



RESEARCH ARTICLE

2024, vol. 11, issue 1, 363 - 370
<https://doi.org/10.5281/zenodo.#>

DETERMINING PREDICTORS OF PSYCHOLOGICAL WELLBEING AMONG NURSES IN NHI PILOT CLINICS IN DR KENNETH KAUNDA DISTRICT

Dianne Ackerman – Souls¹, Ruwayda Petrus², Inge Petersen³¹ Academic, Industrial Psychology, Mancosa, <https://orcid.org/0000-0002-8828-476X>² Senior Lecturer, Industrial Psychology, University of Kwazulu Natal, <https://orcid.org/0000-0002-0963-7812>³ Research Professor, University of Kwazulu Natal, <https://orcid.org/0000-0002-3573-4229>

Abstract

The purpose of this paper was to determine the predictors of psychological well-being.

Re-Engineering of Primary Health Care in South Africa and introduction of the National Health Insurance (NHI) has increased the workload of PHC nurses who are expected to provide person centred care that attends to patients' physical and emotional health.

However, little attention has been paid to attending to the psychological well-being of nurses which is cause of concern as job strain and burnout can impact negatively on the quality of care provided. Despite the growing recognition of the importance of nurse well-being in healthcare delivery, there is a scarcity of research specifically focusing on the psychological well-being of nurses within the context of the NHI's mental health services. While studies have examined the broader implications of the NHI for healthcare professionals, few have delved into the unique challenges faced by mental health nurses and their coping strategies in adapting to policy changes and increased job demands. The belief in one's abilities has proven to be instrumental in aiding workers, including nurses, to navigate heightened job strain effectively. Moreover, studies have demonstrated that self-efficacy directly impacts psychological well-being. This substantiates the need for self-efficacy among nurses, particularly in demanding healthcare environments.

The study made use of a quantitative research method and cross – sectional study design.

Quantitative research can be used to answer the particular research questions which are concerned with establishing the level of job strain experienced by nurses in the site as well as associations between job strain and psychological well-being. The design proved to be appropriate because it allowed for the relationships between psychological job demands, job decision latitude and self-efficacy on the psychological well-being to be determined amongst 36 nurses with regard to the NHI pilot. The study made use of non – probability sampling, purposive sampling. Professional nurses working in PHC facilities in the Dr Kenneth Kaunda District in the North West Province (an NHI pilot site) were surveyed using the Psychological Capital questionnaire, the Maslach Burnout Inventory, the General Health Questionnaire and the Job Content Questionnaire and a demographic questionnaire.

The Cronbach's alpha results indicated that all measures were reliable. Levels of psychological wellbeing were above average and indicated a cause for concern. Whilst results indicated that self – efficacy was the only positive predictor of psychological wellbeing.

Keywords: Psychological wellbeing; job strain; self – efficacy; nurses; NHI;

Introduction

South Africa faces a quadruple burden of disease of non – communicable diseases, HIV/AIDS, violence and injury and poor maternal and child health that is crippling the health care system (Bradshaw, 2019). The legacy of apartheid is still very much alive in the South African health care system as disparities still exists between the type of care being provided at a public and private facility. The Re-engineering of the primary health care system (PHC) has been proposed in order to address this quadruple burden of disease and redress this unequal provision of

health care. In line with the call by the World Health Organisation (WHO) for countries to move towards Universal Health Coverage, South Africa has been piloting a National Health Insurance system which aims to provide efficient and effective quality universal health care, through the creation of a public health care system that foregrounds PHC as the first point of care, but also makes provision for access to specialist and high cost care for all where necessary (Michel et al., 2020).

The implementation of the NHI is expected to bring significant changes to the healthcare system, including restructuring of services, redistribution of resources, and shifts in professional roles and responsibilities. These changes can have profound implications for the work environment and job demands faced by nurses, potentially leading to increased job strain and psychological distress.

The educational

Given that nurses form the backbone of the PHC system, much of the burden of re-engineering of PHC, including task sharing, falls on PHC nurses (Petersen, 2019). Increased workloads and changes such as those associated with transformation of the health system, notably re – engineering of PHC in South Africa (Kigozi-Male., Heunis., & Engelbrecht, 2023), have previously been reported to result in decreased psychological wellbeing, because of the job strain that arises as a result of the change efforts (Hlongwa & Sibiya, 2019). When nurses experience job strain, it is often associated with negative emotions (Lindahl Norberg & Falkstedt, 2023). These negative emotions can, in turn influence nurses' psychological well-being. According to De Kock (2021) a nurse professional who is experiencing mental health issues, will not be able to provide adequate care for patients. Which is fuel to an already volatile situation as Kigozi-Male et al., (2023) highlights that primary health care nurses' attitude towards people with severe mental disorders reports a high negative attitude among nurses towards persons with mental illness. Nurses face numerous challenges daily, from managing patient care under pressure to navigating complex medical procedures. In such contexts, possessing a strong sense of self-efficacy enables nurses to approach their tasks with confidence, leading to improved job performance and overall well-being (Kigozi – Male et al., 2023).

The well-being of nurses is crucial not only for their own health and job satisfaction but also for the quality of patient care and overall healthcare outcomes (Merrick, 2022). Research has consistently shown that high levels of job strain and burnout among nurses are associated with decreased quality of care, increased medical errors, and higher rates of patient dissatisfaction (Babapour., Gahassab-Mozaffari., & Fathnezhad-Kazemi, 2022). Understanding and addressing the psychological needs of nurses within the mental health sector is therefore essential for maintaining a sustainable and effective healthcare workforce (Flaubert, 2021). However, within the re-engineering framework, there is little mention of provision for nurses' psychological well-being and interventions to assist nurses who may experience job strain as a result of increased workloads (Petrus, 2017; Petersen et al., 2019). This is cause for concern as poor psychological well-being remains one of most frequent reasons for an employee's inability to perform (Kundi, 2020) and has the potential to impact negatively on the quality of care provided. Thus, it would be important for services to be provided to nurses in order for them to cope with their own emotional problems which may in turn result in an improvement in the quality of care provided as well as being enabling of person - centred care that requires that nurses provide holistic care, paying attention to both the physical and emotional needs of patients (Kigozi – Male et al., 2023). Previous research indicated that nurses suffered from at least one mental health problem (Merrick, 2022), although nurses deal with patients mental health, they felt that their employers 'repeatedly' ignored their mental health issues (Merrick, 2022).

Bandura (1997) refers to self – efficacy as an individual's belief of his or her ability to accomplish a task of cope with demands. Fostering self-efficacy among nurses is not only essential for enhancing their ability to cope with job strain but also for promoting their psychological well-being and resilience in the face of adversity. By providing support and opportunities for nurses to develop and strengthen their self-efficacy beliefs, healthcare organizations can empower their nursing workforce to thrive in demanding healthcare environments while delivering high-quality patient care. Self – efficacy has been also found to assist workers to cope with increased job strain and has also been found to have a direct effect on psychological well-being (Ackerman, 2018). Interventions which assist in reducing job strain by increasing levels of autonomy amongst health care workers, have been found to increase levels of psychological well-being (Cohen., Pignata., Bezak., Tie., & Childs, 2023).

Nurses in the NHI pilot districts face potentially greater workloads and longer hours (Mukwena & Manyisa, 2022), self – efficacy can potentially protect nurses from poor psychological outcomes. It is important for effective change efforts because employees are more open to acquiring new skills and regulating experiences of stress that may arise as a result of organizational change (Norberg & Falkstedt, 2023). Santos et al. (2014) asserted that increased self – efficacy results in positive psychological wellbeing and a regulation of stress. Therefore, despite

stressors in the work environment, employees' skepticism will be met with positive perceptions thus resulting in nurses who are more engaged and committed to their work (Ngobeni & Dhanpat, 2022). The need for mental health promotion interventions, such as stress management, debriefing and employee assistance programmes to help nurses deal with their own psychological problems, should also be considered to help nurses cope with the high job demands that they shoulder (Cohen et al., 2023).

In an NHI pilot site where re-engineering of PHC has increased the workload of professional nurses as well as increased demand for person-centred care that includes mental health care in South Africa, the aims of this study were to investigate i) levels of job strain and psychological well-being in nurses; ii) the relationship between job strain, psychological job demands, self - efficacy and psychological wellbeing; and iii) the predictors of psychological wellbeing.

According to Richemond, Needham and Jean (2022), nursing is an emotionally draining profession. Consequently, given the increased demands being placed on nurses, especially with task sharing, a useful intervention would be to ensure that nurses are equipped with the necessary skills, competencies and support to carry out their additional responsibilities which should assist to strengthen nurses' sense of self-efficacy (Yinn, 2024). While there are a number of capacity building interventions for nurses, e.g., PC 101 training, the findings of this study suggest that many nurses do not have a strong sense of self-efficacy in their jobs, indicating the need for greater attention to be paid to capacity building and supportive mentoring interventions to assist nurses to implement their expanded roles competently (Arvidson et al., 2023). This is particularly important considering that added workloads and working hours are a source of nurses' job strain in the NHI pilot clinics. Improved self-efficacy as a result of improved internal capabilities may result in nurses having less of a need for appraisal or support from others which is often not given, and more inner confidence to deal with job challenges (Arvidson et al., 2023). This may serve to help moderate an increase in job strain (Arvidson et al., 2023), which may have a positive impact on reducing nurse turnover as organisational commitment has been found to be relatively high for individuals with high levels of self-efficacy (Arvidson et al., 2023).

Lastly, the need for mental health promotion interventions, such as stress management, debriefing and employee assistance programmes to help nurses deal with their own psychological problems, should also be considered to help nurses cope with the high job demands that they shoulder.

Method

Study site: The research was conducted in ten NHI pilot clinics within the Dr Kenneth Kaunda district which is an NHI pilot site in the North West Province. The clinics were selected from those where the PRogramme for Improving Mental health care (PRIME) scale up research was being conducted.

The PRIME South Africa district MHCP informed the Dr Kenneth Kaunda district MHCP and is being used to provide a template for district mental health care plans in two other districts, and in Uganda work continues with the Ministry of Health to scale up mental health services in various districts.

The Programme for Improving Mental Healthcare (PRIME) is a consortium of research institutions and ministries of health in five countries, creating high quality research evidence on how best to implement and expand the coverage of mental health treatment programmes for priority mental disorders in primary healthcare contexts in low resource settings. PRIME has developed, implemented, evaluated and scaled up integrated mental healthcare plans over eight years, ending in 2019. PRIME focused on the four mental disorders which contribute to the greatest overall burden of disease; alcohol abuse, depression (including maternal depression), psychosis and epilepsy, and for which there was evidence of cost-effective interventions. PRIME developed an integrated a mental health care plan (MHCP) comprising packages of mental health care for delivery in primary health care and maternal health care, to suit each study country's unique setting. It evaluated the feasibility, acceptability and impact of these packages with four separate studies, including a community survey, facility survey, a cohort study and a case study. PRIME then scaled up to 94 facilities across the five study countries. In the final phase, it partnered with other countries beyond the PRIME network, with a goal to help make a significant ongoing contribution to a broader investment in mental health and mental healthcare (Centre for Global Mental Health, n.d).

Twenty of the largest clinics out of 39 clinics were selected for the PRIME trial. The sample population from Dr Kenneth Kaunda district was made up of the four sub-districts: Maquassi Hills, Matlosana, Potchefstroom and Ventersdorp.

Study design and sample

The study design was cross sectional using a survey instrument comprised of a number of measures. Participants were recruited using non-probability purposive sampling. All professional nurses within the twenty

facilities were approached to complete the survey questionnaire. Altogether 137 professional nurses from the 20 clinics completed the survey questionnaire.

Measures

Job Content Questionnaire (JCQ)– 33 was used to measure job strain: The JCQ has been widely used in research both internationally and locally with regard to job strain, psychological job demands (workload) and decision latitude (control) (Nehzat, Huda & Tajuddin, 2014). In a local study by Johnston et al. (2013), psychological job demands obtained a Cronbach's alpha of 0.76 and a Cronbach's alpha of 0.80 for decision latitude which both make up the construct of job strain.

General Health Questionnaire (GHQ) – 12 was used to measure psychological wellbeing. The GHQ has been widely used in research and in research in South Africa, with a Cronbach's alpha of 0.84 reported by Koen, Van Eeden and Wissing (2011) and 0.89 reported in a study amongst Setswana-speaking adults in the North West province of South Africa (Vosloo, Potgieter, Temane, Ellis, & Khumalo, 2013).

Psychological Capital Questionnaire (PCQ)- 24 was used to measure self – efficacy. This study made use of the PCQ-24 sub-scale on self-efficacy to investigate the relationship between self-efficacy and psychological wellbeing. Simons and Buitendach (2013), in a local study, reported a Cronbach's alpha of 0.87 for self-efficacy. Self-efficacy proved to have the highest reliability scores of all the sub-scales.

Data Collection

The nurses in the identified clinics were informed of the purpose of the study by the researcher or research assistant. The research assistant had an honours qualification and could understand Zulu. Voluntary participation was a biographical data sheet and consent form were given to the participants, the researcher told the participants of their rights as respondents and gave them the questionnaire to be completed if they agreed to participate. Data was collected through the use of a self-administered research survey in a group setting. However, those who were unable to complete the survey at the time that the researcher and her assistants were present, were given the opportunity to take it home and have it collected at a later date. The researcher along with the research assistant went through the questionnaire with the participants and explained some of the questions that were found to be problematic, given that English was not their first language. The survey took most of the nurses about 45 minutes to complete; however, some of the older nurses took longer and those who took the surveys home, had extra time.

Analysis

All the measures used in the survey were found to be reliable measures, prior to rolling out the survey to this sample. This survey had not been rolled out to the sample prior to this. The researcher entered the data and analysed using SPSS 23.0. Job strain was computed using the quotient method described by (Kawakami, Kobayashi, Araki, Haratani & Furui, 1995). This involved multiplying psychological job demands by two and then dividing by decision latitude. A score greater than or equal to one indicated job strain (Schnall, 2004). A score less than one is indicative of no job strain (Kawakami et al., 1995). With regard to the GHQ, scores greater than 20 are considered indicative of severe problems and psychological disorders; scores greater than 15 are indicative of distress, whilst scores between 11 and 12 are considered to be typical (Zulkefly & Baharudin, 2010). According to Zulkefly and Baharudin (2010), higher scores on the GHQ indicate poorer psychological states and lower scores indicate healthier psychological states. This study made use of the Pearson product moment correlation coefficient analysis to investigate the relationship between self – efficacy and psychological wellbeing. The sub-scale for self-efficacy was attained from the psychological capital questionnaire, this sub-scale was adapted from Parker (1998). The scale for self-efficacy was computed by adding questions 1- 6

Ethical considerations

Ethical clearance had been obtained for this study from the Humanities and Social Sciences ethics committee, reference number HSS/05888/015M. The researcher also gained ethical clearance from the Department of Health at North West in order to conduct the research with the nurses in the North West province. If participants experienced any stress as result of completing the questionnaire, the nurses were invited to contact the PRIME-SA team who would be willing to provide counseling. Herein the wellbeing of the participants was taken into consideration.

Findings

The demographics of the sample is presented in Table 1. There was a preponderance of females with 14.6% being male (n=20) and 85.4% (n=117) female, with age ranging from 20 to over 61 years. Racially, 86% (n = 118) were Black.

The Cronbach Alpha for the JCQ for was .768; thus the scale was reliable and valid for use in this study. This study made use of the sub-scales of the JCQ, namely psychological job demands had a Cronbach’s alpha of .556; for decision latitude the sub-scale presented a Cronbach’s alpha of .790. The Cronbach Alpha of the sub-scale for job strain was .655. Therefore, all the scales were reliable and valid for use in this study. For the full GHQ, the Cronbach’s Alpha was .869 thus also indicating that this scale was reliable and valid for use in this study. The psychological capital questionnaire presented a Cronbach’s alpha co-efficient of .867 which is above the ideal value of 0.7 thus indicating that the PsyCap Questionnaire is reliable, therefore making it a valid instrument for use in this study. The Cronbach’s alpha for the psychological capital sub-scale of self-efficacy was .808; thus indicating that the scale was reliable for use in this study.

Table 1

Variable	Cronbach’s Alpha
Job Content Questionnaire	0.768
Psychological job demands	0.556
Decision latitude	0.790
Job strain	0.655
General Health Questionnaire	0.869
Psychological Capital	0.867
Self-efficacy	0.808

Levels of job strain and psychological well-being

Having computed job strain using the quotient method outlined in the methods section, the result for the NHI pilot clinic was .76. This result is less than 1 which is indicative of no job strain. Therefore, nurses within the NHI pilot clinics were not experiencing job strain at the time of the study. The result of .76 which is quite close to 1; thus it may be advisable for authorities to put in place measures not to increase job strain so as to prevent the scores from going above one. About half (51.08%) (n=?) of nurses were experiencing between severe psychological distress and typical levels of distress.

Predictors of psychological wellbeing

Simultaneous multiple regressions were conducted to determine which variables acted as predictors of psychological well-being. Only constructs that had a significant relationship with outcome variables in the correlational analysis were entered into the regression models. The results, presented in Table 3 indicate that the regression model accounted for 11.4% of the variance in psychological well-being, $F(3, 123) = 5.25$; $p < 0.01$, Adjusted $R^2 = 0.114$, with only self-efficacy ($\beta = -.175$; $t = 1.980^*$; $p < 0.05$) made a unique predictive contribution to psychological well-being.

Table 3: The predictors of psychological wellbeing

Model	B	SE B	β	t	95% CI (B)
Job strain	21.302	33.066	.138	.644	.020 – .125
Psychological job demands	.287	.509	.119	.563	.721 – 1.295
Self-efficacy	-.381	.192	-.175	-1.980*	-.762 – -.012

Adjusted R^2	0.114
F	5.25**

* $p < .05$; ** $p < .01$

Note: B = Unstandardised coefficient beta; $SE B$ = Standard error of B ; β = Standardised coefficients beta; 95%CI = 95% Confidence Interval for the B .

Discussion- Conclusions

The results of this study indicated that nurses did not report high levels of job strain in the NHI pilot district of Dr KK. Contrary, a previous study in Malaysia found that nurses do experience high levels of job strain (Mohammadi, Bavarsad & Hendigomashi, 2022). This is contradictory to what would be expected given the increasing burden of care associated with task sharing – including nurse initiated ART as well as being expected to provide person-centred care that requires emotional labour etc – rather refer to previous local studies. According to Fogel and Woods (2008), female nurses are expected to provide ‘emotional labour’; in other words, female nurses are expected to put their own emotions aside to attend to their patients’ concerns (Martinez – Morato et al., 2021).

The majority of the nurses within the NHI pilot clinics fell below the typical distress category. This means that at the time that this study was conducted, the majority of nurses were not experiencing psychological distress. Of 137 nurses, 37% were experiencing typical to severe psychological distress, whilst the rest of the nurses were experiencing below typical to no psychological distress. It is important to consider that the results may not be a true reflection of the psychological distress that nurses face within the NHI pilot clinics.

Results indicated that an increase in job strain was associated with a decrease in psychological wellbeing. According to Norberg (2023), mental health problems correlate with an increase in workload, understaffing and change within an organisation. All of the above factors that correlate with mental health problems, are characteristics of re – engineering. This is cause for concern for nurse psychological well-being and coping capacity within the re-engineering framework of the NHI. A potential threat of poor mental health on the re-engineering process and NHI may be higher absenteeism and turnover amongst nurses coupled with lowered job commitment and engagement that are associated with poor mental health in the workplace (Petrus, 2017). This may jeopardise the success of the NHI system, as quality of care provided may be compromised. In particular, nurses may be less likely to want to deal with patients with comorbid mental health problems given their own unattended poor mental health (Guthrie et al., 2009; Parker, 2014), which may compromise efforts to integrate mental health into primary health care.

In relation to predictors of psychological well-being, despite job strain and psychological job demands having positive relationships with psychological wellbeing; only self-efficacy made a unique predictive contribution to psychological well-being. Previous studies have shown that self-efficacy can moderate psychological well-being (Alkhatib, 2020). Thus, although individuals may be experiencing psychological distress, experiencing high self-efficacy can allow for individuals to remain intrinsically motivated, self-disciplined and possess the appropriate attitude for success (Alkhatib, 2020). It is therefore suggested that mental health promotion interventions integrate and develop positive psychological resources among nurses and relational leadership skills among management. It is recommended that nurses are equipped with the necessary skills, competencies and support in order to perform their duties - all of which would strengthen the self – efficacy of nurses. Self – efficacy and psychological wellbeing both affect behaviours and attitudes of individuals (Alkhatib, 2020). In order to prioritize and enhance nurses' psychological wellbeing, it is crucial for organizations to take a proactive approach (Velana & Rinkenauer, 2021). By implementing the following strategies, organizations can create a supportive and empowering work environment for nurses by focusing on Leadership Accountability. First and foremost, organisations need to make monitoring and improving nurse well-being a priority. Leadership, governance, and management should be held accountable for creating an organizational culture that promotes nurses' psychological wellbeing. This can be achieved through implementing policies and practices that prioritize employee wellness, providing support and resources for mental health, and actively addressing any barriers or challenges that nurses may face in achieving optimal psychological wellbeing.

References

- Arvidsson, L., Skytt, B., Lindberg, M., & Lindberg, M. (2023). Nurses' assessed self-efficacy levels to medical asepsis and their relation to structural empowerment, work engagement and work-related stress. *Work (Reading, Mass.)*, 74(2), 501-513. <https://doi.org/10.3233/WOR-211305>.
- Babapour, A. R., Gahassab-Mozaffari, N., & Fathnezhad-Kazemi, A. (2022). Nurses' job stress and its impact on quality of life and caring behaviors: a cross-sectional study. *BMC nursing*, 21(1), 75. <https://doi.org/10.1186/s12912-022-00852-y>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman and Company.
- Biricik, Yunus. (2020). The Relationship between Psychological Capital, Job Performance and Job Satisfaction in Higher Education Institutions Offering Sports Education. *World Journal of Education*. 10. 57. 10.5430/wje.v10n3p57.
- Bradshaw, D., Nannan, N., Pillay-van Wyk, V., Laubscher, R., Groenewald, P., & Dorrington, R. (2019). Burden of disease in South Africa: Protracted transitions driven by social pathologies. *South African Medical Journal*, 109(11b), 69-76. doi:10.7196/SAMJ.2019.v109i11b.14273.
- Cohen, C., Pignata, S., Bezak, E., Tie, M., & Childs, J. (2023). Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ open*, 13(6), e071203. <https://doi.org/10.1136/bmjopen-2022-071203>.
- Cranage, K., & Foster, K. (2022). Mental health nurses' experience of challenging workplace situations: A qualitative descriptive study. *International journal of mental health nursing*, 31(3), 665-676. <https://doi.org/10.1111/inm.12986>
- De Kock, J.H., Latham, H.A., Leslie, S.J. et al. (2021). A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being. *BMC Public Health* 21, 104. <https://doi.org/10.1186/s12889-020-10070-3>
- Flaubert, J.L., Le Menestrel, S., & Williams, D.R., et al., National Academies of Sciences, Engineering, and Medicine; National Academy of Medicine; Committee on the Future of Nursing 2020-2030. *The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity*. Washington (DC): National Academies Press (US); 2021 May 11. 10, Supporting the Health and Professional Well-Being of Nurses. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK573902/>
- Fredrickson, B. L. (1998). What good are positive emotions? *Rev. Gen. Psychol.* 2, 300-319.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *The American Psychologist*, 56(3), 218-226.
- Hlongwa, E. N., & Sibiyi, M. N. (2019). Challenges affecting the implementation of the Policy on Integration of Mental Health Care into primary healthcare in KwaZulu-Natal province. *Curationis*, 42(1), e1-e9. <https://doi.org/10.4102/curationis.v42i1.1847>
- Kawakami, N., Kobayashi, F., Araki, S., Haratani, T., & Furui, H. (1995). Assessment of job stress dimensions based on the job demands-control model of employees of telecommunication and electric power companies in Japan: Reliability and validity of the Japanese version of the job content questionnaire. *International Journal of Behavioral Medicine*, 2(4), 358-375.
- Kigozi-Male, N. G., Heunis, J. C., & Engelbrecht, M. C. (2023). Primary health care nurses' mental health knowledge and attitudes towards patients and mental health care in a South African metropolitan municipality. *BMC nursing*, 22(1), 25. <https://doi.org/10.1186/s12912-023-01188-x>.
- Koen, M. P., Van Eeden, C., & Wissing, M. P. (2011). The prevalence of resilience in a group of professional nurses. *Health SA Gesondheid*, 16(1), 1-11.
- Kundi, Y.M., Aboramadan, M., Elhamalawi, E.M.I. and Shahid, S. (2021), "Employee psychological well-being and job performance: exploring mediating and moderating mechanisms", *International Journal of Organizational Analysis*, Vol. 29 No. 3, pp. 736-754. <https://doi.org/10.1108/IJOA-05-2020-2204>
- Lindahl Norberg, A., & Falkstedt, D. (2023). The meaning of decision latitude in registered nurses' night work. *International journal of qualitative studies on health and well-being*, 18(1), 2253572. <https://doi.org/10.1080/17482631.2023.2253572>
- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the Human Competitive Edge*. Oxford: Oxford University Press.

- Merrick, T.T., Louie, E., Cleary, M., Molloy, L., Baillie, A., Haber, P. and Morley, K.C. (2022), A systematic review of the perceptions and attitudes of mental health nurses towards alcohol and other drug use in mental health clients. *Int J Mental Health Nurs*, 31: 1373-1389. <https://doi.org/10.1111/inm.13043>
- Michel J, Tediosi F, Egger M, et al. Universal health coverage financing in South Africa: wishes vs reality. *Journal of Global Health Reports*. 2020;4:e2020061. doi:10.29392/001c.13509
- Mohammadi, S., Bavarsad, B., & Hendighomashi, A. (2022). Analysis the Effect of Job Strain on Nurses' Quality of Work-Life: A Mediating and Moderating Model. *Iranian journal of nursing and midwifery research*, 27(5), 420-424. https://doi.org/10.4103/ijnmr.IJNMR_237_20
- Mukwena, N.V., & Manyisa, Z.M. (2022). Factors influencing the preparedness for the implementation of the national health insurance scheme at a selected hospital in Gauteng Province, South Africa. *BMC Health Serv Res* 22, 1006. <https://doi.org/10.1186/s12913-022-08367-7>
- Nafei, W. (2015). Meta-Analysis of the Impact of Psychological Capital on Quality of Work Life and Organizational Citizenship Behavior: A Study on Sadat City University, *International Journal of Business Administration*, 6(2), 42 - 59.
- Ngobeni, P., & Dhanpat, N. (2022). Keeping nurses engaged during COVID-19: An i-deal perspective. *SA Journal of Industrial Psychology*, 48(1), 1-11. <https://dx.doi.org/10.4102/sajip.v48i0.1971>
- Petrus, R. C. (2017). Positive psychological resources and stressors of nurses working in a national health insurance (NHI) pilot site (Doctoral dissertation, The University of KwaZulu-Natal). Retrieved from https://researchspace.ukzn.ac.za/xmlui/bitstream/handle/10413/14963/Petrus_Ruwayda_Chantelle_2017.pdf?sequence=1&isAllowed=y
- Pillay, Y., & Barron, P. (2012). The implementation of PHC re-engineering in South Africa. *PHASA*, 1-6.
- Richemond, D., Needham, M. and Jean, K. (2022) The Effects of Nurse Burnout on Patient Experiences. *Open Journal of Business and Management*, 10, 2805-2828. doi: 10.4236/ojbm.2022.105139.
- Sahile, Y., Yitayih, S., Yeshanew, B. et al. Primary health care nurses attitude towards people with severe mental disorders in Addis Ababa, Ethiopia: a cross sectional study. *Int J Ment Health Syst* 13, 26 (2019). <https://doi.org/10.1186/s13033-019-0283-x>
- Santos, M. C. J., Magramo, C. S., Oguan, F., & Paat, J. N. J. (2014). Establishing the relationship between general self-efficacy and subjective well-being among college students. *Asian Journal of Management Sciences & Education*, 3(1), 1-12.
- Schnall, P.L. (2004). Practicum for Work & Health, 2004. <http://www.workhealth.org/UCLA%20OHP%20class%202004/JCQ%20and%20scoring%202004.pdf> [Accessed on 26 November 2015]. 74
- Schnall, P. L., Pieper, C., Schwartz, J. E., Karasek, R. A., Schlüssel, Y., Devereux, R. B., Ganau, A., Alderman, M., Warren, K., & Pickering, T. G. (1990). The relationship between „job strain,“ workplace diastolic blood pressure and left ventricular mass index, results of a case control study. *Journal of the American Medical Association*, 14, 1929-1935.
- Smollan, Roy. (2017). Supporting staff through stressful organizational change. *Human Resource Development International*. 20. 1-23. 10.1080/13678868.2017.1288028.
- Vosloo, M., Potgieter, J., Temane, M., Ellis, S., & Khumalo, T. (2013). Validation of the short self-regulation questionnaire in a group of black teachers: The SABPA study. *South African Journal of Industrial Psychology*, 39(1), 1-10.
- Zulkefly, N. S., & Baharudin, R. (2010). Using the 12-item General Health Questionnaire (GHQ-12) to assess the psychological health of Malaysian college students. *Global Journal of Health Science*, 2(1), 73-80.