

# BREATHE IN, BREATHE OUT: ALLEVIATING STRESS IN SCHOOL PRINCIPALS

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## ABSTRACT

The aim of the study was to determine the influence of controlled breathing on school principals' stress relief. The research sample consisted of six primary school principals purposefully selected on the basis of years of school principal experience and the voluntary attendance of a stress alleviation workshop. Based on an interpretive paradigm employing a mixed-methods research approach, a structured questionnaire was used to compare participants' levels of stress before and after attendance of a stress alleviation workshop that focused on controlled breathing. By means of in-depth individual interviews the manifestation of the influence of controlled breathing on participants' stress relief was investigated. Data from the structured questionnaires were analysed as frequencies and mean scores. Through qualitative content analysis data from the individual interviews were analysed as emerging categories and themes. It was found that the regular practising of controlled breathing resulted in participants' stress relief with main improvements related to revitalised energy levels, restored clarity of thinking and improved interpersonal relationships. The findings contribute to research on constructive ways of stress relief within the school environment.

**Keywords:** school principals' stress, self-efficacy, executive control, controlled breathing

## 1. INTRODUCTION

Stress is related to unrelieved tension caused by an imbalance between encountered stressors and the resources available for dealing with those stressors (Brown, Ralph & Brember, 2002:2; Spangenberg & Orpen-Lyall, 2000:6). Stress effect is subjective in that an individual's experience of stress is contingent on the specific appraisal of a situation which is closely related to self-efficacy as a job-specific disposition (Schwarzer & Hallum, 2008:153).

The existence of stress amongst school principals is well documented and is mainly associated with the pressures caused by the rate of change in society, the demand for improved excellence juxtaposed against the added responsibilities due to school-based management, and school principals' intense involvement in day-to-day school functioning (Betoret, 2006; Brown et al., 2002; Friedman, 2002; Griffith, 2004; Tucker, 2010; Yong & Yue, 2007). Within the South African context, with major politically and socially motivated transformations in education, school principals are expected to contribute to social reconstruction (Berkhout, 2007:405) carried out in environments characterised by extreme poverty, high levels of family disintegration,

substance abuse and violent crime (Bloch, 2009:124; Olivier & Venter, 2003:186). In order to manage their schools effectively, school principals need to manage their own stress. What is more, they have to manage the school as a whole in such a way that stress levels are reduced for all staff so as to counteract undesirable influences on learners (Yong & Yue, 2007:79).

As a stress alleviation strategy that is economically and readily available, controlled breathing within a holistic approach of life skills development is scientifically recognised, with designated organisations focussing on developing individuals' stress-coping abilities through controlled breathing (Nagel & Brown, 2003:256; Trampuz, Kononenko & Rus, 2002:57). The Art of Living Foundation is such an organisation. Founded in Bangalore, India in 1981, the organisation presents workshops to improve individuals' sense of well-being through stress relief that is based on meditation and controlled breathing so as to restore energy and equilibrium (Balasubramanyam, 2010:1; Bhatia, 2002:23).

Although many studies have been conducted on stress alleviation strategies within the teaching profession, few have dealt with the value of a holistic approach that includes controlled breathing. To the researchers' knowledge, no study has been conducted in South Africa on the influence of a holistic approach to school principals' stress relief, which includes controlled breathing. The pivotal role that school principals fulfil in day-to-day school effectiveness and the potential stress accompanying such intense involvement (Friedman, 2002:229; Yong & Yue, 2007:80) demand a readily available stress alleviation strategy. The aim of the research on which this article is based was to investigate the alleviation of school principals' stress through a holistic approach of life skills development based on controlled breathing. The researchers assume that controlled breathing as a readily available coping strategy can eventually be applied across schools to contribute to the alleviation of stress encountered by all stakeholders, thus contributing to school success.

## **2. SELF-EFFICACY AND STRESS ENCOUNTER**

In order to understand the influence of controlled breathing on school principals' stress relief, self-efficacy theory is used as point of departure, as a sense of self-efficacy determines the individual's reaction to stress and is also affected by stress.

Self-efficacy theory as a core aspect of social-cognitive theory determines how individuals think, feel, and act on stressors (Bandura, 1997:38). A low sense of self-efficacy, for example, results in feelings of anxiety and helplessness and in the harbouring of pessimistic thoughts about accomplishment. A strong sense of self-efficacy facilitates cognitive processes and performance in a variety of settings, including decision-making competencies (Bandura, 1997; Betoret, 2006:523; Schwarzer & Hallum,

2008:153). Known as executive control, cognitive processes underlie voluntary, but effortful regulation of perception and motor processes in order to deal adaptively with changing task demands (Van der Linden, Keijsers, Eling & Van Schaijk, 2005:24). Two major aspects of executive control are sustained attention that is needed for qualitative decision-making, and response inhibition that ensures healthy work relationships. Self-efficacy is, however, negatively affected by high levels of work stress (Friedman, 2002:229; Griffith, 2004:258), and when school principals start to doubt their professional accomplishments, burnout occurs, causing a down-spiral of self-efficacy.

Burnout as a common response to chronic emotional stress due to intense involvement with people in the work situation (Schwarzer & Hallum, 2008:154; Yong & Yue, 2007:79) results in exhaustion, cynicism and inefficacy (Leiter & Maslach, 2004:93). In order to understand burnout and the influence of burnout on self-efficacy, three components of burnout have been identified, namely emotional exhaustion, depersonalisation, and reduced personal accomplishment (Maslach & Jackson, 1981:1). Emotional exhaustion that is caused by being overextended and depleted of emotional and physical resources is reflected in low levels of energy which impact negatively on a sense of self-efficacy. Depersonalisation results in excessively detached response to various aspects of the work, including interaction with colleagues. Reduced personal accomplishment, brought about by feelings of incompetence and reduced achievement and productivity, leads to low morale (Maslach & Jackson, 1981; Schwarzer & Hallum, 2008:155). With reference to self-efficacy, and on a continuum of employee well-being, burnout as exhaustion, cynicism, and inefficacy, represents the one pole. At the other pole an energetic, involved and effective state of work engagement represents self-efficacy and the ability to cope with work stressors.

Apart from the effects of chronic work stress on the psychological (job dissatisfaction), physiological (high blood pressure) and behavioural (absenteeism) dimensions of employee existence, burnout also impacts on the cognitive level. This causes impaired executive control in that deficits occur in the ability to sustain logical thinking and to inhibit pre-potent but inappropriate behaviour (Miller & Cohen, 2001:170; Van der Linden et al., 2005:24).

### **3. STRESSORS WITHIN THE SCHOOL CONTEXT**

The demand for change associated with the dynamism of science and technology developments and the impact thereof on organisational calibrating efforts manifests as a major reason for work stress (Armstrong, 2005:3). Due to the challenges to survive within a competitive socio-economic environment and because government anticipates them to be instruments for the creation of economic growth (Berkhout, 2007:408), education systems are also prone to change. The increased emphasis on school principals' management task

alongside their functional task manifests as an answer to the 'doing better' discourse of global competitiveness (Kokkinos, 2007:230; Kruger, 2003:246; Tucker, 2010:71). Major stressors resulting from this situation relate to heavy workloads, conflict with stakeholders, lack of a multiplicity of resources, lack of support from authorities, and time pressures (Bachkirova, 2005; Brown et al., 2002; Tatar & Horenczyk, 2003; Yong & Yue, 2007). Although these stressors affect all school staff, they acutely impact on school principals as the chief executives who are accountable for all actions taking place at their schools (Friedman, 2002:229; Griffith, 2004:259). For South African school principals who are challenged to contribute to social reconstruction, a major stressor is related to conflict with the State that is interfering in the authority of school-level governance (Berkhout, 2007:405; Prinsloo, 2006:355). The chronic stress caused by such intensive conflict demands effective coping strategies in order to sustain constructive decision-making (Mertzger, 2003:656).

#### **4. COPING STRATEGIES**

Coping resources and coping strategies enhance self-efficacy in dealing with stress (Bandura, 1997:478; Betoret, 2006:522). With regard to the school environment, coping resources include physical (classrooms), human (teachers), support service (school psychologists) and didactic resources (learning materials) which enable school principals to arrange for quality teaching and learning events, thus minimising potential stress (Betoret, 2006:524; Kruger, 2003:250). Considered holistically, stress-coping strategies encapsulate the physical, socio-psychological and mental spheres of human existence. Physically, the stress effect can be alleviated by healthy eating and sleeping habits and regular exercise. Socio-psychologically speaking, self-efficacy to cope with stress is enhanced by family and friends' support networks, creative hobbies, appreciating nature, and by not comparing oneself to others. In terms of mental well-being, stress can be alleviated by prioritising, compartmentalising, and considering stressors in perspective (Cartwright & Whatmore, 2005:169; Yong & Yue, 2007:82).

Serving as a basis for a holistic approach to stress relief, the practising of controlled breathing is inspired by the fact that the mind and body automatically resort to breathing in stressful situations. Breathing responses manifest as if controlled by a sensor to ensure a corresponding rhythm in the breath for every emotion (Papworth, 2003:24). The cornerstone for workshops presented by the Art of Living Foundation is a breathing technique known as Sudarshan Kriya. Departing from the premise that toxins accumulate in the human system at a cellular level, practising Sudarshan Kriya removes stress and toxins through oxygenating and revitalising bodily cells (Bhatia, 2002:23; Trampuz et al., 2002:57).

The Sudarshan Kriya breathing technique is practised while sitting erect to enable a hindrance-free movement of attention between the brain and the spinal cord, engaging the neck and shoulder muscles to relieve stress-related

pressure. The breathing technique comprises four sequential breathing stages with 20 cycles of inhalation and exhalation at each stage, executed slowly and rhythmically (Balasubramanyam, 2010:1; Gangadhar & Janakiramaiah, 2002:26). In the first stage, equally long and deep inhalations and exhalations expand the lobes of the lungs to maximise the absorption of oxygenated energy. The second stage involves normal inhalations followed by deep and longer exhalations. In the third stage deep and longer inhalations are followed by normal exhalations. The fourth stage is a repetition of the first stage with equally long and deep inhalations and exhalations. Sudarshan Kriya ends with 20 cycles in which normal breathing is gradually restored to rhythmic inhalations and exhalations. Sufficient proficiency gained through regular application demands that the Sudarshan Kriya breathing technique be applied whenever needed, but at least twice daily, morning and evening (Balasubramanyam, 2010:1).

## **5. RESEARCH DESIGN AND RESEARCH METHODOLOGY**

In order to determine the influence of the Sudarshan Kriya breathing technique on the alleviation of stress experienced by school principals, an empirical investigation was conducted. The discussion that follows represents the plan of action which the researchers deemed most suitable for the empirical investigation.

### **Research design**

As the researchers sought to determine the influence of controlled breathing on school principals' stress relief and the manifestation of this stress relief, an interpretive paradigm employing a mixed-methods research approach was used. This approach was selected to arrange for increased insight in that the results of the quantitative inquiry were supplemented with the findings of the qualitative investigation (Creswell, 2003:16). The final outcome was a deeper understanding of the influence of controlled breathing as a stress alleviator.

### **Selection of participants**

Based on convenience and purposeful selection, the research sample consisted of six primary school principals (five males and one female) selected from a total of 49 primary schools in the Phoenix circuit, KwaZulu-Natal. Purposeful selection was steered by years of school principal experience (between six and 17 years) and voluntary attendance of the stress alleviation workshop based on controlled breathing. With regard to sample size, Rossman and Rallis (2003:138) note that, with phenomenological studies, three to five in-depth interviews with information-rich participants provide intensive coverage of the data. The researchers experienced saturation of information when they realised that nothing new had been learned after the sixth interview was conducted (Greeff, 2005:294).

## **Data collection instruments**

The Maslach Burnout Inventory (MBI) questionnaire as developed by Maslach and Jackson (1981) determines the intensity of chronic work stress by assessing the three aspects of burnout, namely emotional exhaustion, personal accomplishment and depersonalisation. As the aim with this research was to determine the influence of controlled breathing on stress relief, the MBI questionnaire was deemed an appropriate instrument. The MBI questionnaire was employed before and after participants attended the Art of Living workshop on controlled breathing.

The MBI questionnaire consists of 22 items ordered into the three categories of burnout, namely emotional exhaustion, personal accomplishment and depersonalisation (Maslach & Jackson, 1981:14). Statements about personal feelings are evaluated by means of a 7-point Likert-type scale (Never = 0; Every day = 6). Participant responses are interpreted according to the template of the Maslach Burnout Inventory Manual for assessing category responses as low, moderate or high degrees of burnout (Maslach & Jackson, 1981:2). According to this template higher scores in emotional exhaustion and depersonalisation and lower scores in personal accomplishment reflect burnout.

To understand the manifestation of participants' stress relief due to controlled breathing, individual in-depth interviews were conducted. Questions included in an interview schedule pertained to comprehending the magnitude of the influence of controlled breathing on participants' stress relief and the ease and consistency of participants' application of the breathing technique.

With regard to the data collection procedure, the individual in-depth interviews were conducted six weeks after participants had attended the stress alleviation workshop. The reason for the six-week span was that participants needed to internalise the practising of the breathing technique and its influence on stress relief.

## **Data analysis**

Qualitative content analysis based on Tesch's model was used to ensure that all the perspectives and issues that arose from the interview data were considered (Poggenpoel, 1998:343). In brief this included a transcription of each interview for an immersion into the data and as an initial segmentation of the data into units of meaning (De Vos, 2005:336). This was followed by open coding to achieve an inductive selection of codes determined on sentence level (Henning, Van Rensburg & Smit, 2004:104). Selective coding followed axial coding to ensure that themes from the labelled categories were constructed and extracted to represent the interpreted and rationalised data as research findings (Henning et al., 2004:105). Guba's trustworthiness model was used to establish the validity and reliability of the qualitative

research in terms of truth value, applicability, consistency and neutrality (Poggenpoel, 1998:348-350). An analysis of the data from the MBI questionnaires represented the construction of a frequency distribution and the calculation of mean scores (Johnson & Christensen, 2004:436). The interpretation of the mean scores was based on the template of the MBI manual for assessing work stress in terms of burnout as a three-dimensional concept of high levels of exhaustion and depersonalisation and low levels of accomplishment (Maslach & Jackson, 1981:2).

## **Ethical issues**

Care was taken to ensure that the consent of the participants was voluntary and informed, without any implied deprivation or penalty for refusal to participate (Strydom, 2002:74). The participants' anonymity and the confidentiality of their disclosures were ensured at all times during the research (Henning et al., 2004:73).

## **6. FINDINGS**

The presentation of findings includes a discussion on the comparison of the stress levels of participants interpreted as the degree of burnout experienced before and after attending the stress intervention programme based on controlled breathing. The comparison serves to confirm the positive influence of controlled breathing on stress relief. This is followed by a discussion of the manifestation of the influence of controlled breathing on participants' stress relief.

The fact that controlled breathing had an alleviating influence on participants' levels of stress was confirmed by the results from the Maslach Burnout Inventory questionnaire. These results are discussed next.

### **Stress levels of participants before and after applying controlled breathing**

Table 1 provides the interpreted data from the Maslach Burnout Inventory (MBI) questionnaire which reflects the stress levels of participants before and after attending the stress intervention programme based on controlled breathing. The mean scores, indicating the influence of the breathing technique workshop, represent the average of the six participants. Mean score interpretation is based on the template of the MBI manual for assessing work stress in terms of burnout as depicted by higher scores on emotional exhaustion and depersonalisation and lower scores on personal accomplishment (Maslach & Jackson, 1981:2).

**Table 1:** Comparison of participant scores before and after attending the stress intervention programme (n=6)

	<b>Before</b>	<b>After</b>
	Mean	Mean
<b>EMOTIONAL EXHAUSTION</b>		
I feel emotionally drained after work	3.7	2.7
I feel used up at the end of the day	4.7	2.2
I feel tired when I get up in the morning and have to face another day at work	4.5	2.8
Working with people all day is usually a strain for me	3.8	1.7
I feel burned out from my job	3.2	1.5
I feel frustrated by my job	2.7	1.3
I feel I am working too hard on the job	4.5	3.0
Working with people directly puts too much strain on me	3.0	2.0
I feel like I am at the end of the rope	1.7	1.2
<b>PERSONAL ACCOMPLISHMENT</b>		
I can easily understand how my clients feel	5.5	6.7
I deal effectively with the problems of my clients	6.2	6.5
I feel I am positively influencing other people's lives through my work	6.2	6.3
I feel very energetic	4.5	7.0
I can easily create a relaxed atmosphere with my clients	5.0	6.8
I feel exhilarated after working closely with my clients	4.2	6.7
I have accomplished very worthwhile things in my work	4.2	5.8
In my work I deal with emotional problems very calmly	4.3	6.7
<b>DEPERSONALISATION</b>		
I feel I treat some clients as if they were impersonal objects	2.3	2.2
I've become harder towards people since I took this job	3.5	2.0
I worry that this job is hardening me emotionally	3.5	1.5
I don't really care what happens to some clients	1.8	1.0
I feel clients blame me for some of their problems	2.5	2.0

Table 1 shows that for each item included in the MBI questionnaire the level of burnout (chronic work stress) decreased after attendance of the stress intervention programme. This is evident in the decreased scores for emotional exhaustion and depersonalisation and the increased scores for personal accomplishment after practising controlled breathing. A comparison of the separate categories shows that the personal accomplishment category represents the highest dividends of stress alleviation followed by the category of emotional exhaustion and the category of depersonalisation. As the best improvement, the mean for personal accomplishment increased with 1.56 (from 5.00 to 6.56). Means for emotional exhaustion and depersonalisation decreased with 1.49 (from 3.53 to 2.04) and 0.98 (from 2.72 to 1.74) respectively. It is clear that controlled breathing influenced feelings of accomplishment particularly positively, thus restoring self-efficacy.

For an understanding of the manifestation of the influence of controlled breathing on school principals' stress relief, the data from the interviews that emerged as categories from an inductive selection of codes are discussed next. Where discussions are substantiated by verbatim excerpts from the interviews, the six participants are distinguished as principal P1, P2, P3, P4, P5 and P6.

### **School principals' evaluation of controlled breathing as a stress alleviator**

Participants had consensus that controlled breathing was beneficial. They were all practising the breathing technique at least twice a day. At a socio-psychological level, the ability to relax and remain calm was a common response. Practising controlled breathing resulted in *"calming the mind and body"* (P1), which contributed to *"functioning more effectively"* (P5), *"accepting people and situations better"* (p5) and *"focussing on the moment again"* (P3). Linked to cognition and the possibility of creating for oneself an inner atmosphere of serenity through controlled breathing, participants were enabled to *"talk about problems and fears and cast them away"* (P2), to *"see situations in perspective"* (P5), to *"become more objective"* (P1) and to *"apply logic in a much calmer mental state"* (P5). Participants agreed that applying controlled breathing readily calmed and energised them: *"If stress is getting to me during the day, I take a small break and do my breathing exercises, which calms me down immediately and gives me renewed energy"* (P2).

With regard to the socio-physical aspect, participants acknowledged a perceived connection between controlled breathing and improved sleeping. Some identified specific improvements that related to *"the sleeping disorder of apnoea"* (P3) and *"no disturbing in the middle of the night"* (P2). Improved sleeping effected restored energy levels which enhanced participants' alertness (*"I feel more energised and alert"* P3), their enthusiasm (*"I feel more vibrant"* P4) and their ability to work for longer periods of time (*"controlled breathing energises me throughout the day"* P6). Linked to higher energy

levels was the ability to stay positive (*“being positive and cultivating ideal human values”* P4) and have good human relationships (*“seeing the good and positive in everyone and in every situation”* P3). Controlled breathing also restored feelings of control (*“avoid being on an emotional roller coaster”* P5) and to think rationally (*“accept the conditions which cannot be changed”* P3).

Considered holistically, practising controlled breathing regularly for stress relief (*“I start and end every day with my breathing exercises”* P2) resulted in the fostering of a wholesome discipline of constructive routines. These routines included physical exercise (*“I try to swim once a week”* P3), healthy eating habits (*“I focus on eating more fruit and vegetables”* P4), serene introspection (*“I sit quietly, reflect on all that has happened, feel satisfied that I tried my best”* P6) and being alert to the aesthetic (*“I hear the birds' singing”* P2).

## **7. DISCUSSION**

As a result of the pivotal role that school principals fulfil in managing inevitable change (Berkhout, 2007), their intense involvement with stakeholders (Yong & Yue, 2007), and their taking accountability for all on-site decisions (Kokkinos, 2007), participants experienced high levels of work stress. This was evident in higher scores for the emotional exhaustion and depersonalisation categories of burnout and lower scores for personal accomplishment before attending the stress alleviation workshop based on controlled breathing. Stress effect manifested in a decrease in the levels of self-efficacy (Bandura, 1997) which affected participants' physical and emotional well-being and their executive control capacities (Van der Linden et al., 2005).

As a holistic approach to alleviating stress in all spheres of human existence (Betoret, 2006), the practising of controlled breathing according to the Sudarshan Kriya breathing technique (Balasubramanyam, 2010) served as a constructive strategy for stress relief. This was confirmed by a comparison of the scores for the Maslach Burnout Inventory (MBI) questionnaire completed before and after participants attended the workshop on controlled breathing. The alleviation of stress was reflected in scores that decreased for each item in the category of emotional exhaustion and depersonalisation and scores that increased for each item in the category of personal accomplishment. The influence of controlled breathing was especially notable with regard to improvements in the category of personal accomplishment.

Feelings of restored accomplishment were accompanied by a renewed emphasis on healthy eating habits, physical exercise and appreciation of nature. The increase in personal accomplishment scores represented restored self-efficacy levels which, in line with the findings of Schwarzer and Hallum (2008), enabled participants to prioritise tasks again, compartmentalise problems and relate responsively to stakeholders.

Participants' executive control capacities were reinstated and they were able to sustain logical thinking in their decision-making responsibilities calmly and accommodatingly (Van der Linden et al., 2005). As a readily available coping mechanism practised consistently at least twice a day (Balasubramanyam, 2010), controlled breathing re-empowered self-efficacious school principals to improve their own levels of excellence as well as those of their schools. This was made possible through a reinstated clear cognition and attentiveness to the positive aspects residing in every person and every situation.

## 8. CONCLUSION

The aim of the research on which this article is based was to investigate the alleviation of school principals' stress through a holistic approach of life skills development based on controlled breathing. It can be concluded that controlled breathing is an effective mechanism for stress relief. Participants' high levels of chronic work stress, interpreted as burnout, inhibited their self-efficacy in terms of accomplishment and impaired their executive control capacities to sustain logical thinking and inappropriate behaviour inhibition. The practising of controlled breathing improved the participants' health and restored their executive control capacities. This had a ripple influence on improved school functioning in that decision-making and stakeholder relationships were positively influenced.

Due to the mainly qualitative nature of the study, findings cannot be generalised. Trends can, however, be noted in terms of utilising breathing as a mechanism for stress relief and for restoring personal well-being and productivity at work. In that regard and against the backdrop of the 'doing better' discourse of global competitiveness, a study on the influence of controlled breathing as stress alleviator could be extended to include teachers and learners. Positive findings could realise in a concerted fostering of self-efficacy through the practising of controlled breathing as an instinctive, readily available and economic technique for stress relief. This could contribute to the improved well-being of all stakeholders and to increased school effectiveness.

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