

## Causes of Stress in Public Schools and its Impact on Work Performance of Educators

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**ABSTRACT** This article reports on educator stress in public schools. In doing so, the article sets the objectives of identifying the causes of stress in public schools of educators in KwaZulu-Natal. The data were collected by means of a stratified random sample drawn in a cross-sectional survey design of educators employed in public schools in four districts in KwaZulu-Natal in South Africa. A total of 368 questionnaires (of which 350 were usable) were received from 1500 distributed questionnaires. The theory on the causes of stress were empirically postulated and analysed by means of data employed exploratory factor analysis. In total seven key causes (factors) of educator stress were identified. These factors explain a favourable cumulative variance 69%, and are (in declining order of importance) Organizational support, Overload, Remuneration, Control, Job insecurity, Relationship opportunities and Growth opportunities.

### INTRODUCTION

Sixteen years after apartheid, questions are being asked about what substantive changes have been achieved in the educational context where the intentions and effects of apartheid were most insidious and overt and the efforts to change are most visible and dramatic (Naidoo 2012; Department of Education 2003). Since 1994, there has been a significant refashioning of the education and training landscape in South Africa. This commenced when the 18 racially-divided departments were restructured into nine provincial education departments resulting in education becoming a provincial phenomenon. The question then arises as to whether there has been adequate preparedness to embrace this change in order to prevent stress and allow for smooth transition. Teachers enter the profession with high expectations, a vision for the future and a mission to educate children. The demands, pressures and conditions they work under can stifle the zeal of present educators. Research by Brown and Uehara (2012) in Asia and

Margolis and Nagel (2006) in the mid-west area of the United States of America showed that any changeover to the new education system has a direct impact on the schooling system, the educators and learners' performance. In addition, these changes add to educator stress and educator performance decreases as a result. Similar trends have been witnessed in South Africa (Naidoo 2012). Stressful situations, a lack of organisational support, poor leadership, poor remuneration, a lack of growth opportunities, and work overload had arisen which snowballed over decades and suddenly exploded into the new millennium with ever increasing demands on all stakeholders involved in the education of children (Naidoo 2012; Taylor et al. 2008: 66).

In addition, the budget allocated to education is huge when compared to most other countries where the norm is around 20% of total government expenditure. South Africa's Finance Minister Pravin Gordhan recently announced that regarding education, the total amount of spending equates to R190bn in 2012/13 (21%) to R215bn in 2013/14 (an estimated 24%). The key amounts to be spent include R9.5 billion for the expansion of further education and training colleges and skills development, as well as R8.3bn

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on schools infrastructure. A further R24.3bn will be added to education and skills expenditure for the next three years (Afribrain 2012).

As the demands on education and schools increase, so does the incidence of stress in the profession teaching. There are a variety of factors which contribute to the stress, demoralisation and drop-out of educators which also includes student discipline and apathy, policies, a failing schooling system, an increased number of learners per class, specialisation, rationalisation of personnel and diversity in the school population (Gold and Roth 1993: 15). In South Africa, previous studies have linked educator stress as among others, the lack of discipline, unmotivated learners, redeployment and retrenchment of educators, large learner: educator ratios and new curriculum approaches (Armstrong, 2004: 46) and have analysed educator stress in the North West and Free State provinces of South Africa (Jackson 2004; Van Wyk 2006). This study focuses on KwaZulu-Natal educators' perceptions of what causes stress in their professional lives and how it impacts on work performance.

### Objectives

The primary objective of this article is to identify the causes of educator stress in South Africa. This objective is reached by means of the following secondary objectives:

- ♦ To perform a literature review of the causes of stress;
- ♦ To empirically identify the causes of stress amongst South African educators;
- ♦ To test the reliability coefficients of the identified stress factors of the educators; and to
- ♦ Draw conclusions and make recommendations pertaining to the stress of educators in South Africa

### CONCEPTUALISATION AND THE CAUSES OF STRESS

Stress is a general term applied to pressures people feel in life. The presence of stress at work is almost inevitable and is becoming a major problem in workplaces around the world. When stress becomes excessive, employees develop various symptoms of stress that can harm their work performance and health and even threaten their

ability to cope in the environment (Newstroom and Davies 2002: 365).

Moorhead and Griffin (2004: 266) define stress as being a person's adaptive response to a stimulus that places excessive psychological or physical demands on the individual. This stimulus generally is called a stressor, which is any factor that causes stress. Robbins (2003: 562) summarizes stress as being a dynamic condition in which an individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important.

Jon et al. (2009: 262) define stress as the general term applied to the pressures people feel in life. According to Moss (2008: 04), stress is defined as any objective condition or any change in the work environment that is perceived as potentially harmful, threatening, challenging, or frustrating, or any set of circumstances related to work that requires change in the individual's ongoing life pattern (Miller and Khoza 2008). On the other hand, Chung (2001: 54) argues that stress is a mental and physical strain that people experience when they pursue a goal. Baron and Greenberg (2003: 121) define stress as the pattern of emotional state, cognitions, and physiological reactions occurring in response to stressors.

The presence of stress is also felt in the school environment. Over the past decade there has been a general recognition that many in the teaching profession are working under considerable stress. This is perceived to be mainly a result of the pressures caused by the rapid rate of change and increased responsibilities at school level (Deventer and Kruger 2009: 50).

Education, the largest job category in the sector sees stress affecting staff which arises from the work environment. These include the intensive interpersonal relations, conditions of work, deep-seated changes in the content and modes of delivery, services which lack autonomy, demands for accountability about academic performance from educational users such as students, parents and political leaders (ILO 2008).

All these definitions emphasize that stress is a mental or physical stimuli to which the response can be positive or negative thus impacting on personal lives, work performance, productivity and organisational goals. Some of the stressors in schools can include task demand,

physical demand, role demand and interpersonal demand (Moorhead and Griffin 2004: 230).

### Causes of Stress

The forerunners in identifying the causes of stress are presented by the studies of Gold and Roth (1993) that identify causes of stress, which are organized into two categories, namely:

- ♦ *Professional stressors* such as disruptive students, excessive paperwork and limited timeframes, complex scheduling, burdensome workload, lack of mobility, environmental pressure, administrative entanglement, and situational factors such as role conflict and role ambiguity have been reported to affect significant job satisfaction for many educators. Difficulty in carefully defining the duties of educators can also be stressful and contribute to a lack of personal accomplishment which diminishes their feeling of success.
- ♦ *Personal stressors* includes reasons that causes educators to be stressed such as health, relationships, financial problems, recreational activities and living conditions add to the many sources of stress with which educators are constantly having to contend with.

Role conflict, as Galloway et al. (2005: 259) state, occurs when an individual receives competing and conflicting expectations from others while role ambiguity (Daft 2002: 492) results from having unclear expectations resulting in many complications and stress in the workplace. Moorhead and Griffin (2004: 463) state that role overloads occur when there are too many expectations that one has to fulfil. Both role conflict and role ambiguity are prevalent in schools as a result of excessive paper work, large classrooms, and abnormal teacher: pupil ratio.

This is currently the case with the implementation of outcomes based education (OBE), the expectation that educators must engage in fundraising for the school, become involved in extra-curricular activities after schooling hours, collection and record-keeping of school fees, discipline of learners with lack of parental involvement, drug and alcohol abuse of learners, handling of vandalism in schools which inevitably results in added stressors. Not every educator has coping mechanisms in place.

The physical demands are stressors which are associated with job setting. Working outdoors in extremely hot or cold temperatures, or classroom conditions not being conducive can lead to stress and the lack of basic resources such as textbooks and teaching aids can lead to stress and ultimately impact negatively on work performance (Newstroom and Davies 2002: 369).

Robbins (2001: 564) and have identified three sets of factors responsible for the causes of stress. These factors are environmental, organisational and individual and act as potential sources of stress. Robbins (2003: 564) has identified three sets of factors responsible for the causes of stress as represented in the model of stress. These factors are environmental, organisational and individual, and act as potential sources of stress.

### Environmental Factors

The environmental factors causing stress are:

- ♦ *Economic uncertainty*: In the rapidly changing world, education has become more important than ever before. Faced with the increasing effects of globalisation, the rapid spread of democracy, emergence of new market economies and the changing of public/private roles, countries need highly educated and skilled populations while individuals need more specialised information to compete and survive (ILO 2008). Educators are therefore seen as a crucial element in the achievement of these goals.
- ♦ *Political uncertainty*: Changes in the political and South African system create a sense of insecurity amongst educators, thus resulting in stressful situations. The labour issues such as poor salaries, unqualified educators, docking of pay, strikes and more have contributed to higher stress levels (Rout and Rout 2002: 27). The response to this question in the research instrument indicates that 47.5% of the respondents do not have basic teaching aids to do their job effectively.
- ♦ *Technological uncertainty*: New innovations such as digital technology, smart boards, internet, and computer teaching aids can make the educators' skills obsolete in a very short period of time. The older and seasoned educators are not too com-

fortable and do not have the know-how to embrace technology and will result in stressful situations for the educators and the learners (Hellriegel and Slocum 2004: 175).

### **Organisational Factors**

In addition to the environmental factors of stress, there are also organisational factors that cause stress. These are:

- ♦ *Task demands* are factors that are related directly to the educator's job. These include the design of the educator's job which involves the working conditions and the physical work layout. The school environment includes the physical setting as well as the policy, administrative and psychological environment. Physical conditions that play a role in stress and the overall learning process include school size, lighting, and temperature. The cut-backs on subsidies and re-grouping of schools have had a direct impact on the work environment resulting in deteriorating working conditions and teacher performance (Hunsanker and Jamal 2001: 89). The cut-backs have also resulted in a scarcity of physical resources such as textbooks, teaching aids and equipment, and the lack of furniture which is thus hindering the progress of learners but have concomitantly exacerbated the performance of the educator (Mathney et al. 2000: 351).
- ♦ *Role and interpersonal demands* relate to the pressure placed on educators as they function in a particular role in the school environment. A heavy workload with little time generally features as a stressor. Most often educators are not able to achieve the standards of teaching and learning they would like due to there being large student numbers and the unfavourable post provisioning norms (ppn). As result poor academic performance manifests in the form of poor pass rates, poor discipline and an increased drop-off rate at schools which also contribute to low levels of educator job satisfaction and high educator turnover (Jackson 2004). In addition, poor learner discipline includes disruptive behaviour, negative attitudes toward work, aggression and violence towards the educator. The lack of student motivation may lead to a failure which impacts negatively on educators thus resulting in stress and the decline in work performance. To add to this, a lack of parental support is also identified as possible stressors. The apathy of parents and the distinct absence of parent commitment and involvement in education have resulted in poor performance of learners and increased frustration, and poor performance of educators.
- ♦ *Interpersonal demands* are the most frequent interpersonal demand causing stress is dealing with the negative aspects of interpersonal relationships. These include interpersonal conflicts, political manoeuvring and dishonesty. Educators are expected to overcome job-related constraints to maintain interpersonal relationships. Other aspects of interpersonal demands include meetings, workloads and personal insecurity (Michael et al. 2007: 15)
- ♦ *Organisational structure* allows for the responsibilities from different functions and processes to be clearly allocated to different departments and educators. An institution with no proper structure can hinder the success of pass rates and the efficiency of the educators. An effective institution will facilitate good working relationships between staff and management (Hieller et al. 2005: 322). A strong organisational structure should also incorporate the inputs from the school management and parents and department officials. A strong support structure can alleviate stressful situations for educators.
- ♦ *Organisational leadership*. A leader creates the environment that determines educator's behaviour which affects their productivity and level of engagement. This is supported by research which indicates that the most significant determinant of continued job satisfaction is positive relationships with their immediate supervisors (Watson 2009: 297). Leadership has varying degrees of success in different situations. Shultz and Steyn (2007: 221) affirm that incompetent leadership results in poor educator perfor-

mance, high stress, low job commitment, low job satisfaction and poor results.

### **Individual Factors**

The following individual factors are causes of stress:

- ♦ *Family problems and economic problems.* Educators who are undergoing excessive stress can display aggressive behaviour, which results in discipline and behavioural problems with children. These educators may also experience marital difficulties or perhaps even breaking-off of relationships. They have difficulty balancing their career with family life and the end result is both relationships and performance suffers (Chetty 2004: 22).
- ♦ *Economic problems* are also stressors in the family. Due to the salary grading system, salary scales have been adjusted with major gaps between different educators. Many educators try to live within their means, but unfortunately with the recent economic downturn, many have to succumb to bank loans. This additional burden creates disharmony both at home and manifests itself in poor performance in the school situation (Jackson and Rothman 2006).
- ♦ *Personality.* Some individuals appear more likely than others to interpret events and situations in a more stress-provoking way. These are generally categorised as personality Type A (extremely competitive, strives for achievement and may be aggressive, hasty, impatient, restless, very alert, with explosive speech) and Type B (easy going, take difficulties in their stride, spend time on what they do and maintain a careful balance between events and actions demanding their energy) and it also helps in determining the educators' perceptions and reaction to stress (Leigh 2004: 277; Michael et al. 2007: 844; Charles 2008: 16; Jackson and Rothman 2006: 13). In addition, studies conducted by Schultz and Steyn (2007: 694) have shown that coronary risk factors were associated with patterns of behaviour of traits in type A personalities.

### **CONSEQUENCES OF STRESS**

According to Moolla (2005: 54), there are three main consequences of work related stress. These are physiological, psychological and behavioural consequences.

- ♦ *Physiological consequences* affect the educator's physical well-being. The most common physiological symptoms resulting from stress are headaches, high blood pressure and heart disease (Moolla 2005: 54). Other symptoms include immune system problems, musculoskeletal system problems like backaches, and gastrointestinal problem (Phillip 2004: 12).
- ♦ *Psychological consequences* of stress, according to (Newstrom and Davies 2004: 123) can result in emotional instability, moodiness which can impact on reaction to learners and colleagues. Nervousness and tension can eventually result in the lack of concentration and will impact on work performance. Other symptoms can result can result in chronic illness, depression and burnout.
- ♦ *Behavioural consequences* of stress may harm the individual under stress or others. One such behaviour is the consumption of alcohol or smoking. Research has indicated that people who smoke tend to smoke more when under stress. Consumption of alcohol and drug abuse may also increase (Palmer et al. 2006: 44). Other possible behavioural consequences are accident proneness, violence and appetite disorders (Moorhead and Griffin 2004: 237). Organisational stressors frequently create job dissatisfaction. The consequences of job satisfaction, for Baron and Greenberg (2003: 176) are absenteeism and attrition of educators.

### **Stress in the School Environment**

The costs of stress at schools in most developed and developing world has risen according to recent statistics which has revealed an increase in the number of sick days taken, the decline in work performance, the negative attitudes of educators and premature death (Hillier et al. 2005: 419). According to Phillip (2004: 56), the three major reasons for absenteeism from the school environment in South Africa are primari-

ly ascribed to, work related depression, work stress and HIV/Aids. The effects of stress create physical and psychological harm to an individual. This, along with lack of job satisfaction, forces educators to take time off to recover which inevitably increases the rate of absenteeism. The implication of this is that work performance declines this impacting on learner performance, poor pass rates, resulting in schools-categorised as being an underperforming school. Stress is a highly personalised phenomenon and can vary widely even in identical situations for different reasons. The severity of job stress depends on the magnitude of the demands that are being made and the individual's sense of control or decision-making latitude he or she has in dealing with them. Not all educators have coping mechanisms to deal with these types of stress.

## METHODOLOGY

### Data Collection

A cross-sectional survey design was used to reach the objectives of this study. Data were collected by means of a validated structured questionnaire known as the ASSET (which refers to An Organisational Stress Screening Tool). It was developed by Cartwright and Cooper (2002) as an initial screening tool to help organisations assess the risk of occupational stress in their workforce. This questionnaire's main objective is to measure potential exposure to stress in respect of common workplace stressors. The questionnaire is scored on a five-point Likert scale that ranged from: *1 = strongly agree* to *5 = strongly disagree*. This questionnaire was distributed to all educators in the schools of each of the selected districts in the sample pertaining to KwaZulu-Natal.

The study was approved by the Director-General of the KwaZulu-Natal Education Department as a research project of the Department of Education, and as a result, the data collection was assisted and overseen by the respective district offices. The questionnaires were distributed on behalf of the researcher by the district managers. The district managers personally handed these questionnaires to the principals at each school for distribution to their staff. Envelopes with stickers were also given to ensure

confidentiality. Once the teachers completed questionnaires, the principals collected it from their staff and, in turn, handed all the questionnaires to the district manager at the district office. The ASSET, as measuring instrument, was proven to be a valid research tool that returns high reliability coefficients (based on the split-half co-efficient scale) by Shaughnessy and Zechmeister (2003: 67). Additionally, Jackson (2004), Van Wyk (2006) and Jackson and Rothman (2006) successfully applied the ASSET as a valid measuring instrument in the Free state and North West provinces of South Africa, showing that the reliability of the data and validity of the instrument are satisfactory for the South African educational environment.

### Study Population and Sampling

A total of 84 977 educators are employed (at the time of the study) by the KwaZulu-Natal provincial Department of Education. This represents 22.3% of the national total with the largest number of educators in ordinary schools (EMIS, 2009). There are 12 districts in the province from which 4 were randomly selected. A total of 1 500 participants were randomly selected from a total population of educators in the four selected districts (Total number of educators = 2 123), thus targeting 70.6% of the selected population. A total of 358 educators in KwaZulu-Natal had completed the questionnaire by the cut-off date which was set to be the end of March 2010 (representing 23.3% of the sample). In total, 8 of these questionnaires were discarded due to either partial or non-completion thereof.

### Statistical Analysis

The objective of the analysis was to identify the causes of stress (or factors) from the data. Exploratory factors analysis (Varimax rotation) was used. The suitability of factor analysis as analytical tool was substantiated by employing the Bartlett test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Once factors have been identified from the data, it is also customary to determine the reliability of the factors by calculating the Cronbach alpha coefficient (Field, 2007: 666-668). The software program SPSS 17.0 (SPSS Inc. 2009) for Windows was used for the statistical analysis.

**RESULTS**

**Bartlett Test of Sphericity and the KMO Measure of Sample Adequacy**

The analysis was initiated by calculating the suitability to proceed with factor analysis by

means of both the Bartlett test of sphericity and the KMO measure of sample adequacy. The results of these tests appear in the Table 1.

The KMO measure returns a satisfactory value of 0.896. From the same table, the Bartlett’s test of sphericity also returns a favourable value of zero (which is less than the re-

**Table 1: Rotated factor matrix and loadings**

<i>Items</i>	<i>Fac- tor 1</i>	<i>Fac- tor 2</i>	<i>Fac- tor 3</i>	<i>Fac- tor 4</i>	<i>Fac- tor 5</i>	<i>Fac- tor 6</i>	<i>Fac- tor 7</i>
I am clear on whom I should address with the education department for specific problems	.891	.023	.089	.077	.061	.163	.054
The education department’s decision-making process is clear to me	.875	.016	.107	.060	.012	.115	.058
I am kept up to date about impromptu issues within the education dept.	.754	.045	.002	.078	.014	.066	.131
I am able to discuss work-related problems with my direct supervisor	.746	.088	.022	.161	.060	.165	.058
I participate in decisions about the nature of my work	.728	.104	.026	.221	.009	.103	.011
I receive adequate information about the purpose of my work	.647	.058	.051	.022	.069	.153	.323
I am aware of my supervisors’ appraisal of my performance at work	.635	.040	.115	.025	.095	.179	.227
At work I feel appreciated by my supervisor	.544	.087	.013	.075	.075	.109	.373
I am expected to remember too many aspects in my work	.084	.836	.007	.075	.067	.041	.060
I am confronted with things that affect me personally	.057	.813	.040	.153	.017	.109	.028
My job requires multi-tasking	.071	.715	.030	.183	.053	.227	.139
My work puts me in emotionally upsetting situations	.098	.707	.114	.052	.023	.044	.247
I constantly make contact with difficult children at work	.062	.655	.109	.134	.104	.075	.331
I am paid adequately for the work I do	.009	.018	.921	.042	.015	.015	.009
I am able to live comfortably on my salary	.025	.044	.909	.107	.022	.022	.083
My job offers me the possibility to progress financially	.035	.059	.849	.131	.004	.113	.022
The education department pays good salaries	.017	.018	.833	.096	.086	.086	.046
There is constant monitoring of my work	.055	.052	.042	.847	.096	.103	.097
I am given tasks with unreasonable or impossible targets or deadlines	.116	.018	.101	.821	.090	.096	.060
I have too much work to complete	.060	.103	.180	.743	.021	.209	.074
I find that my work contributes to my stress levels	.326	.311	.148	.456	-.023	.439	.103
I need to be more secure that next year I will retain the same function level as currently	.032	.082	.001	.047	.962	.087	.052
I need to be reassured that I will still be employed in one year’s time	.000	.048	.005	.092	.953	.089	.031
My organisation gives me the opportunity to attend training	.136	.033	.271	.117	.319	.548	.011
I am able to work under pressure	.074	.228	-.080	.114	.194	.540	.008
My job gives me the opportunity to be promoted	.097	.160	.400	.211	.050	.522	.012
I have the freedom to carry out my work activities	.036	.057	.063	.010	.043	.024	.827
I am independent in thought and action	.069	.168	.075	.051	.007	.035	.805
My work gives me a feeling that I can achieve	.031	.176	.124	.022	.017	.117	.804
I can count on my colleagues when I encounter difficulties at work	.181	.128	.069	.013	.066	.003	.719
My work makes sufficient demand on all my skills and capabilities	.108	.354	.041	.001	.004	.015	.692
I get on well with my colleagues	.183	.069	.091	.055	.109	.112	.666
I participate in the decision-making of the due dates of tasks	.328	.013	.049	.007	.035	.162	.550
I have a professional relationship with my supervisor	.429	.094	.079	.031	.092	.141	.526

F<sub>1</sub> - Organisational support; F<sub>2</sub>- Overload F<sub>3</sub>- Remuneration; F<sub>4</sub> – Control; F<sub>5</sub> – Job insecurity; F<sub>6</sub>- Job opportunities; F<sub>7</sub>- Growth opportunity

quired value of 0.05). As a result, it can be concluded that the strength of the relationship among variables is strong and that the data are suitable to be subjected to multivariate statistical analysis (such as a factor analysis).

### Exploratory Factor Analysis

The results from the factor analysis appear in Table 2. In total, seven factors were identified after rotating the component matrix with a Normalised Varimax rotation (orthogonal rotation). The factor labels are also shown in the table. A total of 35 items (out of 39 items) loaded onto the seven factors. Resultantly, only four statements have been discarded since they did not load onto a specific factor with a factor loading of 0.40 or higher. These factors are discussed and labelled below.

**Table 2: Kaiser-Meyer-Olkin (KMO) measure of sample adwquacy and bartlett's test of sphericity**

<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</i>		.896
Bartlett's Test of sphericity	8136.717	
Approx. Chi-square	df	.595
	Sig	.000

### Factor 1: Organisational Support

All the items loading onto factor 1 deal with the individual and the support the teacher receives from the organisation. In total, eight items loaded onto this factor. Two items loaded in excess of 0.80 to the factor. These two items loading heavily are: "I am clear on whom I should address with the Department of Education for specific problems" (.891) which means that there are some support mechanisms in place to support the educator; and "the department's decision-making process is clear to me" loaded as (.875) which also indicates that the educator is aware of these processes to assist him/her. All the other items also loaded very well (in excess of 0.60) except the item relating to feeling appreciated where a factor loading of 0.544 presented itself. All the items share a common trend, namely the organisational support. The factor is thus labelled as "*Organisational support*". This factor is the most important factor to be extracted from the analysis because it explains the most variance of all factors. This factor explains almost a third of the variance, namely 30.8%.

### Factor 2: Overload

Five items loaded onto factor 2. All five had high factor loadings exceeding 0.60 as factor loading. The items are all related to the central concept of workload, and more specifically, excessive workloads. Once again two items loaded heavily (above 0.80) on the factor. The first item is: "I am expected to remember too many aspects of my work" (.836), which clearly indicates that the educator is being put under pressure which ultimately will increase levels of stress and impact on work performance. The second item is: "I am confronted with things that affect me personally" (.813). This can result in personal stress for the educator which has been identified as a stressor in the literature. The item "My job requires multi-tasking" with a factor loading of .715, at first glance, seems to be unexpected within the concept of work overload. Almost any job requires multi-tasking and is regarded to be an asset for the educator in the workplace. However, when considered within the educational environment, multi-tasking can be seen as a distraction from the core task of education. In addition, multi-tasking becomes increasingly taxing as workload increases since it requires advanced organising skills. The item is thus acceptable in the work overload situation. After consideration of the five items, the factor is labelled as "*Overload*". The factor is the second most important factor as it explains a variance of 13.5%. Although this is significantly lower than the first factor's variance (30.8%), the factor is also regarded to be an important factor.

### Factor 3: Remuneration

A total of four items loaded onto factor 3. All four these items have heavy factor loadings which are higher than 0.80. These items all have a clear communality, namely their direct involvement with remuneration. As such the factor is labelled "*Remuneration*". The factor explains a variance of 8.8% and is the third most important factor. In considering the satisfaction with remuneration, the mean value in Table 3 shows a value of 3.02 (on a 5-point scale) with a standard deviation lower than 1, implying that the educators are overall satisfied with their salaries received. This means that although remuneration is identified as a stress factor, the educators are not stressed because they are underpaid or be-



cause they perceive their salaries to be not befitting the tasks they perform.

#### **Factor 4: Control**

Once again four items loaded onto the factor. Two of the items have loaded heavily (exceeding the factor loading of 0.80). They are: "There is constant monitoring of my work" (.847) which can result in the individual doubting of their capabilities thus resulting in a stressful situation, and "I am given tasks with unreasonable or impossible targets or deadlines" (.821) which will result in work pressure impacting on performance. Both these items directly point to the function of control in management. The other two items are less clear in their communality to managerial control. These items are: "I find that my work contributes to my stress levels" (.743) and "I have too much work to complete" (.456). These items can be justified by the fact that poor managerial control can lead to subordinate stress while a work overload clearly points to poor management (control) of subordinates. Although one would have expected the last item to load onto factor 2 (Overload), closer inspection reveals that the respondents are actually quite certain that the concept of too much work are a result of managerial control. This is substantiated by the high factor loading of .743. Regarding the item that work contributes to stress, the respondents are not certain how this actually manifests (as can be seen from the low factor loading of .456). As a result the items actually load onto three other factors, namely factors 1 (.326), 2 (.311) and 6 (.439). This means that the stress levels at work is a complex matter and that no single aspect can be blamed for it. In labelling the factor, the two dominant items leads to conclude that this factor is labelled as "Control". The factor explains a variance of 7.2% and is the fourth most important factor of stress in educators.

#### **Factor 5: Job Insecurity**

Only two items loaded onto this factor. However, these two items have exceptional factor loading which is larger than 0.90. The items are: "I need to be more secure that next year I will retain the same function level as currently" (.962), "I need to be re-assured that I will still be employed in one year's time" (.953) indicates that

the educator is insecure in terms of his job for the future. It is clear that both these items deal directly with job security, or rather insecurity. Resultantly, the factor is labelled as "Job insecurity". A variance of 4.2% is explained by the factor. It is also important to understand if educators perceive their job security to be uncertain. From Table 3, the mean value (2.55 on a 5-point scale) and a standard deviation lower than 1 suggests that educators do not require constant reassurance of job security. This means that although job insecurity has been identified as stressor, educators do not experience job insecurity per se.

#### **Factor 6: Job Opportunities**

Only three items loaded onto this factor. All three items had factor loadings which are between 0.50 and 0.55. Two of the items are directly related to job opportunities, while the third item relates to work under pressure. Working under pressure is regarded to be a derivative of job opportunities because the ability to perform under pressure opens doors to promotion and other opportunities in the workplace. As a lower order factor (falling below the point of inflection – see Fig. 1), the factor explains only 3.8% of the variance. The factor is labelled "Job opportunities". However, when considering Table 3, the mean value of 2.46 on the 5-point scale (and a standard deviation below 1) suggests that almost a half of the educators do not perceive their jobs to give them promotion opportunities nor do it provide for training opportunities. Surely, this could lead to increased stress on the educator per se.

#### **Factor 7: Growth Opportunities**

Three of the eight items that loaded on the seventh factor, loaded heavily with factor loading larger than 0.80. The central theme in items that loaded onto this factor is growth opportunities. Consider the three items that loaded heavily in this regard: Item 1, "I have the freedom to carry out my work activities" (.827) indicates that the educator is concerned with undertaking the activities with much freedom. Item 2, "I am independent in thought and action" (.805) also refers to the ability to grow with the institution. Item 3, "my work gives me a feeling that I can achieve" (.804); this reassures the educator of

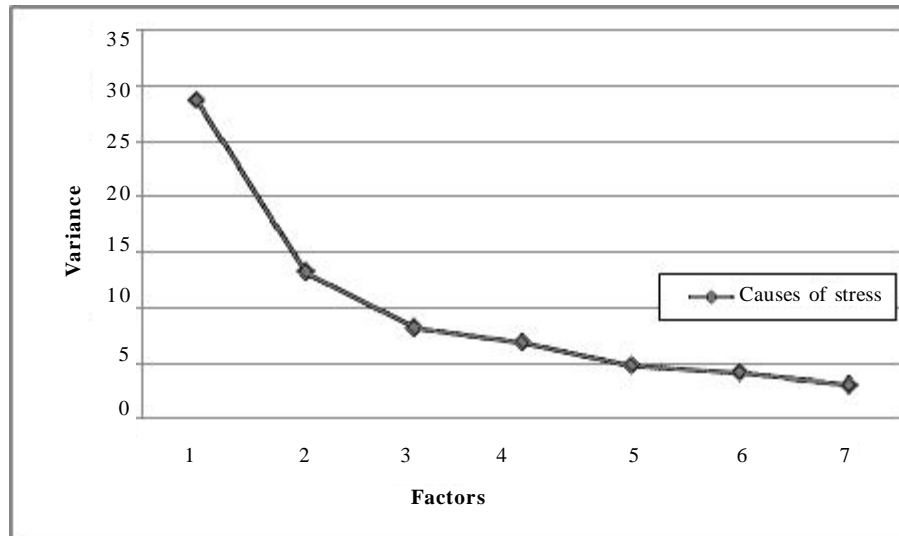


Fig. 1. Point of inflexion

growth opportunities. The other items (with factor loading ranging between 0.52 and 0.72) are all related to scenarios that either create or assist the possibilities for opportunities. As such, the final factor is labelled “*Growth opportunities*”. The factor explains a variance of 3.3%.

Figure 1 presents the factor extraction associated with a variance which indicates the substantive importance of a factor. It is important to note that when analysing a graph of this type which represents the factors of the study, the larger variance explained are considered for discussion. Generally by graphing these values, the relative importance of each factor becomes apparent. In this instance, factor one which represents *Organisational support* under the causes of stress has a high explained variance while the next factor decreases significantly in its variance explained. The point of inflexion thus graphically represents the point of additional marginal variance explained by the next factor declines and the curves flatten. The factors that follow are regarded to be less significant than the factors before the point of inflexion because of their lower marginal and absolute contribution to the variance explained (Field 2007: 633). This means that management should devote more attention to those factors explaining higher variance and also those before the point of inflexion as such managerial inputs should yield better

returns. Once these factors have been attended to, the focus could move to the remaining factors.

The factors explain a satisfactory cumulative variance of 71.6%, exceeding the required 60% variance easily (Field 2005: 663).

### Reliability

Table 3 shows the Cronbach alpha coefficients for the factors. In Table 3, Factors 1, 2, 3, 4, 5 and 7 all have reliability coefficients that are above 0.70. On closer scrutiny, it is evident that the majority of the Cronbach alpha coefficients are greater than 0.90, which is regarded to be an excellent level of reliability and internal consistency (Field 2007: 667). These high reliability coefficients concur with the literature on the causes of stress of the educators (Rothman 2006; Jackson 2004). Factor 3 has a reliability coefficient of 0.75 which is also regarded to be very satisfactory as it exceeds the 0.70 margin with ease (Nunnally and Bernstein 1994: 76). However, Factor 6 (Relationship and Job opportunities) requires closer scrutiny as it has an Alpha coefficient below 0.70 ( $\alpha = 0.60$ ). In this regard, Kline (in Field 2005: 666) reports that an Alpha value of 0.58 is acceptable when ratio scales (such as the Likert scale used in this research) are used. A lower Alpha coefficient also

**Table 3: Descriptive statistics: Reliability and variance explained**

<i>Test factors</i>	<i>Items</i>	<i>Mean</i>	<i>SD</i>	<i>Cronbach Alpha</i>	<i>Variance explained</i>
1. Organisational support	8	3.84	1.03	.938	30.8
2. Overload	5	3.42	1.24	.881	13.5
3. Remuneration	4	3.02	0.96	.925	8.8
4. Control	4	2.74	0.81	.745	7.2
5. Job insecurity	2	2.55	0.98	.910	4.2
6. Job opportunities	4	2.46	0.97	.603	3.8
7. Growth opportunities	8	2.26	0.89	.915	3.3

does not disqualify a factor from the set of identified factors. It merely means that once the study is repeated under similar conditions, the factors with lower reliability coefficients are less likely to reappear than those factors with higher reliability coefficients (Pietersen 1994: 385). Based on Field's (2007: 666) research, the reliability of Factor 6 is thus acceptable ( $\alpha > 0.58$ ) bearing in mind the constraints mentioned. The high Alpha coefficients are not unexpected since the questionnaire employed (ASSET) is a tried and tested data collection tool that has been developed by specifically to measure stress in the workplace and verified by studies such as Van Wyk (2006), Jackson and Rothman (2006) and Jackson (2004).

### *Inter-factor Correlations*

Table 4 shows the correlations between the different factors as calculated by the Pearson Correlation Coefficient. The Pearson correlations return a value between -1 and 1, signifying perfectly uncorrelated to perfectly correlated (StatSoft 2010). In addition, the statistical significance is shown in the table. Evident from the table is the fact that all factors are significantly correlated with factor 1 at the 0.01 level. Correlations in excess of the 0.30 correlation coefficient is bold printed in the table (see Factor 6 and Factor 7 which correlates with factor 1 with correlation coefficients of 0.458 and 0.668 respectively). Factor 2 correlates on this level with Factors 4, 5 and 7. The remainder of the table is interpreted

**Table 4: Pearson correlation coefficients**

		<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4</i>	<i>Factor 5</i>	<i>Factor 6</i>	<i>Factor 7</i>
<i>Factor 1</i>	Pearson Correlation	1	.227**	.287**	-.148**	.167**	.458**	.668**
	Sig. (2-tailed)		.000	.000	.006	.002	.000	.000
	n	340	340	340	340	338	340	340
<i>Factor 2</i>	Pearson Correlation	.227**	1	-.061	.236**	.192**	.138*	.524**
	Sig. (2-tailed)	.000		.265	.000	.000	.011	.000
	n	340	340	340	340	338	340	340
<i>Factor 3</i>	Pearson Correlation	.287**	-.061	1	-.048	.284**	.429**	.145**
	Sig. (2-tailed)	.000	.265		.379	.000	.000	.007
	n	340	340	341	340	339	341	340
<i>Factor 4</i>	Pearson Correlation	-.148**	.236**	-.048	1	-.051	-.230**	-.091
	Sig. (2-tailed)	.006	.000	.379		.349	.000	.092
	n	340	340	340	342	338	341	340
<i>Factor 5</i>	Pearson Correlation	.167**	.192**	.284**	-.051	1	.360**	.216**
	Sig. (2-tailed)	.002	.000	.000	.349		.000	.000
	n	338	338	339	338	339	339	338
<i>Factor 6</i>	Pearson Correlation	.458**	.138*	.429**	-.230**	.360**	1	.389**
	Sig. (2-tailed)	.000	.011	.000	.000	.000		.000
	n	340	340	341	341	339	342	340
<i>Factor 7</i>	Pearson Correlation	.668**	.524**	.145**	-.091	.216**	.389**	1
	Sig. (2-tailed)	.000	.000	.007	.092	.000	.000	
	n	340	340	340	340	338	340	340

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).\* Practically significant correlation (medium effect):  $r > 0.30$

in similar fashion. From the table it is clear that the number of factors do correlate with the other factors on 0.30 level or higher.

### DISCUSSION

The aim of this article was to establish the causes of stress and its impact on work performance of educators in the KwaZulu-Natal Province. The results showed that job demands (overload), a lack of growth opportunities, job insecurity and a lack of control were the best predictors of stress in educators in the province. The study was intended to test the ASSET (which refers to an Organisational Stress Screening Tool, see also chapter one), the Model of Causes and Consequences of Stress (Robbins 2003: 560) and the Job Demand Resources model.

In the month of June 2010, the Provincial Department of Education has come under fire for not dealing with the “educator crisis” (Mbanjwa 2010: 3). The recent issues highlighted in the media focused primarily on schools with much emphasis being placed on the school environment, educator commitment, learner attitude and performance. It is also reported that more educators are seeking medical boarding, absenteeism has increased, and educators are seeking greener pastures and are leaving the country in large numbers. It was reported by Minister Angie Motshekga that 24 750 educators left the profession between 2005 and 2008 (Mbanjwa 2010: 3). Some of the reasons highlighted for this situation in schools are violence, low salaries and strenuous working conditions which are all prevalent in the findings thus far. Statistics also indicate that more than 4 500 educators resigned during the 2007-2008 financial year. An average of 2 000 educators retired each year, while 1 800 died and more than 500 were discharged because of ill-health. The largest number of educators which are quitting the profession is in Gauteng (5 614), followed by KwaZulu-Natal (5 005).

The results confirmed that strenuous working conditions had a direct impact on educator stress resulting in poor performance. The findings of the seven factors which were organisational support, overload, remuneration, control, job insecurity, relationship and opportunities and growth opportunities also highlight the reasons why educators are considering quitting the profession. These findings are very much in line with Jackson (2004), Van Wyk (2006: 32) and even

older studies such as the one by Gold and Roth (1993). As referred to throughout in this article, various studies have also reported that educators experience high levels of occupational stress from learner recalcitrance, excessive demands on educators, lack of educational equipment, low salaries and high class numbers.

### CONCLUSION

From the study, the following conclusions are drawn:

The use of a good literature review sets the scene and provides a good base for the development and execution of the rest of the study (as in the case of the four articles). It provides an in-depth understanding of the research problem. It also provides a theoretical framework for the causes of educator stress and its impact on work performance and engagement.

The use of the theory is to aid in the construction of the measuring instrument. Although this study used the ASSET (an already approved and validated questionnaire), the literature review proved invaluable because it identified similar studies that employed the same questionnaire. These studies provided valuable guidance in the structure of this study. Resultantly, the use of theory is imperative in scientific application of a questionnaire for the empirical research.

The statistical analysis revealed that the identified constructs such as organisational support, work overload, leadership and management styles and others could be validated. In all cases relative importance was calculated (variance explained and factor loadings) while reliability (Cronbach Alpha), suitability for multivariate analysis (Bartlett’s test of sphericity) and sample adequacy (as calculated by Kaiser, Meyer and Olkin’s measure) added to conclude that the research instrument compiled from the literature provided a valid one. Specifically, it can be concluded from the research methodology that:

- ♦ The sample size was adequate (see the Kaiser-Meyer-Olkin test that exceeded 0.70);
- ♦ This internal relationships between the variables were low enough not to provide biased results (see the Bartlett’s test of sphericity where p-values were smaller than 0.0001); and
- ♦ The data were reliable (see the Cronbach Alpha coefficients).

From the above, it can be then concluded that the questionnaire and the data are reliable and the questionnaire was a valid measuring instrument for this study.

The use of a statistical analysis programme (SPSS Version 17) and the use of an expert from the Statistical Consultation Services at the North-West University provide confidence and security that advanced statistical analyses and the interpretation thereof are correct. It can, therefore, be concluded that the use of an expert and the specialised statistical software added value to this study.

The results show that stress in the education sector in South Africa consists of seven constructs. It is concluded that all seven of them are important in understanding the causes of stress and its impact on work performance on educators.

These seven causes of stress have been tested for reliability, and all but one are highly reliable, while Factor 6 (Relationship and Job opportunities) are slightly less reliable, yet still exceeding the lower margin of 0.58. Resultantly, it is concluded that all factors (causes of stress) are reliable.

Finally, in summary, it is concluded that the seven factors are important indicators of educator stress in KwaZulu-Natal, and that interventions by the Department of Education are required to improve educator stress.

### RECOMMENDATIONS

From the conclusion the following recommendations can be postulated:

1. A solid theoretical base precede any study and that this methodology be adopted by other researchers because it sets the scene for scientific founded research to follow.
2. The success of the questionnaire employed was founded in the literature review. The use of theory to analyse a measuring instrument is highly recommended. This approach assisted greatly in better understanding and analysing the ASSET questionnaire that was employed in this study.
3. With reference to the statistical procedures employed, it is a recommendation that:
  - ♦ Stratified random sampling as data collection methodology (as employed in this research) can be used to collect data within the financial and time constraints researchers are subjected to;

- ♦ The adequacy of the sample size should be statistically confirmed by means of the Kaiser, Meyer and Olkin test; and
  - ♦ Data need to be tested for reliability and the Cronbach Alpha coefficient as a suitable method to do so.
4. It is recommended that future researchers make use of the ASSET as measuring instrument when they do research on educator stress in South Africa.
  5. The use of an expert in both statistical analysis and also a specialised statistical software package is highly recommendation because it provides a built-in safeguard against flaws that may slip into the empirical research.
  6. In dealing with the factors (causes of stress), it is important to take note of each one's significance. As such, it is recommended that:
    - Those factors with the highest relative importance (variance explained) should enjoy the most managerial efforts where the most return on efforts should realise; and
    - Having made this recommendation, it should be done within the framework of knowing that all of the factors are important; some are just more important than others. As such, the recommendation extends to care being taken that none of the constructs should be neglected in managerial intervention.
  7. Although most factors have high reliability coefficients, Factor 6 did return a lower reliability coefficient. It is recommended that this factor be the last to enjoy managerial intervention as these is less likely to represent itself as constructs in future analysis than the other factors.
  8. The managerial interventions should also consider all seven the factors. The summary recommendations are that stress reducing interventions should be implemented and that longitudinal research regarding educator stress at schools should be undertaken.

### REFERENCES

- Afribrains 2012. South Africa: Education to Receive Large Slice of Budget. From <<http://www.afri->

- canbrains.net/2011/02/24/south-africa-education-to-receive-large-slice-of-budget/> (Retrieved on February 14, 2012).
- Brown ZA, Uehara DL 2012. Coping with Teacher Stress: A Research Synthesis for Pacific Educators. From <<http://www.prel.org/products/products/coping-teacherstress.htm>> (Retrieved on October 17, 2012).
- Charles D 2008. Report on the Update on Sectoral Aspects: Education and Health. From <<http://www.ilo.org/global/themes/individual/index.html>> (Retrieved on February 20, 2009)
- Chetty UP 2004. *The Effect of Stress on Educator Efficacy*. D.Ed. Thesis, Unpublished. Durban: University of Zululand.
- Chung E 2001. *Pocket Guide to Stress Testing*. New York: Blackwell Science.
- Daft RL 2002. *Management*. 5<sup>th</sup> Edition Singapore: Thomson Learning.
- Department of Education 2003. Education in South Africa since 1994. From <<http://www.education.kzn.gov.za>> (Retrieved on June 25, 2009).
- Department of Education, Arts and Culture 2006. *The National Policy Framework for Teacher Education and Development in South Africa: "More Teachers, Better Teachers"*. Pretoria: Department of Education.
- DeVenter J, Kruger P 2009. Primary teacher stress. *Psychological Bulletin*, 78: 109-132.
- Field A 2005. *Discovering Statistics Using SPSS*. 2<sup>nd</sup> Edition. London: Sage Publications.
- Galloway D, Panckhurst F, Boswell K, Boswell C, Green K 2005. Mental health, absences from work, stress and satisfaction in a sample of New Zealand primary school teachers. *Aust NZJ Psychiatry*, 18(4): 359-363.
- Gold Y, Roth RA 1993. *Teachers Managing Stress and Preventing Burnout. The Professional Health Solution*. London: Famer.
- Hellriegal D, Slocum JW 2004. *Organisational Behavior*. 10<sup>th</sup> Edition. London: McGraw Hill.
- Hillier D, Fewell F, Cann W, Shephard V 2005. Wellness at work: Enhancing the quality of our working lives. *International Review of Psychiatry*, 17: 419-431.
- Hunsanker AP, Jamal CM 2001. *Handbook of Work and Health Psychology*. New Delhi: Wiley.
- ILO (International Labour Organisation) 2010. Skills, Knowledge and Employability. From <[http://www.ilo.org/global/Themes/Skills\\_Knowledge\\_and\\_Employability/lang-en/index.htm](http://www.ilo.org/global/Themes/Skills_Knowledge_and_Employability/lang-en/index.htm)> (Retrieved on May 20, 2010)
- Jackson LTB 2004. *An Adapted Model of Burnout for Teachers in South Africa*. PhD Thesis, Unpublished. Potchefstroom: Potchefstroom University for Christian Higher Education.
- Jackson LTB, Rothman S 2006. Work-related well-being of educators in district of North West Province. *Perspectives in Education*, 23(3): 107-122.
- Jon MW, Randy L, De Simone J 2009. *Human Resource Development*. 5<sup>th</sup> Edition. New York: Cengage Learning.
- Leigh N 2004. Critical psychology and problems on mental health. *Psychology in Society*, 22: 34-42.
- Mbanjwa X 2010. Educators Leave the Profession. *Natal Mercury*, June 7, P. 3.
- Michael JH, Marsh K, Johnson L 2007. Interpersonal relationships. *Journal of Experimental Psychology Human Perception and Performance*, 35: 840-865.
- Margolis J, Nagel L 2006. Educating Reform and the Role of Administrators in Mediating Teacher Stress. From <[http://www.teqjournal.org/Back%20Issues/Volume%2033/VOL33%20PDFS/33\\_4/21margolisandnagel-33\\_4.pdf](http://www.teqjournal.org/Back%20Issues/Volume%2033/VOL33%20PDFS/33_4/21margolisandnagel-33_4.pdf)> (Retrieved on October 19, 2012).
- Miller K, Khoza H 2008. A comparison of teacher stress and school climate across schools with different matric success rates. *South African Journal of Education*, 28: 221-239.
- Moolla AIM 2005. The causes and consequences of stress. *Journal of Management and Administration*, 3(2): 45-60.
- Moorhead G, Griffin RW 2004. *Organisational Behaviour: Managing People and Organisations*. New Delhi: Jaico.
- Moss CA 2008. Power of the Five Elements: Path to Healthy Aging and Stress Resistance. From <<http://northatindiabooks.wordpress.com>> (Retrieved on April 20, 2010).
- Naidoo K 2012. *Stress Management and Its Impact on Work Performance of Educators in Public Schools in KwaZulu-Natal*. PhD Thesis, Unpublished. Potchefstroom: North-West University.
- Newstrom JW, Davies K 2002. *Organisational Behaviour*. London: McGraw Hill.
- Nunnally JC, Bernstein IH 1994. *Psychometric Theory*. 3<sup>rd</sup> Edition. New York: McGraw Hill.
- Palmer I, Dunford R, Akin G 2006. *Managing Organisational Change: A Multi-perspective Approach*. New York: McGraw Hill.
- Peltzer K, Shisana O, Zuma K, Van Wyk B, Zungu-Dirwayi N 2008. Job stress, job satisfaction and stress-related illnesses among South African educators. *Stress and Health*, 25: 247-257.
- Pietersen RA 1994. A meta-analysis of Cronbach's coefficient alpha. *Journal of Consumer Research*, 21(2): 381-391.
- Robbins SP 2001. *Introduction to Management: A Contingency Approach*. New York: McGraw-Hill.
- Robbins T, 2003. *Developing Effective School Management*. London: Routledge.
- Rout P, Rout D 2002. *Foundations of Behavioural Research: Stress Results*. 3<sup>rd</sup> Edition. London: Harcourt College.
- Schultz S, Steyn T 2007. Stressors in the professional lives in South African Secondary schoolteachers. *South African Journal of Education*, 27: 691-701.
- SPSS Inc 2009. SPSS 17.0 for Windows. From <<http://spss.com/software/statistics>> (Retrieved on April, 15 2010).
- Taylor N, Fleisch B, Schindler J 2008. Changes in Education. From <<http://www.jet.org.za>> (Retrieved May 15, 2010).
- Van Wyk D 2006. *Work Wellness among Secondary School Teachers in the Goldfields Region of the Free State Province*. PhD Thesis, Unpublished. Potchefstroom: North-West University.
- Watson MW 2009. Leadership's influence on job satisfaction. *Radiologic Technology*, 80(4): 297-308.