



## Work Stress and its Influence on the Work Performance of Swaziland Teachers in the Swaziland School Education System\*

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**ABSTRACT** This paper deals with work stress within the Swaziland school education context. The objectives are to examine, understand, identify causes of workplace stress and examine how influences work performance. The discussion includes how unmanaged and/or unidentified it manifests itself in relation to the health, welfare and abilities of workers, specifically relating to Swaziland school teachers. The workplace stress-related factors of the teachers and how it influences their work performance were examined using a stratified random sample to identify respondents to complete the structured questionnaire ( $N = 750$ ;  $n=368$ ) in the Mbabane, Manzini and Ezulwini areas. Nine factors, explaining a cumulative variance of 56.5 percent, were identified using exploratory factor analysis. These factors are (in declining order of importance) *Satisfaction, Unfair promotion, Internal locus of control, Job performance, Personal growth, Job retention, Job loyalty, Competence and Job control.*

### INTRODUCTION

Work-related stress (summarised by the Health and Safety Executive (2015) as “*The adverse reaction people have to excessive pressures or other types of demand placed on them at work*”) and its impact on quality of work life, family life, health, work performance and job satisfaction has been a widely researched area in the last decade; especially the influence it has on important business aspects such as productivity, performance, and retention of human capital. In addition the negative effects of work stress on productivity and performance, researchers found that personal health are also an important issue to focus on in work stress research. Koch (2015) indicates positive correlations with nervousness, insomnia, and that continued work stress contributes to health problems such as heart disease and depression. Rosch (2015), from a medical perspective, supports Koch and states

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that “*Chronic job strain can put both your physical and emotional health at risk.*”

However, to comprehend stress and the effect it has on employees and their productivity, knowledge and definition about work stress are required. In this regard the World Health Organisation (2015) defines work stress as:

- ♦ Work-related stress which could result in a response when employees are presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope.
- ♦ Stress occurs in a wide range of work circumstances but is often made worse when employees feel they have little support from supervisors and colleagues, as well as little control over work processes.
- ♦ Stress is aggravated if the employee is confused between under pressure or being challenged.
- ♦ Stress is unfortunately a result (and sometimes an excuse) for bad management practices.

Traditionally, research undertaken in the mid-1990s by the International Labour Organization (ILO) indicated that 33 percent of teachers experience high levels of work-related stress (Craford and Viljoen 2013). These authors also indicate that, although research initially focussed on the private business sector, public studies in South Africa have shown that occupational

stress is highly prevalent within the South African education context. This has also been confirmed in the studies by Naidoo (2011), citing public sector teacher stress to be highly prevalent in different parts of KwaZulu-Natal, South Africa. In support of similar results from educator studies in the North-West Province (Jackson 2004) and the Free State province (Van Wyk 2006) of South Africa, educator stress seems to be indicative of South African educators.

Although work stress research initially focussed on the private business sector based on the generalised assumption that the public sector employees are less work stressed than their public servant counterparts (Keller 1975; Caplan 1991; Mansoor and Sabtain 2011, in Rehman et al. 2012). However, numerous studies in the South African police force (Rothman and Coetzer 2002; Rothman et al. 2005), the South African Electricity Supply Commission (Rothman et al. 2006), the Public Medical laboratories (Narainsamy and Van Der Westhuizen 2014), South African public education (Jackson 2004; Van Wyk 2006; Naidoo 2011) and tertiary education (NWU 2014, 2015), proved this assumption to be incorrect and that public educators are also experiencing high work stress levels. Rehman et al. (2012) also indicated that, similar to their public sector counterparts, private education employees are also experiencing work related stress in Pakistan, while Muthambara (2013) made similar findings regarding employees at the Zimbabwean electricity supply company. Regarding education, Hamid (2014) indicated that public educators are also stressed at work in Swaziland. Very little research into stress among teachers within the Swaziland context has been performed. Dlamini et al. (2014) supports these views of the previously mentioned researchers that various studies in a number of countries indicated that a large proportion of teachers are reporting high levels of occupational stress, but reiterate that very little research has focussed on exploring stress among teachers in Swaziland.

### **Problem Statement**

The problem facing Swaziland education is, as a result of limited focussed research, that the Swaziland Department of education is unable to address educator stress in the country. In addition, the department is also unsure what work stress levels are prevalent; hence managerial

interventions are unfocussed and uncoordinated due to a lack of knowledge (Dlamini et al, 2014).

### **Objectives**

The primary objective of the paper is to investigate work stress among Swaziland public educators.

Serving this primary objective, the secondary objectives are to:

- ♦ Perform a literature review of work stress and the existing studies thereof in the education environment;
- ♦ Identify the prevalence of work stress among Swaziland teachers;
- ♦ Identify the causes of work stress among Swaziland teachers;
- ♦ Determine if there are correlations between the causes of stress; and
- ♦ Make recommendations regarding managerial interventions to lower stress levels as work.

### **Work Stress**

The relationship between work stress and work performance is an important one. According to Feurhahn et al. (2013), burnout, which is a response to work-related stress, is a state of exhaustion, and burnout creates reduced problem-solving abilities and difficulties focusing on daily tasks. Considering the negative effects of stress on health, personal well-being and, importantly, the focus on work and productivity, the examination of the causes of teacher stress and its impact on work performance is an important exploration for the better understanding of the regional dynamics and possible improvement of teacher engagement.

### ***Conceptualization of Stress***

Managers are becoming increasingly sensitive to workforce wellness and workforce satisfaction. Labour management is the continuous effort of ensuring the workforce is healthy, in mind and body. Successful organisations realise the importance of a physically and mentally healthy workforce in realising optimal production, a harmonious work environment and overall business success. The 'Sweat Shop' concept is on the far end of the continuum from the

contemporary understanding of managing the workforce. Organisations are adopting a diverse and comprehensive approach to work wellness. The concept of occupational stress is high up on the attention list. Managers and leaders are paying much attention to understanding the concepts of workplace stress, personal stress and strains, and stress factors to be able to manage labour and the overall business better.

Beehr and Newman (1978) (cited in Cooper and Dewe 2004) suggest that “it is likely that strains to the individual person can lead to some of the behaviours that become organisational outcomes, for example, too much strain might make the person quit his or her job”. From this, it can be deduced that this negative impact may result in strained and stressed staff not being attended to. The notion of occupational stress may be approached in a number of ways and may be diversely defined. It is correct to say that the definition of stress, however, has evolved over time as the boundaries of the elements that are associated with stress are further understood. In addition, the study of stress has evolved from different perspectives, that is, medical, behavioural and social fields of study. Lazarus and Launier (1978) (cited in Dewe and Driscoll 2001) suggest that contemporary views on how stress should be defined require researchers to think of stress as being relational – the result of a transaction between the individual and the environment.

This understanding of stress as a result of a process suggests that stress is not a one-dimensional concept, that is, not just prevalent in the individual or just in the environment, but as a result of a relationship between the two. This understanding of stress is further shared by Cooper and Dewe (2004:115), who state that “...it does not mean that stress is as a result of work environmental factors alone, but a consideration of a number of factors including human consequences, environmental and personal moderators that lead to adaptive responses and/or organizational outcomes.

Stress, as defined by the Oxford Dictionary is a state of mental or emotional strain or tension resulting from adverse or demanding circumstances. Van Wyk (2006:35) asserts that stress is derived from the Latin word ‘*Strictus*’ that translates into taut, meaning stiffly strung. According to Dr Hans Seyle (cited in Van Wyk 2006: 35-37), stress is defined as being in physiologi-

cal terms, a non-specific or generalised bodily response. This occurs when a demand is made on the body, irrespective of it being an environmental need to survive or reach high levels or a personal demand we immerse ourselves in attempting to achieve or accomplish more.

The awareness that occupational stressors and stress-related ill-health do constitute serious problems for all parties on the labour market was expressed in an authoritative way in its ninth session by the joint ILO/WHO Committee on Occupational Health in 1984. In this regard, Cooper and Dewe (2004) quoted both the reports by the ILO and WHO, as well as policy documents and publications by the European Commission, to highlight that Work-Related Stress should not be ignored because:

- ♦ Stress at work may lead to mental or physical ill health;
- ♦ Stress that is not work related can manifest itself in the workplace;
- ♦ The human and economic costs of such stress are very high to all concerned; and
- ♦ Such costs should therefore be reduced by preventing work-related stress.

Stress is explained according to positive aspects (eustress) and negative aspects (distress) of human health and how humans cope with stressors (Ziel et al. 2012). This understanding and impact of stress on an organisation, workplace, company or business, as deduced in the European Commission orientation document, is imperative for employers to expend energies in dealing with the notions of work-related stress and stress in general, as it is a critical success factor in employee performance and employee wellness. One would notice medical aid, insurance companies as well as health- and fitness-related businesses have seen extended business potential by merging brands to take advantage of business opportunities. A classic example of this business potential expansion is Discovery Health SA Group partnering with Virgin Active Fitness Club where there are benefits for Discovery Health group members who are also Virgin Active Fitness club members. The objective is that the medical aid cover business would be paying out less for healthier members, therefore the reason for getting their members fit and healthy by joining a fitness club. The benefit for the fitness club is higher membership numbers. The National Institute on Occupational Safety and Health has linked stress with physiological

conditions of cardiovascular diseases, hypertension, depression and a host of other illnesses as a result of stress-related illnesses, and that 40 million working days per year are lost as a direct result of stress-related illness, according to Jordan et al. (2003) (as cited in Peltzer et al. 2009). This finding is further supported in medical research by Brown (2011), who links job strain to deteriorating health.

Naidoo (2011: 3) asserts that, to this day, the costs of occupational stress are still present and growing, as the very nature of work is dramatically changing. Years later, this sentiment of stress and its negative impact is very much a reality and ever so prevalent. For the Swazi government, as the employer of educators in Swaziland, it would be valuable to fully understand the educator stress 'temperature' to appreciate the context and severity of the notion of stress among its educators, thereby receiving a more holistic understanding of the need for educator support and possible policy developments/shifts. In many ways, managing staff stress is very much a general management and human resource function to such an extent that managing occupational stress could be seen as a strategic aim that can be defined, measured and planned around.

Recent research undertaken by Naidoo (2011:214) indicates that comparative analyses have showed that the causes of stress within the South African education context do not seem to be region bound and that the identified causes of stress are evident country wide. The Swazi social, political, economic and educational context is vastly different to the provincial and national contexts found in South Africa.

### *Sources of Stress*

As mentioned above, stress can result either from job activities or events outside the work context. The major sources of stress, according to Brown (2011), are discussed below:

#### *Technological Change*

Implementation of changing technology and its subsequent usage without involvement of those who use the technology in the decision-making process creates a stressful environment.

#### *Downsizing*

Retrenchments and downsizing that raise job security concerns as well as assuming additional workloads as a result of downsized workforce.

#### *Sudden Reorganisations and Unexpected Changes in Work Schedules*

Such changes create new working groups and alter the way people engage and work with each other.

#### *Competition*

Individuals compete for promotions and opportunities in particular in a work environment with limited or reduced opportunities.

#### *Lack of Participation in Decision-making*

Employees are concern with not being involved in decision-making that influences their work life.

#### *Conflicts with Other People*

Working in teams, and consequently, working with people, which raise opportunities for conflict.

#### *Immediate Supervisor*

Stress as a result of poor management and leadership from immediate supervisor.

#### *Not Enough Time to do Expected Duties*

As a result of downsizing and layoffs, staff who are present take on additional workloads and as a result are not able to complete the required work with less human resources.

#### *Violence in the Workplace*

Violence is as a result of stress or the cause of stress. Whichever reason, violence in the workplace causes stress.

#### *Non-work-related Events*

Stressors outside work that may be social, health related or financial career challenges that, inevitably, play out in the workplace.

According to Naidoo (2011), work stress has three consequences, which are physiological, psychological and behavioural consequences, and the response-based model of stress is from the works of Cooper et al. (2001:4) and Rout and Rout (2002:18), which describes how people respond to stressful stimuli. Based on the work by these authors, Naidoo (2011) formulated the three stress consequences as the physiological, psychological and behavioural consequences that result once the worker is subjected to a stress stimulus. The three consequences and a description on how these consequences may manifest itself.

#### *Behavioural Consequences*

The 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: 144). 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 (Naidoo 2011).

#### *Physiological Consequences*

Physiological consequences of stress 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 such as backaches, and gastrointestinal problems (Peltzer et al. 2008: 247).

#### *Psychological Consequences*

Psychological consequences of stress, according to Newstroom and Davies (2004:123), can result in emotional instability and moodiness, which can impact on reaction to learners and colleagues. Nervousness and tension can eventually result in a lack of concentration and will impact on work performance. Other symptoms can result in chronic illness, depression

and burnout. Interestingly, these consequences tie up with the symptoms of stress and burnout by the work of Colquitt et al. (2013).

#### **Stress among Swaziland Teachers**

Every occupation appears to have a stress 'footprint' and the education sector is no exception (Naidoo, 2011: 3). According to various popular sources, the education sector in Swaziland has been under a great deal of stress during the last 20 years. The following are typical excerpts found in Swazi newspapers (Makhube 2012: 1, 3-4):

1. "*We (Swazi Principals) will go on vacation*".
2. "*Some students will not sit for external exams because their principals have misdirected examination fees*".
3. "*Principals are taking a salary cut.*"
4. "*Principals have threatened to go on vacation if government effects the proposed 10 per cent salary cuts.*"
5. "*Principals downs tools in Swaziland*"

A resolution reached by about 2 000 principals and chairpersons of school committee was that the executive committee notifies the Ministry on Monday July 18 2011, they will not go to school the following Monday if issues were not settled. The educators said they would not close schools, but the situation they are faced with will automatically close down schools. Taking turns to share their opinions; principals said they were faced with desperate times that call for desperate measures.

Such reports of turmoil in the Swazi education sector have received front page prominence in leading Swazi publications in the last three months. These reports point to a situation of educator restlessness with a strong undercurrent of unhappiness and dissatisfaction. When leaders of schools decide to shut down learning centres, it is indicative of a national problem that has been brewing for a while, considering principals have resorted to shut down of learning centres. What is clear is that school educators are restless and possibly faced with high stress levels considering that the education system, its management and administration are highly stressed. The research undertaken asked of Swaziland teachers their negative stressful experiences in the preceding six months. The graph below depicts the findings. Some 75 percent of

respondents indicated experiencing negative stress in this period. This is exceptionally high and a good indicator of the levels of negative stress among Swazi teachers. Considering the description of the strained education environment that Swazi teachers work in, as well as the empirical evidence showing high levels of stress, it becomes crucial to undertake an examination of teacher stress in Swaziland to gain a better understanding of how this may be managed.

Data from the questionnaire administered shows that many Swaziland teachers have experienced negative stress in the recent past. This empirical evidence shows that 75 percent of Swaziland teachers are indeed experiencing stress.

### **Impact of Stress on Work Performance**

The relationship between work stress and work performance has intrigued researchers over decades. Work stress and its impact on work performance is difficult to clearly understand as a result of the multitude of definitions of stressors, and, as such, the relationship between work stress and work performance may be contingent upon the type and definitions of stressors being considered, according to Perewe and Ganster (2010). Occupational stress is defined as the process through which employees perceive, appraise and respond to adverse or challenging job demands at work, as cited in Perewe and Ganster (2010). Work performance may be defined, according to Pepitone (2000), as “the application of human capability to the fulfilment of the objectives of a role in order to create value in the exchange for compensation.” Job performance, according to Campbell (1994), as cited in Perewe and Ganster (2010), is defined as behaviours of employees at work that are relevant to organisational goals. Research by Colquitt et al. (2013) focused on how to understand job performance, suggests that good performance could contain three elements.

- ♦ Firstly, the ability to perform work tasks well;
- ♦ Secondly to engender and encourage good citizenship and behaviour; and
- ♦ Thirdly to act and behave in a positive manner that is not counterproductive.

According to Colquitt et al. (2013), negative stress has a poor influence on work or job per-

formance in that the stressors that result in strain and negative emotions reduce an employee’s physical, cognitive and emotional abilities that they would otherwise bring to their jobs. If stress results in burnout, which is where a person feels or believes that they cannot continue with a job even after a period of rest, then most likely this person is not going to be able to perform his/her job effectively (Grobler et al. 2011).

Managers need to be sensitive to the changes in their employees in an effort to be able to identify possible risk employees. While the symptoms of employee burnout are neither an exact science nor a diagnostic tool, it does provide a practical and helpful guide that managers could use to identify employees who may be stressed. Typical symptoms, according to Grobler et al. (2011), are:

#### ***Physical Symptoms***

A change in physical appearance, decline in grooming or deteriorating wardrobe could be observed while medical complaints such as headaches, backaches or gastrointestinal problems are leading to an increased absenteeism for health reasons. Frequent infections, especially respiratory infections, could also be part of physical deterioration due to burnout. Signs and symptoms of depression such as a change in weight or eating habits or chronic fatigue are symptomatic of burnout.

#### ***Emotional***

Depressed appearance, such as sad expression, slumped posture or rounded shoulders. Appearing bored or speaking of boredom. Attitudes of cynicism, resentment, apathy or anxiety surface while expressions of frustration and hopelessness is made.

#### ***Behavioural***

Decreased productivity, inability to focus on the job or complete a task, tardiness and typical frequent absenteeism typically points towards behavioral symptoms of burnout, usually supported by withdrawal or listlessness experienced by the burnt out employee. Expressions of irritability or hostility, overworking, abuse of drugs, alcohol or caffeine, and increased smoking are also symptomatic. Burnt out employee may also

engage in excessive exercise, often to the point of injury

The evidence below is an indicator of teacher health in Swaziland. The empirical evidence shows a high percentage of teachers rating their health either as poor or satisfactory in their health status. Stress theory regularly discusses occupational stress and its impact on health. While this study does not empirically link the state of poor health and evident high stress levels, it is important to document that 12 percent of the Swaziland teachers experience poor health attributed to stress at work, while the majority (48%) describe their health to be satisfactory. Some 40 percent indicated good health

The Job Demands Resources Model, according to Bakker and Demerouti (2007), as cited by Rosen et al. (2010), is a model that describes the interplay between job demands, coping measures, performance and high job demands, which result in strain and lead to reduced work performance. Nagel et al. (2004), in addition, indicate that stress, either positive or negative, has a relationship with performance. In this regard, Nagel offers three stages of how the body deals with such stress. These stages are:

- ♦ The first stage is the *alarm stage*, which is where the body initially identifies and reacts to the stress by releasing hormones in defence against the stressor.
- ♦ The second stage is the *resistance stage*, whereby the body persists in the resistance to the stressors and, if the persistence of the stress continues, there is potential for the ascension to the third stage.

The model suggests that good performance may be seen according to three elements. Firstly, the ability to perform work tasks well, secondly to engender and encourage good citizenship and behaviour, and thirdly to act and behave in a positive manner that is not counter-productive. According to Colquitt et al. (2013), negative stress has a poor influence on work or job performance in that the stressors that result in strain and negative emotions reduce an employee's physical, cognitive and emotional abilities that they would otherwise bring to their jobs. If stress results in burnout, which is where a person feels or believes that they cannot continue with a job even after a period of rest, then most likely this person is not going to be able to perform his/her job effectively (Grobler et al. 2011).

As indicated, some Swazi teachers experience high levels of stress and experience poor health. It is concerning that teachers may easily be fast-tracked into reaching the third stage of stress, which is the exhaustion stage.

Considering the vast research that consistently finds that negative stress have a strong negative influence on work performance. If employees are experiencing burnout (or as referred to by Nagel as the exhaustion stage) it impacts negatively on work performance, and ultimately, organisational performance. In this regard, organisations are increasingly looking at developing programmes to aid their employees in developing mechanisms to identify stressors, to identify stressors at an early stage, and also to develop coping mechanisms. Organisations also aim to develop employee assistance programmes that assist valuable employees in dealing with stress (Grobler et al. 2011). Stress among teachers in Swaziland is real where the inability to retain staff, for many reasons, including that of stressed teachers. Sass et al. (2011) conclude in stating that it is very important for school management to predict job dissatisfaction in order to reduce the possibility of losing teachers in a school or from the profession altogether.

## RESEARCH METHODOLOGY

A literature study and an empirical study make up the research methodology for this study. The literature study examines the issues of work stress, the causes of stress, its impact on performance as well as an investigation of stress among teachers in Swaziland. The literature study included journal papers, textbooks, conference proceedings and internet-based data. Libraries at the Management College of Southern Africa as well as that of the North-West University were used to source reference materials. EBSCOhost, EMERALD and SABINET were also used.

### Data Collection

The empirical study profiled the educators in this study. Data was collected using the ASSET questionnaire (An Organisational Stress Screening Tool), developed by Cartwright and Cooper (2002) as an initial screening tool to help organisations assess the risk of occupational stress in their workforce (Naidoo 2011:15). This

questionnaire proved to be a valid and reliable tool in similar educational research (Naidoo 2011; Jackson 2004; Jackson and Rothman 2006; Van Wyk 2006). This questionnaire was distributed using a stratified sample of state schools to Swaziland educators, and the principals supervised the completion and collection of the questionnaires. The questionnaire also measured the demographic and biographic variables of educators in schools.

The questionnaire was only administered to government schools to ensure that the sample group is representative of only government schools. Private schools are structured differently, funded and governed differently, and also serve a different population group as those served by government schools, and as a result, they were excluded from the population. While the regulatory requirements that govern government schools also govern private schools, the educator profile, education, training and philosophy are different, as many are religion-based schools or schools that are part of an international model of schooling. The researcher collected the completed questionnaires from the principals. The study had the permission and blessing of the Swaziland Ministry of Education, who assisted in facilitating and coordinating the distribution and retrieval of questionnaires. A total of 550 questionnaires were distributed and 377 completed questionnaires were received. This signified a satisfactory response rate of 68.5 percent.

### Statistical Analysis

The empirical results for this paper are presented in accordance with themes as per the questionnaire used (see Appendix A). Exploratory factor analysis (EFA) with a Varimax orthogonal rotation of the axis was used to identify causes of stress factors required for management of the Swaziland's public schools (Field 2007:749). Prior to undertaking the factor analysis, the data was subjected to the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity to ensure that the sample was appropriate and that the data is suitable for EFA analyses (Field 2007: 668).

According to Du Plessis (2009: 26), KMO values of at least 0.6 should be present before advanced statistical analysis is considered based on an adequate sample criterion. General-

ly, values below 0.5 are unacceptable, while values of 0.7 and higher are regarded significant and an adequate sample fit for advanced statistical analysis (Field 2007: 640, in support of research by Hutcheson and Sofroniou 1999). These authors also point out that values between 0.7 and 0.8 are regarded as 'good', while values between 0.8 and 0.9 are 'excellent'. Values between 0.9 and 1 are 'superb'. A value close to 1 suggests that sample used is adequate and should yield usable results. This study set a KMO value at a minimum of 0.70 as suggested by Field (2007: 672).

The null hypothesis that variables in the population correlation matrix are uncorrelated is tested through the Bartlett's test of sphericity (Coakes et al. 2008). The acceptable significance level is equal to or below .005 (Field 2007: 641). If the data value is below 0.005, then the data is suitable for the purposes of multivariate statistical analyses, such as factor analysis, because the inter-correlations between the variables are low and would not influence the results negatively (Du Plessis 2009: 58).

The reliability and the internal consistency of the data were determined by the calculation of the Cronbach alpha (Wuensch 2009: 58). The minimum Cronbach alpha coefficient for this study is set at 0.70 (Field 2007: 668).

## RESULTS

### Bartlett's Test of Sphericity and the KMO test of Sample Adequacy

The adequacy of the sample was measured by employing the KMO measure of sampling adequacy. In addition, to determine the suitability to continue towards exploratory factor analysis, the inter-relationships that exist between the variables were calculated by means of Bartlett's test of sphericity. Table 1 presents the results:

**Table 1: KMO and Bartlett's test**

Kaiser-Meyer-Olkin measure of sampling adequacy.		.678
Bartlett's test of sphericity	Approx. chi-square	1119.790
	df	300
	Sig.	.000

The analysis showed that the sample is adequate. The sphericity assumption was tested using Bartlett's test and the KMO was used to



measure sample adequacy. The results arising from these two tests are found in the table above. The KMO measure returns a satisfactory value of .621. The Bartlett's test of sphericity returns a favourable value of .000 (which is less than the required value of 0.05). This denotes sufficient inter-variable relationships to conduct the factor analysis.

### Exploratory Factor Analysis

The exploratory factor analysis identified nine factors. An orthogonal Varimax rotation was employed to do so. Varimax was selected as rotational method because it attempts to maximise the dispersion of factor loadings by loading a smaller number of variables highly onto each factor resulting in a more interpretable cluster of factors (Field 2007:749). Only factor loadings that were equal to or higher than 0.40 were considered to be significant and were used in the analysis, while factors with Eigenvalues of 1 and higher were extracted from the matrix (Mutambara 2013:115). The nine factors extracted from the analysis as well as the associated statements that loaded onto these factors are shown in Table 2. The nine factors explain a cumulative variance of 56.47 percent.

The factor loadings are shown in Table 3.

Extraction method: Principal component analysis. Rotation method: Oblimin with Kaiser normalisation.

a. Rotation converged in 27 iterations.

#### Factor 1: Job Satisfaction

Four items loaded onto factor 1. These items are 98, 83, 109 and 108. These items deal with issues related to acknowledgement from superi-

ors, self-belief and comfort in the organisation and as a result this factor has been termed job satisfaction. Item 98, which deals with the aspect of undertaking work satisfactorily enough to ensure compliments from superiors, loaded with a high .730, which indicates that indeed teachers feel that they believe that their work is done well enough and that compliments from superiors are received. Item 83, which deals with ability of knowing what an individual wants out of a job and therefore being able to find that what is wanted in a job loaded at .525, which suggests that teachers do believe that they are aware of their jobs and what they get out of their jobs. Job satisfaction overall is a key element of employee wellness and happiness referred to as an employee's pleasurable or positive emotional state as a result of one's appraisal of one's job and the resultant experience. Teachers who are dissatisfied with their job are less likely to have the desired commitment required for the job (Reilly et al. 2014; Sass et al. 2011). The factor explains a variance of 13.510 percent.

#### Factor 2: Unfair Promotion

Four items loaded onto factor 2. These are items 90, 88, 92 and 91. These items deal with the issues of promotion, nepotism, networks and perception of rationale for promotions. As a result of these issues, the factor has been termed unfair promotion. Interestingly enough, item 90 loaded a high .739, which suggests that teachers feel that their ability to get a good job is dependent on who they know. Item 88 also loaded on a high .727, indicating that again to get a good job it is dependent on having family or friends in high positions. Item 92 loaded a good .642, and indicate that teachers feel that if they

**Table 2: Total variance explained**

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings <sup>a</sup>
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	3.377	13.510	13.510	3.377	13.510	13.510	1.933
2	1.809	7.236	20.745	1.809	7.236	20.745	2.198
3	1.694	6.776	27.521	1.694	6.776	27.521	1.974
4	1.515	6.060	33.581	1.515	6.060	33.581	1.776
5	1.288	5.152	38.734	1.288	5.152	38.734	1.779
6	1.211	4.845	43.579	1.211	4.845	43.579	1.253
7	1.105	4.420	47.999	1.105	4.420	47.999	1.439
8	1.070	4.279	52.277	1.070	4.279	52.277	1.668
9	1.049	4.196	56.474	1.049	4.196	56.474	1.428

**Table 3: Rotated factor matrix**

	<i>Factors</i>								
	<i>F1 Job satisfaction</i>	<i>F2 Unfair promotion</i>	<i>F3 Internal locus of control</i>	<i>F4 Job performance</i>	<i>F5 Personal growth</i>	<i>F6 Job retention</i>	<i>F7 Job loyalty</i>	<i>F8 Competence</i>	<i>F9 Job control</i>
q98	.730								
q83	.525								
q109	.489								
q108	.434								
q90		.739							
q88		.727							
q92		.642							
q91		-.540							
q84			.735						
q82			.712						
q97			.492						
q79				-.660					
q94				-.587					
q96				-.554					
q78					.660				
q105					.654				
q103					.601				
q116						.866			
q122							.722		
q117							.636		
q99								.782	
q75								.672	
q113									-.736
q76									.520
q74									.481

Extraction method: Principal component analysis. Rotation method: Oblimin with Kaiser normalisation.  
 a. Rotation converged in 27 iterations.

were to be financially successful they will have to know people in the right places. Item 91 loaded a negative -.540, which indicates that teachers disagree that promotions are for people who perform well. This is in keeping with the rest of the factors, which show a strong bias towards an overall feeling of the presence of nepotism, favouritism and unfair promotion conditions. The factor explains a variance of 7.236 percent.

**Factor 3: Internal Locus of Control**

Three items loaded onto factor 3. These are items 84, 82 and 97. Item 84 loaded on a high .735, which suggests that respondents agree that if there are concerns about decisions made by seniors, they should indeed do something in response. Item 2 deals with the ability to achieve what is expected of the job, loaded on a high .712, which indicates that respondents agree that this accomplishment is generally achieved. Item 97 loaded on a low .492, which indicates that respondents feel that they do not really meet

their deadlines. These items deal broadly with the issues of personal goal orientation, ability to respond to situations and ability to reflect internally on self-accomplishments and as a result this factor has been termed internal locus of control. The factor explains a variance of 6.776 percent.

**Factor 4: Job Performance**

Three items loaded onto factor 4. These are items 79, 94 and 96. Interestingly, all items loaded negatively. Item 79 deals with the issue of ability to find solutions in times of challenges and loaded negatively. Consequently, respondents feel that they generally cannot find solutions in times of difficulty. Item 94 deals with the perception that people who perform their work well receive rewards for it. This item loaded negatively, suggesting that respondents do not agree that those who perform their jobs well get rewarded. Item 96, which deals with timeous attendance at work, loaded negatively, indicating

that respondents agree that most of the time they do not get to work on time. All three items deal with aspects of job performance and therefore the factor has been termed job performance. The factor explains a variance of 6.06 percent. From the results it is evident that Swaziland teachers perceived themselves as being highly productive. Only 4.8 percent regarded themselves to less than 70 percent productive while 12.8 percent rate themselves as being between 70 and 80 percent productive. The majority (67.4 percent) regard themselves to be in excess of 80 percent productive. Some 15 percent reported that they are fully productive with 100 percent or more productivity levels.

#### ***Factor 5: Personal Growth***

Three items loaded onto factor 5. These are items 78, 103 and 105. All three loaded above .600. These items deal with ability to find solutions, attainment of personal development in the organisation and the individual's contribution towards overall team productivity. The loadings across the items show a general acceptance that respondents feel that they do find solutions, they experience personal development and that they contribute towards overall team productivity. Considering the concepts of personal development and value added as an employee, this factor has been termed personal growth. The factor explains a variance of 5.152 percent.

#### ***Factor 6: Job Retention***

Only one item loaded onto factor 6 and this is item 116. Item 116 deals with the feeling that staying with the organisation is as a result of need and not desire to be in the organisation. This item loaded very highly at .866, which shows a strong feeling that respondents do not feel that they want to be in their organisation, but have to do so because of the need to be employed. This is an important finding in that productivity and performance are also dependent on an individual's comfort and keenness to be involved. Performing at a desired level cannot be extricated from the desire to be involved. If staff does not desire to be involved in an organisation and feel they have to do it because they need a job, then the ability to retain staff becomes limited. According to Sass et al. (2011), research suggests that teacher satisfaction is

related to the intrinsic rewards of student and teacher achievements and teachers' dissatisfaction is related to extrinsic factors such as school leadership, work climate, workload and communication. The literature study above indicates that schools need to be able to predict satisfaction and dissatisfaction among teachers in an effort to reduce loss of employees. Considering this together with the understanding of teacher satisfaction and dissatisfaction, Swaziland school leaders should be looking to understand the stressors at play and provide leadership in mitigation. This item deals with the notion of desire to be involved in the organisation as a result of need or desire and as a result, the factor has been termed job retention. The factor explains a variance of 4.845 percent.

#### ***Factor 7: Job Loyalty***

Two items loaded onto factor 7. These are items 117 and 122. Item 117 loaded on an average .636, and deals with the feeling respondents will experience if they have to leave their organisation immediately. The loading suggests that the respondents indeed will feel guilty if they would leave their organisations immediately. Item 122 deals with the number of options available to respondents if they were to leave the organisation. This item loaded on a high .722, which suggests that respondents agree that they do not have too many options if they were to leave. Both these items deal with issues of loyalty and as a result the factor has been termed job loyalty. Suliman and Junaibi (2010), cited in Ibrahim and Al Falasi (2014), indicate that organisations depend on the commitment of its employees and that organisational success is related to employee organisational commitment. Furthermore, organisations should be looking to develop an understanding of how employee loyalty develops if organisations were to meaningfully reduce staff turnover. Interestingly, according to Ziel et al. (2012), employees at times may not necessarily experience job satisfaction or involvement; however, they may be relatively satisfied with the organisation and resultantly are comfortable to continue employment. The factor explains a variance of 4.420 percent.

#### ***Factor 8: Competence***

Two items loaded onto factor 8. These are items 75 and 99. Item 75 deals with one's person-

al ability to deal with unforeseen situations and item 99 deals with one’s ability to do work well enough to receive compliments from team members. These items loaded a good .672 and .782, respectively, indicating that respondents agree that they are able to deal with unforeseen circumstances and also work well enough to receive compliments from fellow team members. Both items deal with ability and competence resulting in factor 8 being termed competence. The factor explains a variance of 4.279 percent.

**Factor 9: Job Control**

Three Items loaded onto factor 9. These are items 74, 76 and 113. Item 74 deals with the ability to deal with unexpected events in an efficient way and interestingly loaded on a low .482, which does not correlate with item 75 loading in factor 8. Item 76 deals with the ability to solve problems and loaded on a low .520, which suggests that respondents do not agree that they can solve problems if they invest their efforts. This finding does correlate with item 74 in this factor. Item 113 deals with the feeling that leaving work immediately will result in disruptions in their lives. This loaded on a -.736, which indicates that respondents do not agree that leaving work immediately will result in disruptions in their lives. These items deal with the issues of self-control over work problems, ability to solve work problems and the ability to deal with issues related to leaving work and as a result the factor has been termed job control. The factor explains a variance of 4.196 percent.

**Contextualising the Factors**

The identified factors are contextualised in Table 4.

This factor deals with the issues of self-control over work problems, ability to solve work problems and ability to deal with issues related to leaving work.

**Reliability of Factors**

The reliability of the nine factors was calculated using the Cronbach alpha coefficient. The results appear in Table 5.

**Table 5: Reliability of the factors**

<i>Factors</i>	<i>Cronbach alpha</i>
F1	0.467
F2	0.177
F3	0.218
F4	0.442
F5	0.465
F6	0.339
F7	***
F8	0.461
F9	0.040

\*\*\* not calculated due to limited items loading

The required coefficient of 0.7 set was not achieved as the minimum level of reliability in this study. As a result, the factors cannot be regarded as reliable. Field (2007:675), however, states that alpha coefficients of 0.57 (based on extensive research on reliability by Cortina 1993) could also be regarded as reliable. However, even the lower coefficient is not reached by the fac-

**Table 4: Factor labels and contextualization**

<i>Factor</i>	<i>Factor label</i>	<i>Factor refers to:</i>
F1	Job satisfaction	This factor deal with the issues related to acknowledgement from superiors, self-belief and comfort in the organisation.
F2	Unfair promotion	This factor deals with the issues of promotion, nepotism, networks and perception of rationale for promotions.
F3	Internal locus of control	This factor deals broadly with the issues of personal goal orientation, ability to respond to situations and ability to reflect internally on self-accomplishments.
F4	Job performance	This factor deals with abilities to find solutions in times of challenges and loaded negatively, i.e. performance.
F5	Personal growth	This factor deals with the concepts of personal development and value added as an employee.
F6	Job retention	This factor deals with the notion or desire to be involved in the organisation.
F7	Job loyalty	This factor deals with issues of teacher loyalty.
F8	Competence	This factor deals with ability and competence.
F9	Job control	This factor deals with the issues of self-control over work problems, ability to solve work problems and ability to deal with issues related to leaving work.

tors, and despite acceptable sample adequacy and sphericity, none of the factors have acceptable reliability coefficients. In practice, the lower reliability levels do not influence the importance of the factors to the current study (Naidoo, 2011). This suggests that, assuming this study were to be undertaken in another application context; these factors are unlikely to represent themselves again.

### Inter-factor Correlations

The correlations between the factors were calculated by means of Pearson's correlation coefficients at  $p < 0.05$  and  $p < 0.10$ . The results appear in Table 6.

From the analysis, it is clear that the factors do not significantly correlate with one another. This signifies that the factors, although measuring one construct (Swaziland educator stress), are independent and should be managed as such. In practice, this means that each factor should be individually addressed by management, and that these managerial interventions will only affect the specific factor. The fact that no inter-correlations exist means that management should address each factor individually to correct its negative influences on educators' stress levels.

## DISCUSSION

The methodology employed to extract factors (causes) of work stress have been validated in various similar (Jackson 2004; Van Wyk 2006; Naidoo, 2011; Imandin, 2015) and dissimilar studies (Fields 2013; Moolla 2010; Bisschoff and Moolla 2014) to identify causes or communalities within the data. The data were also subjected (as recommended by all the aforemen-

tioned studies) to determine if inter-correlations exist between the variables that could result in flawed results, and also to statistically establish if the sample used was adequate. These statistical tests eliminate common pitfalls and resultantly usable results were obtained.

The results identified nine factors (causes) of work stress. As recommended by Field (2007) the cumulative variance explained should preferably be above 50 percent, while cumulative variance equal or exceeding 60 percent is regarded to be "good fit of the data" Bahçivan and Kapucu 2014:113), The variance explained in this study exceeds the 50 percent margin explaining a cumulative variance of 56.5 percent, The variance is explained cumulatively by nine identified factors which are (in declining order of importance): *Satisfaction, Unfair promotion, Internal locus of control, Job performance, Personal growth, Job retention, Job loyalty, Competence and Job control.*

According to Naidoo (2011) directly comparable work stress analysis pertains to the identification of *pure factors* and *non-pure factors*. Pure factors are regarded to be generic since they feature in a number the studies that identified work stress among educators in Southern Africa. These studies are Jackson (2004) (North-West Province), Van Wyk (2006) (Free State) and Naidoo 2011 (KwaZulu-Natal). *Pure factors* identified from these three studies are *Organisational support; Overload; Rewards/Remuneration; Growth opportunities/Task characteristics; and Job insecurity*. Compared to the Swaziland educators it is clear that only one factor could be identified as a pure factor, namely the factor pertaining to *Personal growth*. Regarding the identification of *Non-pure factors* (factors that are identified by at least one more study), no factor could be identified. In practice this means that

**Table 6: Component correlation matrix**

Component	1	2	3	4	5	6	7	8	9
1	1.000	-.114	.131	-.065	.119	.012	.121	.062	-.012
2	-.114	1.000	-.047	.073	-.161	-.033	-.003	-.132	-.092
3	.131	-.047	1.000	-.152	.111	.079	.011	.186	.059
4	-.065	.073	-.152	1.000	-.107	-.038	-.008	-.031	-.050
5	.119	-.161	.111	-.107	1.000	.016	.057	.085	.034
6	.012	-.033	.079	-.038	.016	1.000	-.050	.003	.053
7	.121	-.003	.011	-.008	.057	-.050	1.000	.008	-.035
8	.062	-.132	.186	-.031	.085	.003	.008	1.000	.053
9	-.012	-.092	.059	-.050	.034	.053	-.035	.053	1.000

\* Significant at  $p < 0.05$  ; \*\* Significant at  $p < 0.10$

although the three other studies in different provinces of South Africa compared well and identified five generic causes (five pure factors were identified within all three studies) and another two non-pure factors were present in at least two of the three studies, the Swaziland educators have different stressors in their work. In practice this means that only Growth is a generic cause of stress and that South African and Swaziland educators have very little in common when it comes to causes of work stress. Transferring stress management policies from one country to the other will just not be effective, hence each country is required to develop its own managerial strategies with unique work stress interventions to address work stress in schools.

### CONCLUSION

The study shows that a high number of Swaziland teachers are experiencing work stress. The literature study reveals that negative workplace stress has an adverse effect on health and well-being as well as work performance. There are a number of factors that have been identified that may be used to address the issue of work stress among Swaziland teachers. These factors are job satisfaction, unfair promotion, internal locus of control, job performance, personal growth, job retention, job loyalty, competence and job control.

An examination of these factors will provide an overview of the key areas of attention that need to be considered when attempting to understand the issue of workplace stress and its relation to Swaziland teachers and their performance. While these factors have been identified in this study, different factors may be yielded in the same study within a different context or environment. The literature study and empirical data highlight the need for Swaziland school managers to recognise the existence of the negative stress elements among Swaziland teachers and resultantly find ways to meaningfully address them, where possible. This is vital for a number of reasons and importantly for the general employee health and well-being, employee satisfaction and loyalty, employee commitment and focus – these elements all shape the way the employee as individuals and together as a workforce perform their duties with optimum productivity.

The study also provides models to understand the causes of workplace stress, identifying the symptoms of workplace stress and how it may manifest itself in an employee. An understanding of these models is helpful in mitigating workplace stress that becomes negative, which may result in burnout. If this were to happen, at an individual level, the employees' work performance may be seriously compromised. If negative stress and burnout are not managed enterprise wide, this may result in adverse organisational-wide performance issues.

### RECOMMENDATIONS

Based on the research methodology and results obtained in this research it is recommended that, regarding the research design and methodology:

- ♦ The extensive ASSET questionnaire developed by Cartwright and Cooper (2002) is a validated and excellent measuring instrument to employ to measure work stress (and other managerial aspects not investigated in this paper);
- ♦ The statistical analysis as developed by the North-West University's Statistical consultation services, is a sound and useful methodology that can be duplicated in other studies with confidence;
- ♦ Future researchers should make use of professional statistical advice as it not only provides a solid research base, but also instils researcher confidence whilst good advice is easily obtainable;

Concerning the results it is recommended that:

- ♦ Swaziland Department of education employs the results obtained in this research to improve work stress among educators; thus actually using the results to formulate managerial interventions to do so;
- ♦ The causes of stress (as portrayed by the factors) be individually analysed and addressed because there are limited correlations between the causes. Each cause, therefore, necessitates specific and individual managerial interventions; and that
- ♦ Future research be undertaken to further analyse each identified work stress cause in detail and also to repeat the study in other areas of Swaziland to ensure that the causes are generic ones and prevalent to the specific areas investigated.

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