Jackson. A possible explanation for this is that two-thirds of the participants in the current study were women. Maslach and Jackson (1986) and Gursel *et al.* (2002) found that men teachers tend to score higher than women teachers do on the depersonalisation subscale. These authors attribute this gender difference to sex role socialisation that results in the different career expectations of men and women.

However, Bhadoria and Singh (2011) found the opposite. Female participants showed higher levels of depersonalisation. Variables, like cultural factors and concept interpretation, could have led to different findings and should be investigated.

Burnout profiles

To determine the level of burnout the Namibian teachers experienced, the researchers divided their scores on the three subscales of the MBI into low, average and high scores. They did this according to the guidelines in the MBI manual (Maslach & Jackson, 1986). These findings appear in Table 4.

Table 4 shows that approximately a quarter of the teachers experienced high levels of emotional exhaustion, whilst only 12.2% experienced high levels of depersonalisation. Furthermore, about the same number of teachers experienced both low and high levels of personal accomplishment.

TABLE 3: Burnout results of the participants.

Burnout variables	<i>N</i>	\bar{X}	SD
Emotional exhaustion	337	19.71	12.85
Depersonalisation	337	6.66	8.68
Personal accomplishment	337	32.79	5.76

N, number of respondent; \bar{X} , denotes mean; SD, standard deviation.

TABLE 4: The participants' scores on the three components of the Maslach Burnout Inventory.

MBI subscale	Low		Average		High	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Emotional exhaustion (ee)	44.5	150	26.7	90	28.8	97
Depersonalisation (dp)	67.4	227	20.4	69	12.2	41
Personal accomplishment (pa)	36.5	123	25.8	87	37.7	127

n, number.

ee shows low at ≤ 16 , average at 17–26 and high at ≥ 27 .

dp shows low at ≤ 8 , average at 9–13 and high at ≥ 14 .

pa shows low at 37, average at 36–31 and high at ≤ 30 .

TABLE 5: Frequency distribution of teachers with high levels of emotional exhaustion.

Biographical variable	Emotional exhaustion (<i>n</i> = 97)	%
Gender		
Male	29	25.9
Female	68	30.2
Age		
30 and younger	21	24.7
31–40	41	30.1
Older than 40	35	30.2
Marital status		
Married	55	26.2
Single	42	33.1
School area		
Average resourced (less resourced)	50	26.9
Above-average resourced	47	31.1
Teaching experience		
5 years and fewer	18	20.7
6–10 years	16	22.2
11–15 years	32	38.6
More than 15 years	31	32.6
Highest academic qualifications		
Diploma or lower	31	26.1
Bachelor degree or higher	66	30.3
Rank		
Non-management	79	27.6
Management	18	35.3

n, number.

Most experienced low levels of depersonalisation whilst a relatively small percentage (12.2%) had high levels of depersonalisation. Since emotional exhaustion is an important component of burnout, the researchers decided to describe only those teachers (*n* = 97) who experienced high levels of emotional exhaustion in terms of their biographical variables. This sample had twice as many women as men participants. Results from this study compare favourably with results in a study that Van der Linde *et al.* (1999) conducted on gender distributions.

Table 5 shows the frequency distribution of the high levels of emotional exhaustion in the group. Because different numbers of participants appear in the various categories of the biographical variables, the researchers calculated the

number of teachers with high levels of emotional exhaustion as a percentage of the total number of teachers in each of the categories.

Table 5 shows that approximately a quarter of the teachers, regardless of which category of the biographical variables they fall into, experience a high degree of emotional exhaustion. Furthermore, the teachers who experience a high level of emotional exhaustion distribute relatively equally amongst the different categories of a specific biographical variable.

However, more teachers with more than 10 years of teaching experience had higher levels of emotional exhaustion than did teachers with 10 years and fewer of teaching experience. The results of the Namibian teachers' teaching experience correspond with the findings of studies in South Africa (Rutsch, 1997; Van der Linde *et al.*, 1999) and other countries (Daniel & Schuller, 2000; Friedman, 1991; Pedrabissi & Rolland, 1993). However, other researchers have found no, or inverse, relationships between teaching experience and emotional exhaustion (Brackett, Palomere, Mojsa-Kaja & Salovey, 2010; Gavish & Friedman, 2010).

The same increased tendency in emotional exhaustion seemed to be present according to rank. Compared to teachers in non-management positions, more teachers in management positions experienced high levels of emotional exhaustion.

Researchers like Geving (2007), Grayson and Alvarez, (2008) and Wolters and Daugherty (2007) reached similar conclusions.

One could ascribe the higher levels of burnout of Namibian teachers in management positions to the fact that, next to being involved in instruction at higher-grade levels, they also have to deal with personnel, learners and parents and administrative issues. These factors make managers more prone to burnout.

Hypothesis testing

Most of the biographical variables consisted of only two categories. Here, the researchers used the Hotelling T^2 test to test the hypothesis. They used MANOVA where more than two categories for a biographical variable were involved.

The researchers compared the teachers' average scores on the burnout subscales for the seven biographical variables. For five of the seven biographical variables, there were only two categories per variable (gender, either male or female). The researchers dealt with these firstly by using the Hotelling T^2 test. They dealt with the remaining two biographical variables (age and experience), which consisted of three categories, afterwards.

The researchers compared the average burnout subscale scores for the biographical variables of gender, marital status, school area, highest qualifications and rank using the Hotelling T^2 test. They used the Bio-Medical Data Package BMDP programme to do so. Table 6 gives the results.

Table 6 shows that no calculated T^2 values were significant on at least the 5% level. Therefore, one can assume that there were no significant differences in the average burnout subscale scores for the different groups according to the five biographical variables in the MBI subscale investigation. Similar studies, which Hock (1988), Smith and Leng (2003) and Vilakazi (2005) conducted on teachers, also yielded non-significant findings for the same biographical variables.

Hock maintains that the absence of significant findings for these demographical variables probably indicates that teachers in such a sample are either equally susceptible or resistant to burnout or that they experience similar levels of burnout.

The researchers followed these analyses by using the two biographical variables that consist of more than two categories. They applied MANOVA for this purpose. One needs to investigate the assumption of equal covariance matrices first before carrying out the MANOVA procedure.

The researchers used part of the SAS-DISCRIM procedure (SAS Institute, 1985) to do this. They investigated this assumption for both variables (age and experience) for the subscales of the MBI. The χ^2 values for age and experience were 16.062 and 14.53 respectively. Both values were not significant and one can assume equal covariance matrices. Because the values also met this assumption, the researchers performed the MANOVA analyses using the SAS computer program (SAS Institute, 1985). Table 7 gives the results.

Table 7 shows that the researchers found no significant F value for the age variable. Therefore, they did not investigate this variable further. However, there were differences in the average MBI subscale scores for teachers with different levels of experience (5 years and less, 6–10 years, 11–15 years and 16 years and more). These differences were significant on the 5% level.

The researchers investigated the nature of these differences by determining which dependent variable of the three subscales of the MBI showed significant differences for teachers with different experience levels. For this purpose, they conducted a one-way analysis of variance using the SAS computer program. Table 8 gives these results.

TABLE 6: Results of the five biographical variables on the Maslach Burnout Inventory subscales.

Biographical variables	Hotelling T^2	F -value	p -value
Gender	2.939	0.974	0.4052
Marital status	3.929	1.302	0.7237
School area	7.282	2.413	0.0666
Qualifications	6.179	2.047	0.1071
Rank	1.580	0.524	0.6663

p , probability value.

TABLE 7: MANOVA F values for testing the main effects on the Maslach Burnout Inventory subscales.

Source	F -value	ν	p -value
Age	1.597	6.656	0.1454
Experience	2.101	9.983	0.0270

ν , degrees of freedom; p , probability value.

Table 8 shows that there were significant differences on the 5% level for the emotional exhaustion variable. Because there were four groups with differing levels of experience (five years and fewer, 6–10 years, 11–15 years and 16 years and more) to consider, the researchers performed a post *t*-test (the Scheffé test) to identify the group differences. Table 9 gives the results for the emotional exhaustion subscale.

The Scheffé results show that the mean emotional exhaustion scores of teachers with five years and shorter experience (group 1) differ from those of teachers with experience of between 11 and 15 years (group 3).

Previous research supports this finding. It showed that, if teachers do not leave their jobs early and when they feel like doing so, they decide to stay in the profession despite their feelings of emotional exhaustion (Maslach, 1982; Skaalvik & Skaalvik, 2011).

Byrne (1998) explains that emotional exhaustion can result from pre-teaching ideals that fade when the realities of the everyday classroom world face the teachers. If they remain in teaching, teachers resign themselves to do the best they can in the circumstances. Respondents in Byrne's study indicated that teachers experienced symptoms of burnout, especially in their seventh and then in their tenth year of teaching and had been fighting with burnout ever since.

As noted earlier, most of the teachers in this Namibian sample were women. As further possible explanations for the higher prevalence of emotional exhaustion in this study, Maslach and Jackson (1986), Gursel, Sunbul and Sari (2002) and Purvanova and Muros (2010) found that women teachers scored higher on emotional exhaustion than did men teachers.

Discussion

The main finding of this study was that secondary school teachers in Windhoek, Namibia, experience levels of burnout that compare with those in most other countries. This is especially true of their levels of emotional exhaustion, which measured higher than their levels of depersonalisation and

TABLE 8: Results of the one-way analysis of variance, with experience as the independent variable, on the three Maslach Burnout Inventory subscales.

Variable	<i>F</i> -value	<i>p</i> -value
Emotional exhaustion	3.50	0.0159
Depersonalisation	1.64	0.1800
Personal accomplishment	1.26	0.2876

p, probability value.

TABLE 9: Scheffé results for emotional exhaustion and experience as independent variables.

Groups	<i>N</i>	χ^2 value	SD
5 years and shorter (group 1)	87	16.23	12.15
6–10 years (group 2)	72	18.58	12.51
11–15 years (group 3)	83	23.28	13.32
16 years and longer (group 4)	95	20.62	12.55

Note: Group 1 and 3 differ

N, number; χ^2 , the calculated test statistic or chi squared statistic, SD, standard deviation of the sample.

personal accomplishment. Teaching experience was the most significant biographical indicator associated with burnout. Gender, age, academic qualifications, rank, type of school and marital status did not yield significant results.

Although findings like these provide valuable information about the very real emotional needs of secondary school teachers in Namibia, they will only be of academic interest if the relevant education authorities do not take the necessary action, especially by introducing effective burnout intervention and prevention programmes. These programmes could result in higher levels of job satisfaction and educational effectiveness and lead to increased general fulfilment and better teacher retention.

This study suggested that teachers in management positions tend to experience higher levels of burnout than their non-management colleagues do. Therefore, they might need support systems and effective management strategies so that teachers in management positions experience less stress.

Therefore, focusing on making management decisions more transparent and involving non-management teachers in decision-making and planning could contribute to a better work environment for all.

Limitations of the study

The present study has some limitations, which one should consider when interpreting the findings.

Firstly, the researchers collected data using quantitative research only. This does not seem to capture the complexity of teachers' perceptions of their workplace conditions. Therefore, a combination of quantitative and qualitative research would have been a better option. Focus group interviews could have helped to achieve a more behaviourally related assessment of the subjects' lives at work and a better indication of the exact factors that contribute to their levels of burnout.

Secondly, teachers in this study completed the questionnaires during the examination period in Namibia (April). This is usually a stressful time for teachers, especially those in management positions. This may have had an effect on their responses. They were preoccupied with duties relating to the examinations and this might have affected the return rate of the questionnaires.

Thirdly, the study did not consider the role of cultural factors in the findings. Namibia is a multicultural country with numerous ethnic groups and languages. The effect of cultural variables on human behaviour is well known and future research should consider it.

Conclusion

In conclusion, the researchers need to mention that continued research on teachers' levels of burnout could eventually lead to realistic and successful burnout interventions and

prevention programmes. Teachers would then be more likely to stay in the teaching profession and find fulfilment in what they do.

The researchers hope that this study will stimulate more research on variables like those that this study has shown as significant.

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