



Research Article

Resilience of Nurse Managers in Botswana Hospitals

Thokgamo Boitshwarelo^{1*}, Magdalene P. Koen², Mahlasela A. Rakhudu³

¹PhD candidate, School of Nursing, North-West University, South Africa

²School of Nursing, North-West University, South Africa

³School of Nursing, North-West University, South Africa

*Corresponding author: Thokgamo Boitshwarelo, PhD candidate, School of Nursing, North-West University, South Africa

Citation: Boitshwarelo T, Koen MP, Rakhudu MA (2022) Resilience of Nurse Managers in Botswana Hospitals. Int J Nurs Health Care Res 5: 1317. DOI: 10.29011/2688-9501.101317

Received Date: 03 July 2022; **Accepted Date:** 18 July 2022; **Published Date:** 22 July 2022

Abstract

Background: Resilience has been identified as being essential for nurse managers to ensure quality of nursing care. As nursing has been identified as one of the professions that exposes its members to stress, resilience allows nurse managers to withstand workplace adversity and ensure achievement of organizational objectives. Nurse managers are expected to role model positive behaviours to the staff and being resilient will assist them in fulfilling this role. **Purpose:** The paper aims to identify the level of resilience of nurse managers in Botswana hospitals and relate it to the selected demographic characteristics. **Design:** The Wagnild and Young's Resilience Scale (1993) was used to measure the level of resilience of 49 nurse managers working in various public hospitals. Additionally, selected demographic characteristics were collected from all the respondents. STRATA 15 was used for analysis of both demographic data and responses from the Resilience Scale. The study further identified the relationship between the level of resilience and the nurse managers demographic characteristics. **Findings:** Participants presented different levels of resilience, that is, 14.3% of nurse managers presented low resilience, 59.2% moderate resilience while 26.5% presented high resilience. There was no significant association between the resilience scores and the demographic characteristics. TY Studies on resilience of nurses and nurse managers has been carried out internationally. However, no studies have been identified addressing the resilience of nurses and nurse managers in Botswana.

Keywords: Nurse manager; Resilience; Workplace stress

Introduction

Garcia-Dia et al. [1] indicate that the concept of resilience is derived from the Latin term 'resiliens, meaning to rebound or recoil while Hatler and Sturgeon state that, in Latin, resilience means 'leaping back'[2]. Resilience is defined from various fields; for instance, Hatler and Sturgeon (2013) defines it from the field of metallurgy as "a metal's ability to respond to stress in a way to absorb energy without deforming" while Davydov et al. [3] state that the term was "originally used to describe the capacity of a material or system to return to equilibrium after a displacement". The above definitions imply strength, stability,

resistance, flexibility and maintenance of originality in relation to the response of an object to stress. Resilience refers to a person's ability to withstand adversity and therefore it can be expected that resilient nurse managers will be able to resist workplace hardships.

Various authors define resilience as the ability or capacity to withstand or recover or bounce back from adversity [4-7]. Resilience does not only address bouncing back from adversity but also the aspect of adaptation and growth following a challenging experience [8-14]. It appears that there are two themes that stand out in the definition of resilience, which are adversity and adaptation. In this study, resilience refers to one's ability to withstand adverse working conditions and be able to adapt and function regardless of the challenging workplace environment.

Most studies addressing the resilience of nurses have identified that, on average, nurses were moderately resilient [15-17] stated that nurse managers on average had moderate resilience. However, a study by Ren et al. [18] reflected that nurses had lower resilience compared to general people in China. Given the fact that resilience is a crucial component of health and well-being, which has been recognised as a coping mechanism for the workforce [18], measurement of resilience for nurse managers in Botswana becomes necessary.

As nurse managers' work in stress prone work environments, hence resilience becomes necessary for them to effectively manage the highly complex healthcare environments. Therefore, measuring the level of resilience of nurse managers was necessary in order to anticipate their ability to withstand workplace adversities resulting in provision of quality nursing care.

Design

This study forms part of a larger study that used mixed method design and this article reports on the quantitative phase. Data was collected utilising a validated questionnaire, the Wagnild and Young's Resilience Scale [19], to measure the level of resilience for nurse managers. The tool was piloted with seven (7) participants who were not included in the study and the results reflected no need for the modification of the scale. The Resilience Scale is a 25-item scale, with each item scored on a 7-point scale with 1 indicating disagree and 7 agree and it is used to identify the degree of individual resilience with possible scores ranging between 25 and 175 where higher scores indicate higher resilience [10,19,20]. According to Wagnild scores of more than 145 indicate moderately high to high resilience, scores from 116 to 144 indicate moderately low to moderate levels of resilience while scores of 115 and below indicate very low resilience [20]. The study further identified the relationship between the level of resilience and the nurse managers demographic characteristics.

Setting and sample

The study was conducted in all the eleven (11) public district and referral hospitals in Botswana. Hospitals in Botswana are divided into primary, district and referral hospitals (National Development Plan (NDP) 10, 2011). All district public hospitals, government and mission, were included in the sample. The 2 referral hospitals were also included as they serve as district hospitals in their regions while the primary hospitals were excluded. The third referral hospital was excluded because it was a specialized psychiatric hospital.

Participants

Participants were unit and departmental nurse managers working in the general wards, that is, medical and surgical wards in district and referral hospitals in Botswana, who agreed

to participate. There were forty-nine (49) nurse managers who participated in the study. The majority of the participants were female at 86% with males at 14%. The minimum age of the participants was within the thirty-one to thirty-five (31 to 35) age bracket at 2% while 87.5% were above forty (40) years of age. Regarding the nursing qualifications, 73.5% possessed a Diploma in Nursing, 10.2% a Bachelor's degree and 2% a Master's degree. Participants who had worked as nurse managers for 5 years or more were 75.5% while the other 24.5% had worked for less than 5 years. Most nurse managers worked in district hospitals with 65% at government and 8% at mission hospitals while 27% worked in referral hospitals. There was a participation rate of 96.1%, that is, out of a total of fifty-one (51) nurse managers who were invited to participate, only 2 declined.

Data collection

In order to measure the resilience level of nurse managers, the researcher adopted an already existing psychometric tool to collect data. Data was collected through a self - administered questionnaire using the Wagnild and Young (1993) Resilience scale (RS) [19]. The tool was explained to participants and they were individually required to fill the RS. The RS is a Likert-scale with seven possible responses for each item ranging from 1 (strongly disagree) to 7 (strongly agree) with all items positively worded and a higher score indicating higher resilience [20]. The RS consists of twenty-five (25) statements with possible scores ranging between 25 and 175 where higher scores indicate higher resilience. The researcher purchased rights to utilise the tool and entered into an agreement with the owner of the scale.

In addition, the biographic and demographic characteristics were collected and they included gender, age, educational level, and years of experience as nurse managers, position and type of hospital. The demographic data was collected in order to determine whether they had any impact on the resilience of nurse managers and whether there was any association between the resilience scores and various demographic characteristics.

Data was collected between January and August 2018 depending on the permission from the hospitals and the availability of participants. Consent was sought from each participant and a consent form was signed before data collection.

Validity and reliability

The Cronbach's alpha coefficient for the Resilience Scale in this study was 0.87 and in previous studies it ranged between 0.85 and 0.94 [20]. Therefore, this study falls within the same range. The Resilience Scale (RS) has proven to be reliable as it has been used in the South African context in a study by Koen and Tau [17]. Koen et al. (2011) conducted a confirmatory factor analysis for the RS while Shehu and Mokgwathi [13] assessed the RS 14 for stability and suitability for the Botswana context. Furthermore, a

statistician was engaged in order to guide the researcher during analysis and to ensure that the results were dependable.

Data analysis

STRATA 15 was used for analysis of demographic data and responses from the Resilience Scale. Frequency tables were used to summarize the demographics and the Resilience Scores. Correlation was done between the Resilience scores and the demographic characteristics and it was determined that there were no significant associations as the p-value was greater than .05, ranging between .192 and .782 for various demographics.

Ethical considerations

Ethical approval was sought from and granted by the University’s Research Ethics Regulatory Committee and the Ministry of Health and Wellness Health Research and Development Unit in Botswana. Permission was also requested from and granted by individual hospitals, either through their committees or hospital superintendents prior to any arrangements for data collection. The heads of nursing services in the hospitals acted as a link to reach the nurse managers and determined possible dates for information sharing about the research. The researcher met all nurse managers to give a detailed brief about the research; then those interested to participate were scheduled individually as deemed suitable for them.

Participants were given detailed information about the study so that they could make an informed decision to participate. Participants were informed that the study was voluntary and that they could withdraw at any time without any consequence. They were also informed that there were no anticipated risks and that they should report any perceived risk so that it could be addressed appropriately. In addition, consent was sought from participants and they individually signed a consent form. Privacy was maintained as data collection was carried out at a place designated by the facility or the participant’s office with minimal distractions. There was no link with participants after data collection. Anonymity was maintained as names were not used in the data collection tools and

data was reported anonymously. Even though the statistician had access to data collection tools for data entry, they were coded with numbers and therefore could not be linked to any participant. Data collection tools were kept in a lockable cabinet that could only be accessed by the researcher.

Findings

The study findings indicate the level of resilience for nurse managers and the relationship between demographics and resilience.

Level of resilience

Participants were found to be at different levels of resilience. It was identified that 14.3% of nurse managers presented low resilience, 59.2% moderate resilience while 26.5% presented high resilience as indicated in Table 1 below.

| Level of Resilience | Frequency | Percentage |
|---------------------|-----------|------------|
| Low Resilience | 7 | 14.3 |
| Moderate Resilience | 29 | 59.2 |
| High Resilience | 13 | 26.5 |
| Total | 49 | 100 |

Table 1: Summary of managers categorized by level of resilience

The resilience scores ranged between 103 and 164 with a mean resilience of 134.06, standard deviation of 16.395 and Cronbach’s Alpha at 0.87. The five characteristics of the Resilience Scale, that is self-reliance, purpose, equanimity, perseverance and authenticity were also measured for significance. The alpha values for the Resilience Scale characteristics ranged between 0.45 and 0.65 with Self-Reliance and Perseverance moderate at 0.65, Authenticity satisfactory at 0.58 and Purpose and Equanimity not satisfactory at 0.47 and 0.45 respectively. The results are tabulated in Table 2 below.

| Variable | Cronbach’s Alpha | Minimum | Maximum | Mean | Std. Deviation |
|---------------|------------------|---------|---------|--------|----------------|
| Self-Reliance | 0.657 | 12 | 35 | 26.16 | 4.701 |
| Purpose | 0.474 | 19 | 35 | 27.47 | 3.530 |
| Equanimity | 0.447 | 16 | 34 | 26.45 | 4.263 |
| Perseverance | 0.651 | 23 | 34 | 28.53 | 3.483 |
| Authenticity | 0.577 | 11 | 35 | 25.45 | 5.021 |
| Resilience | 0.873 | 103 | 164 | 134.06 | 16.395 |

Table 2: Resilience Scale: minimum score, maximum score, mean and standard deviation of the respondents.

Comparison between resilience and demographics

An independent samples t-test was conducted to compare the mean perception score of resilience and various demographics. In addition, a one-way ANOVA between-groups analysis of variance was also conducted to explore the impact of demographics on resilience. Correlation between the Resilience scores and the demographic characteristics determined that there were no significant associations as the p-value was greater than .05 ranging between .192 and .782 for various demographics.

Discussion

The purpose of this study was to measure the resilience level of nurse managers. The article further indicates the relationship between resilience and demographic characteristics.

Demographic characteristics

The participants in this study were mostly female at 86%. The gender bias reflected the dominance of females among nurse managers under study and probably the dominance of females in the nursing profession in Botswana. This finding is similar to other studies which were done in various settings involving nurses and nurse managers where females ranged between 77% and 100% [21-25,16-18]. Most studies involving nurses and nurse managers have identified the nursing profession to be predominantly female. This may be related to the general belief that caring is a characteristic of women [22]. In a study by Rizvi et al. it was revealed that patients had a preference of female nurses due to societal expectations and being accepted as care providers [26].

Participants in this study were all above 30 years of age with 85.7% being above 40 years. The older age may be indicative of the need for experience for one to be appointed as nurse manager. It can be deduced that, for one to be appointed as a nurse manager, they should have grown and matured in the profession, hence the reason for the mature age. Studies involving nurse managers have identified age in a similar range with this study. The mean age in the study by Freitas et al. [22] was 39 years while in other studies, the participants ages were 36 years and above [27,17, 28]. Even though the participants were not required to indicate their years of experience as nurses, they were rather asked to indicate their years of experience as nurse managers and 75.4% had been nurse managers for more than 5 years.

The highest level of education for the nurse managers was predominantly a diploma at 73.5% while Bachelor's degree was at 10.2% and Masters' degree at 2%. Data reflected that the diploma qualification was prominent among the nurse managers and an insignificant number with a Masters' qualification which may reflect the current nursing educational landscape in Botswana. The finding is contrary to other studies where a diploma qualification was insignificant. For instance, in a study of nurse leaders by

Hudgins [29] and Carpio et al. [30] a diploma qualification was at 9% and 10% respectively while in other studies, participants possessed a minimum qualification of a Bachelor's degree [27,12].

Level of resilience

The resilience scores ranged from 103, being the lowest and 164 being the highest score with a mean of 134.06 and a standard deviation of 16.395. There were 26.5% of the participants who presented high resilience while 14.3% had low resilience. However, the majority of participants, that is, 59.2% portrayed moderate resilience. It is evident that, on average, nurse managers in the study had a moderate level of resilience. A study by Mealer et al. (2014) identified one-fifth of nurses as resilient which is close to this study's findings. Other studies that identified the resilience of nurses working in public hospitals being moderate were Guo, Cross et al, Oskuz et al. 2018; Zou et al [31].

Relationship between resilience and demographic characteristics

An independent samples t-test was conducted to compare the mean resilience scores and demographics and a one-way ANOVA between-groups analysis of variance was also conducted to explore the impact of demographics on resilience. It was revealed that there was no significant difference in the scores within various selected demographics as each demographic had no effect on the resilience level. Therefore, it was concluded that there was no association between resilience and demographics as the p-value was greater than .05, ranging between .192 and .782 for various demographics. There are some studies which have corroborated similar findings about the association between demographics and resilience scores. However other studies identified differing results in Relation to different demographics.

It was identified that gender does not affect the resilience of nurses [32,15,33]. However, in a study by Oskuz et al. (2018), it was found that the resilience levels for females were lower than those of males. The findings regarding age not influencing resilience are consistent with [34,35] Gillespie et al. and Zou et al. who concluded that age did not contribute to the nurses' resilience. Nonetheless, there are studies that have identified that age had an impact on nurses' resilience [32,16,33]. Regarding the level of education having no relationship with resilience, it is consistent with findings from Gillespie et al. [34]. However, some studies indicated that education was significantly associated with resilience [31,32,15]. Even though this study has not identified experience as influencing resilience, other studies have established that years of work experience increases resilience [36-37].

Conclusion

Nurse managers need to be resilient in order to facilitate the provision of quality nursing care. Resilience is one's ability

to withstand adversity. The study measured the level of resilience of nurse managers working in general wards in Botswana public hospitals. The Wagnild and Young (1993) Resilience Scale was used to measure the resilience of forty-nine (49) nurse managers working in the general wards of 11 public hospitals. With regard to the participants' level of resilience, the study identified that, on average, nurse managers had moderate resilience. It was also established that demographic factors had no effect on one's level of resilience. As the study also showed that demographics had no impact on resilience, therefore, every nurse manager, regardless of their gender, age, qualification and position are capable of being resilient and withstanding adversity.

Limitations and recommendations

There was a relatively small number of nurse managers (N=49) participating in the study as it covered unit and department managers only in the general wards and excluded those in other specialised wards and units. Even though the sample was 96.1% of nurse managers in the general wards, the results cannot be generalised to the whole population of nurse managers in Botswana, however, it can be generalised to the context similar to that of this study, that is, nurse managers working in the general wards of public hospitals. The results of the quantitative phase were meant to inform the selection of participants for the qualitative phase therefore, unlike in other studies, the study only utilised the Resilience Scale (RS) without relating it other scales.

The findings from this study have implications on future research as there are no previous studies on resilience in the health and nursing field in Botswana.

Recommendations for further research

It is recommended that a similar study be conducted for the nurse managers in the specialised wards and units that were excluded to allow findings to be generalizable to all settings. This study focused on nurse managers in public government and mission hospitals and excluded private hospitals, therefore, a similar study should be done in private hospitals. The complex health care environment that nurse managers work in, is the same as that of the nurses in general. It is therefore recommended that a study on the resilience of nurses be carried out in order to appreciate and compare with those of nurse managers. Further research should be conducted on the resilience of nurse educators and that of student nurses as they ultimately influence the resilience of nurses in practice.

In addition, a study should be conducted that utilises multiple scales to broaden the findings.

References

1. Garcia-Dia M J, DiNapoli JM, Garcia-Ona L, Jakubowski R, Flaherty DO (2013) Concept analysis: Resilience. *Archives of Psychiatric Nursing* 27: 264-270.
2. Hatler C, Sturgeon P (2013) "Resilience Building: A necessary leadership competence", *Nurse Leader* 4: 32-34.
3. Davydov DM, Stewart R, Ritchie K, Chaudieu I (2010) "Resilience and mental health", *Clinical Psychology Review* 30: 479-495.
4. Jackson D, Daly J (2011) All things to all people: Adversity and resilience in leadership. *Nurse Leader* 9: 21-22, 30.
5. Kruger L, Prinsloo H (2008) "The appraisal and enhancement of resilience modalities in middle adolescents within the school context", *South African Journal of Education* 28: 241-259.
6. Turner ST (2014) "The resilient nurse: An emerging concept", *Nurse Leader* 12: 71-73.
7. Gasa V (2013) Resilience in the context of learners and youth raised in grandparent - headed families *Commonwealth Youth and Development Programme* 11: 22-31.
8. Haddadi P, Besharat MA (2010) Resilience, vulnerability and mental health. *Procedia Social and Behavioral Sciences* 5 : 639-642.
9. Koen MP, Van Eeden C, Wissing M (2011) The prevalence of resilience in a group of professional nurses", *Health SA Gesondheid* 16: 1.
10. McAllister M, McKinnon J (2009) The importance of teaching and learning resilience in the health disciplines: A critical review of literature. *Nurse Education Today* 29: 371-379.
11. Mealer M, Conrad D, Evans J, Jooste K, Solyntjes J, et al. (2014) Feasibility and Acceptability of a resilience training program for intensive care unit nurses. *American Association of Critical Care* 23: 97-105.
12. Shehu J, Mokgwathi MM (2008) "Health locus of control and internal resilience factors among adolescents in Botswana: A case - control study with implications for physical education", *South African Journal for Research in Sport, Physical Education and Recreation* 30: 2.
13. Zander M, BaMedRad RT, Hutton A, King L (2013) "Exploring resilience in paediatric oncology nursing staff", *Collegian* 20: 17-25.
14. Guo YF, Luo YH, Cross W, Plummer V, ZhangJP, et al. (2018) Burnout and its association with resilience in nurses: A cross-sectional study. *Journal of Clinical Nursing* 27: 441-449.
15. Oskuz E, Demiralp M, Mersin S, Tuzer H, Asku M, et al. (2019) Resilience in nurses in terms of perceived social support, job satisfaction and certain variables. *Journal of Nursing Management* 27: 423-432.
16. Tau B, Du Plessis E, Koen D, Ellis S (2018) The relationship between resilience and empowering leader behavior of nurse managers in the mining healthcare sector. *Curationis* 41: e1-e10.
17. Y, Zhou Y, Wang S, LuoT, Huang M, et al. (2017) Exploratory study on resilience and its influencing factors among hospital nurses in Guangzhou, China. *International Journal of Nursing Sciences* 5: 57-62.

18. Wagnild GM, Young HM (1993) Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Management* 1:165-178.
19. Wagnild GM (2016) *The Resilience Scale User's Guide*, Resilience center, Montana.
20. Benade P, Du Plessis E, Koen MP, Ramalisa RJ (2018) Exploring resilience in nurses caring for older persons. *Health SA Gesondheid* 22: 138-149.
21. Freitas FMB de, Vannuchi MTO, Haddad M do C L, Silva LG de C, Rossaneis MA (2017) Hardiness and occupational stress in nurse managers of hospital institutions. *Journal of Nursing UFPE On Line* 11: 4199-4205.
22. Guo YF, Cross W, Plummer V, Lam L, Luo Y H, et al. (2018) Exploring resilience in Chinese nurses: a cross sectional study. *Journal of Nursing Management* 25: 223-230.
23. Kelly D, Lankshear A, Jones A (2016) Stress and resilience in post-Francis world-A qualitative study of executive nurse directors. *Journal of Advanced Nursing* 72: 3160-3168.
24. Kulig JC, Townshend I, Kosteniuk J, Karunanayake C, Labrecque, ME, et al (2018). Perceptions of sense of community and community engagement among rural nurses: Results of a national survey. *International Journal of Nursing Studies* 88: 60-70.
25. Rivhi Jafree S, Zakar R, Zakar M Z (2015) Gender segregation as a benefit – a qualitative study from Pakistan. *Journal of Nursing Management* 23: 983-993.
26. Kim M, Windsor C (2015) Resilience and work-life balance in first-line nurse manager. *Asian Nursing Research* 9: 21-27.
27. Wei H, Roberts P, Strickler J, Corbett RW (2019) "Nurse leaders' strategies to foster resilience", *Journal of Nursing Management* 27: 1-7.
28. Hudgin TA, (2016) Resilience, job satisfaction and anticipated turnover in nurse leaders. *Journal of Nursing Management* 24: 62 -69.
29. Carpio RC, Castro LP, Huerto HM, Highfield MEF, Mendelson S (2018) Exploring resilience at work among first line nurse managers. *Journal of Nursing Administration* 48: 481-486.
30. Zou G, Shen X, Tian X, Liu C, Kong L, et al. (2016) Correlates of psychological distress, burnout, and resilience among Chinese female nurses", *Industrial Health* 54: 389-395.
31. Ang SY, Uthaman T, Mordiffi SZ, Ang E, Lopez V, et al. (2018) Association between demographics and resilience - A cross sectional study among nurses in Singapore. *International Nursing Review* 65: 459-466.
32. Zheng Z, Gangaram P, Xie H, Chua S, Ong SBC, et al. (2017) Job satisfaction and resilience in psychiatric nurses: A study at the Institute of Mental Health, Singapore". *Int J Ment Health Nurs* 26: 612-619.
33. Gillespie BM, Chaboyer W, Wallis M (2009) The influence of personal characteristics on the resilience of operating room nurses: A predictor study. *Int J Nurs Stud* 46 : 968-976.
34. Rushton CH, Batcheller J, Schroeder K, Donohue P (2015) Burnout and resilience among nurses practicing in high-intensity settings. *Am J Crit Care* 24: 412-420.
35. Udod SA, Care WD (2011) Nurse managers work stressors and coping experience: Unravelling the evidence", *Nursing Leadership* 24: 57-72.
36. Ministry of Health (2011) Revised National Health Policy. Government of Botswana, Gaborone.
37. Ministry of Health (2011) Integrated Health Service Plan. Government of Botswana, Gaborone.