




The psychosocial work conditions and mental well-being of independent school heads in South Africa

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Orientation: Numerous international studies have investigated the well-being of school Heads. Studies have shown the impact of psychosocial work conditions leading to burnout and stress, negatively impacting on mental well-being. This study aimed to determine the psychosocial work conditions and mental well-being of South African independent School Heads.

Research purpose: Assessing the psychosocial work conditions and the potential impact on mental well-being of school Heads as this has not been previously studied in South Africa.

Motivation for the study: Heads have multiple responsibilities in the school setting. An imbalance in job resources and demands as reflected by the psychosocial work conditions negatively impacts mental well-being and puts Heads at risk for mental illness.

Research approach/design and method: The study adopted a quantitative research approach, using an anonymous cross-sectional questionnaire design, distributed to Heads of independent schools in South Africa (N = 817; n = 296). A demographic questionnaire, the Copenhagen Psychosocial Questionnaire (COPSOQ) III-middle version and mental health continuum-short form (MHC-SF) were used to collect data. Spearman correlation, analysis of variance and univariate linear regression were used to describe associations.

Main findings: This study demonstrated fair correlation between various psychosocial work conditions and mental well-being. Furthermore, two demographic groups were identified as being most at risk for poorer well-being: younger and female Heads.

Practical/managerial implications: This study assisted in identifying at risk groups for possible psychosocial intervention.

Contribution/value-add: This study served to address the previous knowledge gap in South Africa regarding the mental well-being of school Heads and will potentially pioneer further studies in specific modifiable factors and intervention programmes.

Keywords: independent school heads; well-being; psychosocial work conditions; COPSOQ III; MHC-SF.

Introduction

Orientation

Principals, also known as Heads of schools (Heads), have a multifaceted role in the education system that includes administrative, educational, managerial and leadership components. The balance of these components plays a crucial role in determining the success of the school (Devos & Bouckennooghe, 2009). School Heads' primary role and responsibility is to maintain internal organisation and function of the school, which includes focus on the academic, physical, social, emotional, moral development and well-being of the students and teaching staff through leadership (Buskila & Chen-Levi, 2021; Fisher, 2020; Khaleel et al., 2021; Yunas et al., 2021). International research has shown that school Heads experience high levels of chronic workplace stress that makes this population vulnerable to mental illness and can lead to higher prevalence of disability and poorer work performance in the educational sector (Dewa et al., 2009).

Mental well-being, as defined by Keyes, is conceptualised as the experience of both hedonic and eudaimonic well-being. Hedonic well-being refers to emotional well-being or 'feeling good',

whereas eudaimonic well-being encompasses social and psychological well-being or 'fulfilment and purpose', which allows for optimal individual function and functioning in the community (Keyes, 2009). Psychosocial work conditions such as self-efficacy and workload impact job satisfaction and increase work stress, negatively influencing well-being (Toropova et al., 2020). 'Psychosocial work conditions' are defined as 'interpersonal and social interactions that influence behaviour and development in the workplace' (Jacobs et al., 2013, p. 1587). This includes factors such as the culture in the organisation, division of tasks, scope of practice and repetitiveness of the work (Rugulies, 2018). Furthermore, variability in mental well-being and psychosocial work conditions has been shown in different demographic categories. Males have been shown to have a higher sense of job satisfaction, job control and justice in the workplace compared to female co-workers. Female respondents across multiple studies have reported poorer mental well-being. Age has also been shown to impact the experience of psychosocial work conditions and mental well-being with younger and less experienced workers indicating higher levels of stress, poorer well-being and less job control (Jia et al., 2014; Khumalo et al., 2011; Lindeberg et al., 2010; Lindström, 2005).

The above research highlights the link between psychosocial work conditions and mental well-being, and the need to explore associations with demographic factors such as gender and age.

An Australian survey has been tracking the well-being of Heads since 2011 and identifying moderating factors and at-risk individuals for intervention (Riley et al., 2019). The effects of the coronavirus disease 2019 (COVID-19) pandemic have brought teacher and Head well-being into sharper focus (Ozamiz-Etxebarria et al., 2021). Little is known about the psychosocial work conditions and mental well-being of school Heads in South Africa. Further research in this area is necessary to understand the unique challenges faced by school Heads in South Africa and to identify effective strategies to promote their well-being.

Research purpose and objectives

This study aimed to determine the psychosocial work conditions and mental well-being of school Heads in South Africa using independent school Heads as a sample.

The study objectives were:

- To describe the demographic profile of South African independent school Heads to gain an understanding of factors that may impact psychosocial work conditions and their mental well-being.
- To investigate the relationship between psychosocial work conditions and mental well-being in South African school Heads.
- To determine the impact of psychosocial work conditions on mental well-being.

Literature review

Mental well-being and mental illness

Mental health encompasses emotional, psychological and social well-being (Centers for Disease Control and Prevention, 2018). Good mental well-being requires positive emotions and moods, the absence of negative emotions, contentment, fulfilment and generative functioning, expanding on the view that mental health is more than the absence of mental illness (Centers for Disease Control and Prevention; World Health Organization, 2022). Mental illness is defined as 'health conditions involving changes in emotion, thinking or behaviour', which has an impact on occupational, social, and interpersonal function (American Psychiatric Association, 2018, para. 1). Mental illness and mental well-being can be seen as opposite sides of a spectrum (Stranges et al., 2014). A decline in mental well-being increases risk of developing mental illness; conversely, strengthening well-being and psychological resources reduces this risk (Stranges et al., 2014).

Mental well-being in school Heads

Mental well-being among school Heads has been explored internationally. The Australian Principal Occupational Health, Safety and Well-being Survey aims to link Heads identified as being at risk with Employee Assistance Programs and support services (Riley et al., 2019). The most recent report indicated ongoing concerns with regard to psychological health of school leaders, with 29% of which having been flagged for quality of life, occupational health, and self-harm (See et al., 2022). Additionally, the highest scores of burnout and cognitive stress were recorded since the institution of this survey with significant effect sizes compared to the general population, compounded by the effects of the COVID-19 pandemic (See et al., 2022). Closure of schools during the pandemic required much adaptation in approaches to teaching, adding to the burden of Heads (Mhlanga & Moloji, 2020). A significant relationship between psychological distress and burnout as well as a positive correlation between burnout and depression have been demonstrated (Karakose et al., 2022).

Stress and burnout are some of the major negative predictors of well-being (Devos et al., 2007). Burnout has been included in the 11th Revision of the International Classification of Diseases (ICD-11) and is defined as a syndrome that is a consequence of prolonged, poorly managed workplace stress, leading to fatigue and exhaustion, mental distancing and disparagement from one's role and an overall reduction in efficacy (World Health Organization, 2022). Concerningly a growing number of resignations among school Heads with a converse decline in interest in the vacant positions have been reported (Shoho & Barnett, 2010). This is because of the increasing demands in terms of workload, policymaking, responsibilities and relative inexperience identified especially in new Heads (Shoho & Barnett, 2010).

Psychosocial work conditions

The phrase 'psychosocial work environment' has been in use since at least 1982 with multiple attempts at definition, the rationale for this to focus on work environment, identifying factors that the employer can control to improve job satisfaction and well-being (Rugulies, 2018). Work-reward balance, organisational justice, victimisation, bullying and social capital further elaborate on the concept of psychosocial work environment (Rugulies, 2018). A study conducted in the Netherlands identified 10 measurable psychosocial work conditions based on the job demand-control theory, effort reward imbalance model and the concept of organisational justice (Nieuwenhuijsen et al., 2010). These conditions include job demands, control over working environment and workload, co-worker support, support from management, opportunity for growth and career advancement, variation in tasks and use of skills, emotional demands, organisational justice and effort and reward structure (Nieuwenhuijsen et al., 2010).

Theoretical framework: Job demands-resources

The Job Demands-Resources (JDR) framework conceptualises psychosocial work conditions and the impact on mental well-being. The JDR framework is modelled in terms of job demands — the physical, social or organisational aspects of the job that require mental and physical effort, leading to psychological and physiological costs versus resources that function to decrease demands, foster growth in the workplace and meeting goals (Demerouti et al., 2001). Practically, job demands can be conceptualised as physical demands such as standing for long periods or lifting heavy objects; emotional demands such as dealing with accounts of trauma or remaining calm in challenging situations; cognitive demands such as continuous professional development and problem solving; time demands such as meeting deadlines and increasing workloads and interpersonal demands such as collaborating with co-workers and managing conflict (Bakker & Demerouti, 2017). Resources as conceptualised by this framework include social support from colleagues, autonomy and a sense of control over one's job, constructive feedback on performance as well as skills development. These resources include self-efficacy or an individual's belief in their capability in performing their job; positive outlook on the future and optimism; resilience or an individual's ability to adapt to and manage crisis situations and change; mindfulness, which is the ability to recognise thoughts and feelings and accept them non-judgementally, reducing stress and the ability to manage one's own emotions and understand the emotions of others to build effective relationships (Bakker & Demerouti, 2017). An imbalance in job demands and resources can lead to a decline in mental well-being (Bakker & Demerouti, 2017).

Job demands-resources framework influence on psychosocial work conditions as operationalised by the Copenhagen Psychosocial Questionnaire

Job demands in the Copenhagen Psychosocial Questionnaire encompass quantitative demands, that is, time to complete tasks and workload; emotional demands, that is, dealing with

emotionally disturbing situations or colleagues' personal problems; role conflicts, that is, contradictory demands; illegitimate tasks, that is, doing things that seem unnecessary and work life conflict, that is, negative impact of work on personal life. These demands are balanced by resources as experienced by influence at work, that is, influencing decisions and amount of work assigned; possibilities for development, that is, skills building; meaning of work, that is, fulfilment from work and sense of importance; recognition, that is, appreciation of work done by peers and governing body; social support from supervisor and colleagues, that is, listening to problems and providing help; job satisfaction, that is, being pleased with your job and organisational justice, that is, conflicts resolved fairly and fair distribution of work. Imbalance in job demands and resources can subsequently have an effect on sleep quality in sleeping troubles dimension, increase all dimensions of stress and lead to higher rates of burnout and a decline in overall perception of health in the self-rated health dimension (Llorens et al., 2020).

A conceptual model for the impact of psychosocial work conditions on mental well-being

A model was also developed to conceptualise the impact of psychosocial work conditions on the health of employees (Rugulies, 2018). This model positions the individual with their experience as well as cognitive and emotional processes in a macro-level economy, which includes social and political structures that influence meso-level workplace structures and psychosocial working conditions. The cumulative impact of these factors ultimately affects psycho-physiological processes and influences health-related behaviours and the worker's health and well-being (Rugulies, 2018).

Influence of demographic factors on psychosocial work conditions and mental well-being

Considering the link between psychosocial work conditions and mental well-being, demographic factors that contribute to the context of these conditions and mental well-being need to be reviewed. A study conducted in 2010 in South Africa investigated associations between demographic factors and psychological well-being (Khumalo et al., 2011). In this study, variability in mean scores on the mental health continuum-short form (MHC-SF) was reported in the following demographic categories: age, with older and younger participants scoring higher; gender, with males scoring higher than females; marital status, with married participants scoring higher and environmental setting, with participants in urban areas scoring higher than those in rural areas. Positive correlation between employment, higher educational level and MHC-SF scores was also found (Khumalo et al., 2011). Furthermore, three studies showed better scores in men for various well-being outcomes such as 'exhaustion', 'self-rated health' and 'psychological well-being' than women as impacted by psychosocial work conditions (Jia et al., 2014; Lindeberg et al., 2010; Lindström, 2005). Additionally, self-rated health (as a

well-being measure) was higher in older participants in a study comparing two psychosocial work environments in China (Jia et al., 2014).

Mental well-being and challenges faced by South African Heads

In terms of South African research in the educational sector, a small-scale study of 155 school Heads conducted in the North-West province examined rewards as a predictor of well-being and found a positive correlation between perceived benefit and efficacy of school Heads, wherein reward reinforcement positively influenced Heads' self-efficacy (Nthebe et al., 2016).

A review article of challenges in the South African school system identified multiple factors that could impact on Heads and included challenges facing learners, specifically violence in schools, high dropout rates, late arrivals, absenteeism and truancy (Mouton et al., 2012). Challenges facing teachers were found to be the implementation of Curriculum and Assessment Policy Statements, poor results in literacy and numeracy, under-performance of educators and the lack of adequate school governance (compounded by poor communication and collaboration between school principals and the School Governing Body). Indirect challenges on the school system were the lack of community support, political agendas and ideology in schools, corruption and various socio-economic factors (Mouton et al., 2012). All the above factors form part of the context and psychosocial work conditions of school Heads in South Africa but do not give a clear picture of the relationship between psychosocial work conditions and the well-being of Heads.

There is a gap in the knowledge of psychosocial work conditions and mental well-being (as impacted by these conditions) in school Heads in South Africa, a population with much responsibility and limited resources that could potentially benefit from specifically catered intervention programmes.

Research design

Research approach

This study adopted a descriptive and quantitative approach by using a cross-sectional questionnaire design.

Research method

Research participants

The study sample included Heads of all independent schools registered with the Southern African Heads of Independent Schools Association (SAHISA). Southern African Heads of Independent Schools Association is a constituent member of the Independent Schools Association of Southern Africa (ISASA). According to census data in 2021, there were 817 registered ISASA members in South Africa (The Independent Schools Association of Southern Africa, 2022).

Measuring instruments

In addition to a researcher-designed demographic questionnaire, two measuring instruments were included:

- The Copenhagen Psychosocial Questionnaire (COPSOQ) III-middle version. The COPSOQ was originally developed for risk assessment in the workplace (Burr et al., 2019). A short, middle and long version of the questionnaire can be compiled according to the need, that is, risk assessment or research. Each version has a number of required items from each domain to standardise the use of this tool. This study included six domains from the COPSOQ: demands at work, work organisation and job contents, interpersonal relations and leadership, work-individual interface, social capital and health and well-being. Each of these domains consists of several dimensions according to the version used, for example demands at work encompassing quantitative demands, work pace and emotional demands. Each dimension has a subset of questions of which the response is graded from 0 to 100 from which a mean score can be calculated in the study population. Validity has been established for both national and international use. Reliability was assessed by calculating Cronbach α for each of the dimensions. All the dimensions used in this study, except commitment to the workplace, scored more than the accepted 0.7 threshold (Burr et al., 2019). The third version was developed in response to new trends in work life, including theoretical concepts like the job demands-resources (JD-R) model. No studies regarding the validity of use of the COPSOQ III in South Africa were found in the literature. However, a study conducted in 2014 measured the reliability of the COPSOQ II based on internal consistency, using Cronbach's alpha statistic (Volmink, 2015). The findings were more variable than international data with alpha values ranging from 0.31 to 0.85. However, the majority of the dimensions had an alpha value above 0.7, which suggests that it would be appropriate to use the third version in the South African setting (Volmink, 2015). According to the COPSOQ International Network Website, the instrument is free to use under the creative commons CC BY-NC-ND 4.0 (Llorens et al., 2020). The COPSOQ Network recommends the use of a validated version of the specific language (i.e., English version for this study) (Llorens et al., 2020).
- The MHC-SF. Based on the 40-item Mental Health Continuum developed by Keyes, the MHC-SF introduced in 2015 is the short version that consists of 14 items. The items selected mostly represent the different well-being constructs: emotional, psychological and social well-being (Keyes, 2009). The scores from the emotional, social and psychological domains of the MHC-SF are used to quantify mental well-being with a total score out of 70 (a higher score representing a higher sense of subjective well-being) as well as categorising each participant as 'flourishing', 'moderately mentally healthy' or 'languishing'. The participants that score one of the first three items on the MHC-SF (hedonic well-being symptoms) as 'every day' or 'almost every day' and six of items 4–14 (positive functioning symptoms) as 'every day' or 'almost every

day' in the past month are categorised as 'flourishing'. Participants that score one of the first three items 'never' or 'once or twice' on the MHC-SF and six items from 4–14 'never' or 'once or twice' in the past month are categorised as 'languishing'. Participants that do not fit within either of the above categories are categorised as 'moderately mentally healthy' (Keyes, 2009).

The MHC-SF has shown good internal consistency (> 0.80) and discriminant validity in adolescents and adults in the United States and the Netherlands (Keyes, 2009). A South African study using the MHC-SF has shown the same internal consistency with good discriminant validity as well as strong measurement invariance across age and gender (Bothma, 2018). The MHC-SF is copyrighted but may be used freely if credit is given (License CC BY 4.0). Permission is not required (Keyes, 2009).

Research procedure and ethical considerations

The primary researcher collaborated with ISASA stakeholders. A study protocol was drafted and submitted to the University of the Witwatersrand Department of Psychiatry's Assessor group for approval. Subsequently, ethics clearance was obtained, and data collection started. No researchers were involved in data collection as the questionnaire was distributed to ISASA registered school Heads with the assistance of ISASA management.

The study was conducted in the South African Independent School setting across all provinces. The questionnaire was emailed to all SAHISA members through the SAHISA database. The questionnaire was a self-administered Google Form, which allowed only one response per Google account. Data were collected from 08 April 2022 to 08 June 2022.

Participant responses were captured on the Google Form upon submission and exported to a Microsoft Excel spreadsheet. The Likert scale responses of the COPSOQ III and MHC-SF were converted to numerical values for interpretation. There were no missing data.

A participant information sheet was available and informed consent required before participation. Participants were allocated research numbers and the information only included anonymised demographic data. Ethics clearance was granted on 28 March 2022 by the University of the Witwatersrand Human Research Ethics Committee, clearance number: R14/49. A distress protocol was included whereby participants could contact ISASA's Reality Wellness Employee Psychosocial Programme and be assisted by a registered counsellor, psychologist or social worker.

Statistical analysis

STATA SE version 17 was used to analyse data from the questionnaire. Continuous variables for the first objective were summarised using the median (and interquartile range [IQR]) as none of these variables had a normal distribution.

Categorical variables for this objective were summarised using frequencies and percentages. For each dimension in the COPSOQ III, a mean scale score and standard deviation were calculated. The scores from the MHC-SF were summarised using the median (interquartile range) as it followed a non-normal distribution as well. The three categories ('flourishing', 'languishing' and 'moderately mentally healthy') from the MHC-SF were summarised using percentages and frequencies. The Spearman correlation test was used to assess associations between the continuous variables across all objectives as most of the data had a non-normal distribution. Bivariate analysis using ANOVA or t-test was used to examine variance within categorical variables. Lastly, linear regression was performed to estimate the magnitude of effect of the demographic factors on the scores from the two instruments. Univariate linear regression was used to account for any confounding effects of demographic variables and quantify the magnitude of association.

Results

Objective 1: The demographic profile of South African independent school Heads

The population studied consisted of 817 independent school Heads in South Africa. The sample size was 296 respondents. The required sample size to be representative of this population was calculated at 262. The majority of the sample consisted of older respondents with almost half being between 50–59 (43.92%), followed by the 40–49 group (24.66%), over 60 group (19.26%) and the 39 and younger group making out only 12.16%. More than half of the respondents were female (55.74%) followed by males (43.92%) and one identifying as non-binary (0.34%). Because of the small representation of the non-binary category, no associations could be made, and this category was thus left out in further analysis. Most of the respondents self-identified as white (83.45%) followed by black (9.46%), coloured (3.72%), Indian (2.70%) and biracial (0.68%). Almost half of the Heads were from primary schools (43.92%) followed by combined primary and secondary school Heads (32.09%) and secondary and pre-primary Heads making out only 13.85% and 10.14%, respectively.

Objective 2: The relationship between psychosocial work conditions and mental well-being in South African school Heads

Table 1 summarises the mean values with standard deviation and 95% confidence interval (CI) of the mean of each of the dimensions in the six COPSOQ III domains. Scores range from 0 to 100.

The total scores of the MHC-SF in this sample ranged from 13 to 70 with a median value of 43 and an IQR of 33–51. Just over half of the participants ($n = 156$; 52.7%) were deemed to be only moderately mentally healthy, while 120 of the participants (40.54%) were found to be flourishing and 20 participants (6.76%) were languishing.

TABLE 1: Copenhagen Psychosocial Questionnaire III dimensions scores.

Domain	Dimension	Mean	SD	95% CI of the mean
Demands at work	Quantitative demands	53.00	18.67	50.86–55.13
	Work pace	67.99	18.16	65.91–70.07
	Emotional demands	73.11	14.46	71.46–74.77
Work organisation and job contents	Influence at work†	63.94	17.10	61.98–65.89
	Possibilities for development†	77.36	14.87	75.66–79.07
	Meaning of work†	87.25	14.52	85.59–88.91
Interpersonal relations and leadership	Predictability†	72.42	18.76	70.28–74.57
	Recognition†	74.58	18.89	72.42–76.74
	Role clarity†	75.21	18.37	73.11–77.31
	Role conflict	40.50	21.42	38.05–42.95
	Illegitimate tasks	31.76	25.97	28.79–34.73
	Quality of leadership†	61.13	21.93	58.39–63.88
	Social support from colleagues†	73.19	22.84	70.33–76.04
	Social support from supervisor†	72.53	21.96	70.01–75.05
	Sense of community at work†	78.22	14.80	76.52–79.92
Work–individual Interface	Commitment to the workplace†	83.87	16.61	81.97–85.77
	Job insecurity	40.88	29.90	37.46–44.29
	Insecurity over work conditions	8.31	19.08	6.18–10.54
	Job satisfaction†	77.70	19.88	75.43–79.98
	Work life conflict	53.35	23.23	50.69–56.01
Social capital	Vertical trust†	76.35	16.82	74.43–78.28
	Organisational justice†	70.69	16.06	68.86–72.53
Health and well-being	Self-rated health†	58.53	24.38	55.74–61.32
	Sleeping troubles	45.02	23.37	42.34–47.69
	Burnout	57.20	22.60	54.61–59.79
	Stress	50.42	20.97	48.02–52.82
	Somatic stress	28.02	19.47	25.79–30.25
	Cognitive stress	36.87	19.38	34.65–39.08

†, Indicates positive dimensions, that is, a higher score indicates a positive outcome and vice versa for those dimensions without an asterisk, that is, a higher score in these dimensions indicates a negative outcome.

Spearman correlation

Table 2 displays the Spearman correlation coefficients (r_s) and statistical significance of correlations between COPSOQ III dimensions and MHC-SF scores. The threshold for statistical significance was set at $p \leq 0.05$. In terms of the strength of the linear relationship (correlation coefficient), less than 0.3 indicates a poor relationship, 0.3–0.5 denote fair, 0.6–0.8 indicate moderately strong and above 0.8 a very strong relationship in both positive and negative directions (Chan, 2003).

Fair positive correlations were found between the following COPSOQ III dimensions and MHC-SF scores: meaning of work ($r_s = 0.43$), that is, a sense of importance and meaning of work done; predictability ($r_s = 0.32$), that is, being informed of decisions and plans, having access to important information; recognition ($r_s = 0.38$), that is, recognition for work done in a fair and facilitating atmosphere; role clarity ($r_s = 0.32$), that is, having clear objectives and expectations; commitment to the workplace ($r_s = 0.35$), that is, considering the workplace as important; job satisfaction ($r_s = 0.42$), that is, being overall satisfied with the job as a Head; organisational justice ($r_s = 0.30$), that is, fair resolution of conflict and work

TABLE 2: Correlation between Copenhagen Psychosocial Questionnaire III dimensions and mental health continuum – short form scores.

COPSOQ III Domains	Dimensions	MHC-SF (r_s)
Demands at work	Quantitative demands	-0.19*
	Work pace	-0.15*
	Emotional demands	-0.31*
Work organisation and job contents	Influence at work	0.23*
	Possibilities for development	0.28*
	Meaning of work	0.43*
Interpersonal relations and leadership	Predictability	0.32*
	Recognition	0.38*
	Role clarity	0.32*
	Role conflicts	-0.25*
	Illegitimate tasks	-0.26*
	Quality of leadership	0.28*
	Social support from supervisor	0.29*
Social support from colleagues	0.25*	
Work individual interface	Sense of community at work	0.28*
	Commitment to the workplace	0.35*
	Job insecurity	-0.28*
	Insecurity over working conditions	-0.10
	Job satisfaction	0.42*
Social capital	Work Life Conflict	-0.43*
	Vertical trust	0.28*
Health and well-being	Organisational justice	0.30*
	Self-Rated health	0.43*
	Sleeping troubles	-0.41*
	Burnout	-0.52*
	Stress	-0.57*
	Somatic stress	-0.49*
Cognitive stress	-0.53*	

COPSOQ III, Copenhagen Psychosocial Questionnaire III dimensions; MHC-SF, mental health continuum-short form.

*, Correlation is significant at $p \leq 0.05$.

distribution and self-rated health ($r_s = 0.43$), that is, a higher subjective sense of health.

Fair negative correlations were found between the following dimensions of the COPSOQ III and MHC-SF scores: emotional demands ($r_s = -0.31$), that is, a more emotionally demanding work environment; work–life conflict ($r_s = -0.43$), that is, difficulty in balancing the demands of work and personal life with a subjective sense of interference of work in personal life; sleeping troubles ($r_s = -0.41$); burnout ($r_s = -0.52$), that is, a higher subjective experience of physical and emotional exhaustion; stress ($r_s = -0.57$), that is, feeling tense and irritable; somatic stress ($r_s = -0.49$), that is, somatic experience (headache, stomach-ache, palpitations and muscle tension) of stress and cognitive stress ($r_s = -0.53$), that is, difficulty concentrating and making decisions.

Variability within age, gender and level of school

For this study, only associations with age, gender and level of school categories were looked at. Table 3 summarises the variability in these categories for well-being scores (MHC-SF).

There was significant variability ($p = 0.01$) in mean scores on the MHC-SF between male and female Heads, with the male Heads ($M = 44.21$, $SD = 12.48$) experiencing a higher sense of

TABLE 3: Variability of mental health continuum – short form scores within demographic categories.

Demographic variable	Mean MHC-SF score	SD	<i>p</i> -value
Age			0.59
≤ 39	41.03	11.82	
40–49	41.86	11.50	
50–59	41.67	12.95	
≥ 60	44.07	11.94	
Gender			0.01*
Female	40.56	11.81	
Male	44.21	12.48	
Level of School			0.025*
Pre-primary	41.60	10.66	
Primary	40.15	11.59	
Primary and secondary	45.13	12.50	
Secondary	41.61	13.80	

MHC-SF, mental health continuum-short form.

*, Significant variability at $p \leq 0.05$.

well-being compared to female Heads ($M = 40.56$, $SD = 11.81$). The level of school also had an impact on the overall sense of well-being, with Heads of combined primary and secondary schools ($M = 45.13$, $SD = 12.50$) having a higher mean score on the MHC-SF than the Heads of pre-primary ($M = 41.60$, $SD = 10.66$), primary ($M = 40.15$, $SD = 11.59$) or secondary ($M = 41.61$, $SD = 13.80$) schools.

Table 4 summarises only dimensions of the COPSOQ that showed significant variability for age, gender and level of school. The other dimensions that did not show significant variability were excluded.

Age and gender showed the most variability among demographic factors for different dimensions of the COPSOQ III.

Heads younger than 40 years experienced the highest levels of burnout ($M = 61.46$, $SD = 19.57$), whereas Heads 60 years and older experienced less burnout ($p = 0.0057$), cognitive stress ($p = 0.0065$), better self-rated health ($p = 0.0002$) and job satisfaction ($p = 0.011$) than Heads in the younger age demographic. In terms of gender, female Heads reported higher levels of burnout ($M = 61.36$, $SD = 23.13$, $p = 0.0003$) compared to their male colleagues. Additionally, female Heads more frequently reported sleeping troubles ($p = 0.0006$), scored less in the influence at work ($p = 0.0077$), organisational justice ($p = 0.0013$), predictability ($p = 0.047$) and recognition ($p = 0.049$) dimensions.

The only other significant variability was found in pre-primary school Heads who had the lowest levels of social support from colleagues ($p = 0.02$).

Objective 3: The impact of psychosocial work conditions on mental well-being

Table 5 summarises the significant outcomes of the univariate linear regression that was performed, highlighting three demographic factors that had the highest magnitude of

TABLE 4: Variability within demographic categories for Copenhagen Psychosocial Questionnaire III dimensions.

COPSOQ III Dimension	Demographic variable	Mean COPSOQ value	SD	<i>p</i> -value
Burnout	Age			0.0057
	≤ 39	61.46	19.57	
	40–49	58.30	23.59	
	50–59	59.47	22.04	
	≥ 60	47.92	22.45	
Cognitive stress	Gender			0.0003
	Female	61.36	23.13	
	Male	51.92	20.92	
Self-rated health	Age			0.0002
	≤ 39	56.94	21.22	
	40–49	53.08	25.33	
	50–59	56.54	23.62	
	≥ 60	71.05	23.04	
Influence at work	Gender			0.0077
	Female	61.59	17.44	
	Male	66.92	16.31	
Job satisfaction	Age			0.011
	≤ 39	75.69	17.41	
	40–49	75.34	20.62	
	50–59	76.15	21.08	
	≥ 60	85.53	15.63	
Organisational justice	Gender			0.0013
	Female	68.11	17.32	
	Male	74.13	13.59	
Predictability	Gender			0.047
	Female	70.53	19.27	
	Male	74.90	17.92	
Recognition	Gender			0.049
	Female	72.65	20.03	
	Male	77.02	17.18	
Social support from colleagues	Level of school			0.02
	Pre-primary	64.17	26.00	
	Primary	70.96	23.46	
	Primary and Secondary	77.39	17.61	
	Secondary	72.50	21.03	
Sleeping troubles	Gender			0.0006
	Female	49.20	23.58	
	Male	39.86	22.14	

COPSOQ III, Copenhagen Psychosocial Questionnaire III dimensions; SD, standard deviation.

impact on outcomes of COPSOQ III dimensions and MHC-SF scores: age, gender and level of school.

Gender had the most significant impact on MHC-SF scores. On average, male participants scored 3.644 more points on the MHC-SF than the female participants ($p = 0.011$).

Two demographic variables had the most consistent impact on COPSOQ III dimensions: age and gender. Participants older than 60 years old scored significantly more, in comparison to younger participants, on the following dimensions: influence at work ($p = 0.049$), sense of community at work ($p = 0.011$), job satisfaction ($p = 0.004$) and self-rated

TABLE 5: Univariate regression analysis showing significant demographic factors and magnitude of impact on Copenhagen Psychosocial Questionnaire III dimensions and mental health continuum – short form scores.

Measuring instrument	Socio-demographic-contextual variable	B	SE	T	p-value
MHC-SF	Gender				
	Female	0	(base)	-	-
	Male	3.644	1.4199	2.57	0.011
COPSOQ III:					
Demands at work domain					
Emotional demands	Age				
	≤ 39	-0.346	2.925	-0.12	0.906
	40–49	0	(base)	-	-
	50–59	-1.717	2.100	-0.82	0.414
	≥ 60	-6.255	2.538	-2.46	0.014
Work organisation and job contents domain					
Influence at work	Age				
	≤ 39	0.533	3.456	0.15	0.878
	40–49	0	(base)	-	-
	50–59	-1.433	2.482	-0.58	0.564
	≥ 60	5.942	2.999	1.98	0.049
	Gender				
	Female	0	(base)	-	-
Male	5.332	1.988	2.68	0.008	
Interpersonal relations and leadership domain					
Illegitimate tasks	Age				
	≤ 39	2.911	5.248	0.55	0.580
	40–49	0	(base)	-	-
	50–59	-2.666	3.769	-0.7	0.480
	≥ 60	-10.47	4.555	-2.3	0.022
Predictability	Gender				
	Female	0	(base)	-	-
	Male	4.374	2.192	2.00	0.047
Recognition	Gender				
	Female	0	(base)	-	-
	Male	4.368	2.208	1.98	0.049
Social support from colleagues	Level of school				
	Pre-primary	0	(base)	-	-
	Primary	6.795	4.397	1.55	0.123
	Prim. and Second.	13.227	4.553	2.91	0.004
	Secondary	8.333	5.244	1.59	0.113
Sense of community at work	Age				
	≤ 39	-1.712	2.982	-0.6	0.566
	40–49	0	(base)	-	-
	50–59	1.001	2.144	0.47	0.641
	≥ 60	6.621	2.588	2.56	0.011
Work–individual interface domain					
Job satisfaction	Age				
	≤ 39	0.352	3.993	0.09	0.930
	40–49	0	(base)	-	-
	50–59	0.811	2.867	0.28	0.777
	≥ 60	10.184	3.465	2.94	0.004
Work–life conflict	Age				
	≤ 39	-3.815	4.652	-0.82	0.413
	40–49	0	(base)	-	-
	50–59	-4.766	3.341	-1.43	0.155
	≥ 60	-14.378	4.038	-3.56	0.000
	Level of school				
	Pre-primary	0	(base)	-	-
	Primary	9.509	4.687	2.03	0.043
	Prim. and Second.	4.839	4.846	1.00	0.319
	Secondary	8.896	5.5598	1.60	0.111
Social capital domain					
Organisational justice	Gender				
	Female	0	(base)	-	-
	Male	6.029	1.851	3.26	0.001

Table 5 continue on next page →

TABLE 5 (Continues): Univariate regression analysis showing significant demographic factors and magnitude of impact on Copenhagen Psychosocial Questionnaire III dimensions and mental health continuum – short form scores.

Measuring instrument	Socio-demographic-contextual variable	B	SE	T	p-value
Health and well-being domain					
Burnout	Age				
	≤ 39	3.153	4.529	0.70	0.487
	40–49	0	(base)	-	-
	50–59	1.166	3.252	0.36	0.720
	≥ 60	-10.388	3.930	-2.64	0.009
	Gender				
Female	0	(base)	-	-	
Male	-9.441	2.602	-3.63	0.000	
Cognitive stress	Age				
	≤ 39	2.704	3.885	0.70	0.487
	40–49	0	(base)	-	-
	50–59	-0.221	2.790	-0.08	0.937
	≥ 60	-9.385	3.372	-2.78	0.006
Self-rated health	Age				
	≤ 39	3.862	4.821	0.80	0.424
	40–49	0	(base)	-	-
	50–59	3.456	3.462	1.00	0.319
	≥ 60	17.970	4.184	4.29	0.000
Sleeping troubles	Gender				
	Female	0	(base)	-	-
	Male	-9.349	2.692	-3.47	0.001
Somatic stress	Age				
	≤ 39	-2.354	3.946	-0.60	0.551
	40–49	0	(base)	-	-
	50–59	-1.537	2.834	-0.54	0.588
	≥ 60	-7.782	3.425	-2.27	0.024
	Gender				
	Female	0	(base)	-	-
	Male	-12.324	2.162	-5.70	0.000
Stress	Age				
	≤ 39	0.381	4.241	0.09	0.929
	40–49	0	(base)	-	-
	50–59	-0.859	3.046	-0.28	0.778
	≥ 60	-8.538	3.681	-2.32	0.021
	Gender				
	Female	0	(base)	-	-
	Male	-7.354	2.429	-3.03	0.003

B, regression coefficient; SE, standard error; COPSOQ III, Copenhagen Psychosocial Questionnaire III dimensions; MHC-SF, mental health continuum-short form.

health dimension ($p = 0.000$). Conversely, Heads who were 60 years and above scored significantly less than their younger counterparts in the following dimensions: emotional demands ($p = 0.014$), illegitimate tasks, that is, having to do unnecessary tasks ($p = 0.022$), work–life conflict ($p = 0.000$), burnout ($p = 0.009$), stress ($p = 0.021$), cognitive stress ($p = 0.006$) and somatic stress ($p = 0.024$).

Male Heads scored significantly higher than the female participants in the following dimensions: influence at work ($p = 0.008$), predictability ($p = 0.047$), recognition ($p = 0.049$), organisational justice ($p = 0.001$) and scored lower in terms of burnout ($p = 0.000$), stress ($p = 0.003$), somatic stress ($p = 0.000$) and sleeping troubles ($p = 0.001$).

In terms of the level of school, primary school Heads scored significantly more on the work–life conflict dimension (0.043), whereas the Heads of both primary and secondary schools had higher scores in the social support from colleagues dimension ($p = 0.004$).

Discussion

Outline of the results

Mental well-being and the psychosocial work environment of Heads

Many studies have highlighted the immense responsibility of teachers and school Heads over the past decades and the impact of the psychosocial work environment, including emotional demands from working with youth, demands on time and a relative imbalance in work and personal life, predisposing them to mental illness and poor overall well-being (Tang et al., 2012). Surveys done in Britain have reported high levels of work-related mental illness in the educational sector, further highlighting the need to investigate the factors in the psychosocial work environment that can be addressed (Tang et al., 2012).

Almost 60% of Heads in this study reported moderate to poor mental well-being. No recent studies were found with

which to compare these findings; however, it serves as a benchmark on which intervention and its effectiveness could be measured. Strengthening psychosocial work dimensions and introducing strategies to improve dimensions identified as having a negative impact on Heads in this population group will positively influence well-being.

Considering the JDR framework and COPSOQ III dimensions, the negatively evaluated dimensions in this study are seen as all those factors that increase job demands and the positively evaluated dimensions are seen as the resources, that is, the purpose of intervention would thus be to address individual dimensions to not only decrease the scores in the negatively evaluated dimensions but also to increase the score in the positively evaluated dimensions.

This study highlighted domains in the psychosocial work environment of Heads that could be addressed in an intervention plan to improve the workplace and subsequent well-being.

Similar to findings in this study with regard to emotional demands, over the past 20 years, demands on school Heads have increased with increasing accountability leading to poorer decision-making capacity, autonomy and higher levels of scrutiny (Maxwell & Riley, 2016). Demands on time and workloads exceeding capacity increase the risk of burnout and work disengagement (Bakker & Demerouti, 2017). The cumulative impact leads to poorer job performance and satisfaction, consequently affecting overall school function, student engagement and general school well-being (Maxwell & Riley, 2016). Thus, increasing psychological resources and reducing workload to the capacity of the Head can improve work engagement and performance.

A lower average score in quality of leadership was reported. Leadership is not a one-size-fits-all approach and is dependent on the nature of the work, context and structure of the organisation (Perera et al., 2021). The most effective leadership styles also consider personality characteristics of leaders and followers as well as the needs of the organisation (Sethuraman & Suresh, 2014). In the educational environment, effective leadership is holistic, relationship focused and catering the leadership style to the situation, while also seeking to improve management structures in the system and benchmarking outcomes of leader influence to identify areas for improvement (Perera et al., 2021). Understanding the leadership style and personality factors in school Heads can individualise approaches to improving the work environment and subsequently well-being. Average self-rated health scores and high burnout scores were reported in the study sample. Research on a sample of employees in Taiwan has shown a linear relationship between age and poor self-rated health, whereas burnout was noted to be more prevalent in younger age group, both these factors influenced by the psychosocial work environment pertaining to working hours, psychological and physical job demands, job insecurity, job control and organisational justice.

Additionally, gender differences were also reported wherein males were shown to have longer working hours, more psychological and physical demands, but higher job control and less job insecurity possibly accounting for lower burnout and higher self-rated health scores (Cheng et al., 2013). Inversely, by adjusting workload and increasing psychological reserve, positive impact could be made in decreasing levels of burnout and improving the subjective sense of health.

Positive dimensions identified in this study that could be strengthened, include meaning of work, job satisfaction and commitment to the workplace. Meaning in the workplace relates to the content and evaluation of the self, job and role as moderated by a drive for self-consistency and finding importance in the work domain wherein a lack of meaning could be addressed by adjusting the content of the job, role, self or changing the social context of one's work (Wrzesniewski et al., 2003). A study looking at job satisfaction and commitment in the workplace noted adequate remuneration as a significant predictor of job satisfaction and commitment. Furthermore, increased identity with one's age group and job contents as well as social support predicted better outcomes for job satisfaction and commitment (Macdonald & Levy, 2016). Heads also reported higher scores in influence at work, predictability, possibilities for development and role clarity dimensions. These dimensions could be strengthened by applying the concept of job crafting, which relates to the modification of job demands (physical or cognitive) as it fits the needs and resources of the employee (Wrzesniewski & Dutton, 2001). Defining clear roles, strengthening resources as defined by the job demands-resources model and allowing flexibility in meeting job requirements predict increased work engagement, job satisfaction and decrease burnout (Tims et al., 2013). Heads also reported clearly defined roles and tasks suitable for their role (low scores in role conflicts and illegitimate tasks). High average scores in the recognition dimension highlight the positive impact of rewards on self-efficacy and mental well-being of Heads (Nthebe et al., 2016). A strong sense of community and support is reflected in this study. Research has shown that collaboration between colleagues is characterised by high levels of trust, shared responsibility and professional behaviour, which adds to Heads' resources and has a positive influence on well-being (Collie et al., 2020). Both the social capital dimensions showed positive outcomes with Heads scoring higher averages in Vertical Trust and Organisational Justice. Work engagement mediates the relationship between organisational justice and employee well-being; furthermore, psychological capital (job resources) moderates this relationship (Majumdar & Kumar, 2022). Strengthening work engagement and commitment as described above and focusing on job resources can further improve Head well-being (Toyama et al., 2021).

Low levels of job insecurity and insecurity over work conditions reported further reduce demands on psychological job resources (Maxwell & Riley, 2016). Compared to the latest

results from the Australian survey (See et al., 2022), significant differences were seen in the interpersonal relations and leadership domain, with South African Heads having higher scores (≥ 10 -point difference) in predictability and recognition dimensions, meaning South African Heads had more predictable work environments and received more recognition compared to Australian Heads. South African Heads also felt more supported by their colleagues and supervisors with a 20-point difference in these dimensions. Notably, South African Heads scored more than 30 points higher in the job insecurity dimension, meaning they felt less secure in their positions compared to the Australian Heads (See et al., 2022).

Demographic influence on Copenhagen Psychosocial Questionnaire III and mental health continuum-short form

The most significant variability and highest magnitude of impact in MHC-SF and COPSOQ III scores were identified in age, gender and level of school categories. This study highlighted primary school Heads as being at higher risk for poorer well-being. Research comparing primary to other levels of school is lacking with regard to explanations for this variability. Possible reasons could relate to the developmental level of primary school children and navigating the transition from pre-primary school to secondary school as well as dealing with high expectations from parents and various socio-economic difficulties (Gaikhorst & Volman, 2022).

Gender differences in psychosocial work conditions and mental well-being

There are multiple factors that impact on the gender differences seen in well-being, which include structural institutional factors relating to opportunities for men and women, socio-cultural factors rooted in societal norms and expectations as well as inherent biological and physiological factors (Batz & Tay, 2018). The Need Fulfilment Theory can be used to conceptualise the impact of some of these factors on well-being (Tay et al., 2014). This theory posits that the subjective sense of well-being is impacted by the level of fulfilment of psychological and physiological needs. The perception of these needs being met also plays a role and the experience of inequality in economic, educational, social and political spheres has an impact on the subjective sense of well-being (Tay et al., 2014). This is illustrated in our study where the female participants had lower scores in influence at work, recognition, predictability and organisational justice dimensions of the COPSOQ III. In the Health and Well-being domain, females in this study had higher scores for burnout, stress, somatic stress and sleeping troubles. These results are comparable to the Australian survey where there were higher effect sizes for female participants in terms of burnout, sleeping troubles and all stress dimensions (See et al., 2022).

Age and psychosocial work conditions and mental well-being

In this study, it was found that the 60 years and above age group did better in their psychosocial work environment in

multiple dimensions. It has also been described that older workers can face more physical health concerns or limitations along with changing psychosocial work conditions, less work engagement and adverse life events (Hsu, 2018). Possible reasons for better subjective mental well-being in older Heads in this study could relate to the imminent prospect of retirement and work disengagement, thus lower stress, and improved sense of mental well-being (Damman et al., 2013). Other factors include more psychological resources and less work-life imbalance, with older workers being better equipped to manage work-life stress and being more adaptable to their work environment (Mauno et al., 2013). The findings in terms of age variability were consistent with the Australian study where older Heads had higher scores in self-rated health and lower scores in burnout, sleeping troubles and stress in all dimensions (See et al., 2022).

Practical implications

Overall Heads' mental well-being is of concern with school Heads experiencing high levels of burnout, stress and emotional demands at work. The psychosocial work environment is multi-dimensional, and there is interdimensional overlap with changes in one dimension influencing another, the balance of which could improve well-being. Two demographic groups have been identified that are particularly vulnerable: female and younger Heads. Further research could aim to identify unique challenges and moderating variables in these groups for intervention planning. Qualitative research could add benefit in relating the experience of these Heads and identifying common themes that could be addressed. These recommendations, however theoretical, highlight the need for further research in this area to ultimately improve the work conditions and mental well-being of Heads as this is the first step in improving the well-being in the school.

Limitations and recommendations

This was the first study describing the psychosocial work environment and mental well-being of Heads in South Africa. The cross-sectional design of this study limited the ability of the researcher to make causal inferences and allowed only a snapshot of the outcomes measured; results might differ longitudinally (Levin, 2006). This study only included independent School Heads and the experience of Heads in public schools might differ because of different challenges faced. Despite the impersonal nature of the data collection, no prior relationship with the study population and the expected response rate of 20%–30%, this study achieved more than the required 262 participant sample necessary to interpret results within a 95% confidence interval (Survey Monkey, n.d.). An invariance analysis of the MHC-SF and COPSOQ III- middle version was not conducted in this study and evidence for invariance across gender for the MHC-SF was extrapolated from a different population group, therefore impacting the validity of the comparisons between genders. Further studies could be conducted to strengthen the basis for these claims.

The recommendations relate to improving well-being and psychosocial work environments for all Heads. Employee Assistance Programmes have been shown to enhance individual as well as organisational functioning and well-being (Joseph et al., 2017). Independent Schools Association of Southern Africa has an Employee Assistance Programme (Reality Wellness) available. Enhanced engagement and motivation for use of this programme throughout the organisation is recommended. Strengthening structural job resources, which requires input from school boards and policy makers, is also recommended (Collie et al., 2020). As shown in the impact of the various psychosocial work dimensions on well-being, strengthening those dimensions that improve Head's resources will accumulatively positively impact well-being of Heads. In terms of job climate, Heads that have more control, being able to enforce norms, communicating openly with and involving stakeholders in decision-making will decrease the work burden and related stress (Collie et al., 2020). Evaluating the leadership style of Heads and identifying areas of improvement can further positively impact the work environment (Sethuraman & Suresh, 2014). Preparation and induction programmes are vital for new school Heads to prepare them for new curricular, financial and managerial aspects of the job that will assist younger Heads taking up these new roles and improve work engagement (Ray et al., 2020). Improving well-being for female Heads will require adjustments in the psychosocial work environment, focusing on job crafting to fit their individual needs as well as enforcing equity and equality in the workplace (Tay et al., 2014). On an individual-level, mindfulness interventions have been shown to increase the subjective well-being of school Heads (Wells & Klocko, 2018). Instituting a regular exercise programme has also been shown to improve mood and overall well-being (Anderson & Brice, 2011).

Future research could aim to include Heads of public schools in South Africa, identifying moderating factors in the vulnerable groups identified in this study and incorporating a qualitative aspect to the study design. Additionally, future research could aim to investigate the magnitude of the impact of Headship on mental well-being compared to other occupations or the general population. Measurement invariance studies for the COPSOQ III and MHC-SF will strengthen the validity of the findings in this study.

Conclusion

The well-being of Heads in South Africa is an under-researched field. This cohort is burdened by a multitude of job and personal demands, requiring emotional and physical resources. This study aimed to explore the demographic profile and psychosocial work conditions of South African independent school Heads and the possible impact on subjective mental well-being. This study illustrated much room for improvement in the mental well-being and psychosocial work conditions of Heads and identified specific vulnerable groups and factors in the workplace that could be addressed through improved policy and strengthening resources. More research is required to identify specific

factors in vulnerable groups that can be addressed. The study was the first to explore the psychosocial work conditions and well-being of school Heads in South Africa and will hopefully stimulate further meaningful research in this field.

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Competing interests

Jon Patricios is a former governor at an independent school. The authors declare no other financial or personal relationships relevant to this research.

Authors' contributions

J.P. and B.M. presented the idea for the study. J.E.B. developed the protocol with input from J.P. and B.M. J.E.B. collected the data and performed statistical analysis. J.E.B. drafted the article with supervision and editing from J.P. and B.M. before publication.

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Data availability

The authors confirm that the data supporting the findings of this study are available within the article.

Disclaimer

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