

Recruitment and Retention of Healthcare Professionals in the Public Health Sector: Focus at the Limpopo Department of Health

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Abstract: Recruitment and retention of healthcare professionals particularly, clinicians such as medical specialists and medical doctors is seen as a major challenge in the developing countries such South Africa. High vacancy rate of medical specialists and medical doctors at Regional and Tertiary hospitals presents an evidence of inability to attract and retain these categories of healthcare professionals in the health sector. This paper undertakes to reflect key recruitment and retention strategies of medical specialists and medical doctors for service delivery improvement specifically, the provision of quality health care services in the health sector. This paper sought to analyse recruitment and retention strategies that may be considered for the provision of quality health care services. In the process of analysing these recruitment and retention strategies, literature review was considered to determine various recruitment and retention strategies in the public health sector. It is observed that there are various key recruitment and retention strategies for scarce skills of clinicians such as medical specialists and medical doctors that may be considered to enhance the health system for the provision of quality health care services in the health sector. These recruitment and retention strategies among others include, monetary incentives, promoting work autonomy, career development, flexible working time and shift work, safety in the workplace and leadership and management.

Keywords: Health sector, Health system, Recruitment, Retention strategies, clinicians

1. Introduction

The health care system is established with mandate of ensuring that health care services are provided to citizens. For the health sector to meet its obligations, among others, requires adequate number of healthcare professionals. According to Alam (2009), the healthcare profession is regarded as one of the noblest professions across the globe. It is only natural that this profession is expected to demonstrate the highest standard of professionalism and quality health care services even under unfavourable conditions. This notion is supported by Alam and Haque (2010), who indicate that health care professionals are expected to adhere to the required standard even in the face of such adversity as unfavourable job environment, poor working conditions and low salaries. These factors are seen as impediment towards attracting and retaining healthcare professionals, particularly, critical scarce skills of clinicians, for instance medical specialists and medical officers.

Shortage of healthcare professionals is a global phenomenon that has gained increasing attention in the developed countries. This has been seen from European Union (EU) policymakers in recent years,

with major research projects, council conclusions and the start of Joint Action on Workforce Planning early in 2013 (Rose & Janse van Rensburg, 2015). For instance, the pronunciation of the debate on professional mobility at European level has often been on the streams of healthcare professionals from one country to another at the macro-level. However, as the debate regarding recruitment and retention of healthcare professionals gained momentum, the discussion has extended to include the role of local organisations. This has also been reflected in the growing body of EU-funded researches on the healthcare professionals and expanded to the public health organisations in the developing countries. It is worth noting that the health care system in public health sector is faced with a major challenge to meet the needs of citizens, particularly, in the developing countries such as South Africa due to shortage of healthcare professionals, specifically, clinicians such as medical specialists and medical doctors. The inability to recruit and retain the right staff is likely to have some adverse effects on the delivery of health care services, particularly on quality of care and costs. For example, in Zimbabwe, high vacancy rates resulted in the closure of some health care facilities and reduced access to quality health care services (Stilwell, 2001).

In South Africa, the Department of Public Service and Administration (DPSA) introduced measures in an attempt to attract and retain critical scarce skills of professionals in the public service. For instance, the Public Service Bargaining Council, Resolution 1 of 2007, provide several incentive benefits such as occupation specific dispensation (OSD), rural allowances, commuted overtime and pay progressions. Despite, these measures being implemented, the South African public service is still experiencing high turnover of various categories of professionals. In the Limpopo Department of Health, for the period 2015/16 to 2018/19 financial years, the vacancy rate of medical specialists remains high at 72% while of medical officers revolving around 68% (Limpopo Department of Health Annual performance reports for 2015-2019). This high vacancy rate of healthcare professionals is usually having a negative impact on the provision of quality health care services.

This notion is also supported by the Auditor General of South Africa's (AGSA) reports for the same period (2015/16-2018/19 financial years). The AGS's reports revealed that a number of rules and regulations that apply to financial management and reporting matters were not observed as required in terms of policies, procedures and legislations. It is further noted in the AGSA's report (2015/16-18/19 financial years) that there were many instances of reporting on supply chain management (SCM) and service delivery that have been found to be inappropriate. It is further observed that poor performance, among others, is due to shortage of healthcare professionals (Auditor General of South Africa's reports for 2015-2019). This state of affairs could be an indication that the health system is experiencing some difficulties in attracting and retaining healthcare professionals, specifically scarce skills clinicians such as medical specialists and medical doctors in public health sector, specifically, in the Limpopo Department of Health. This is could be attributed to a lack of effective recruitment and retention strategies in the public health sector and highlight a need for exploring measures to recruit and retain healthcare professionals. In this regard, it became necessary that analysis of recruitment and retention strategies for healthcare professionals in the context of public health care sector be undertaken.

2. Recruitment and Retention Strategies

Health care facilities, particularly in the rural communities often face challenges in maintaining an

adequate healthcare professional, making it difficult to provide health care services and to meet staffing requirements for their healthcare facilities. Therefore, rural healthcare facilities should be proactive and strategic about recruiting and retaining healthcare professionals. (Rural Information Hub, 2019). Rose and Janse van Rensburg (2015) confirm that there is a global struggle to attract and retain healthcare professionals, especially scarce skills of clinicians such as medical specialist and medical doctors to rural areas. These authors further provide an understanding of recruitment and retention concepts that: recruitment focuses on attracting current healthcare professionals and medical students to open positions or to future positions, while retention focuses on keeping healthcare professionals employed in the healthcare facilities and communities.

Rose and Janse van Rensburg (2015) maintain that successful recruitment and retention practices can minimise the number and duration of staff vacancies, which can, in turn, save money, improve quality of care, and ensure that services are provided in the community. It is further observed that the scarcity of healthcare professionals contributes to a reduction in the quality and type of health services that are offered to the communities and a crippled health system is further weakened by a lack of healthcare professionals (Rose & Janse van Rensburg, 2015). It is important to note that in order to provide equitable care in underserved areas, like rural locations, it is necessary to ensure that healthcare professionals are attracted to and retained in the under-served areas. Anand and Barnighausen (2007) assert that "under-served areas" can be interpreted in the broadest sense as geographic areas where relatively poorer populations that have limited access to qualified healthcare providers and health services of adequate quality. It may include, for example, remote rural areas; remote islands; urban slum areas; areas that are in conflict or post-conflict; refugee camps; and areas inhabited by ethnic minorities or indigenous groups. Anand and Barnighausen (2007) further indicate that healthcare professionals are reluctant to serve at these areas.

Dolea, Stormont and Braichet (2010) argue that staffing-mix, which comprising all types of healthcare professionals are necessary for the provision of adequate services in rural areas. However, De Villiers and de Villiers (2004) point out several factors that are contributing to the shortage of healthcare

professionals in rural areas. These include inadequate supervision, poor referral and support structures, lack of appropriate equipment and drugs, and poor management structures. These authors further describe how factors such as remoteness, poor job satisfaction, job frustration, and occupational stress and community issues are negatively affecting healthcare professionals in rural areas. It is further observed that these factors are discouraging health care professionals to serve at remote and rural areas (De Villiers & de Villiers, 2004). Jelfs, Knapp, Giepmans and Wijga (2012:345) postulate that staff turnover is a natural and necessary process in the public health care facilities. However, when turnover becomes high and unacceptable it can have a detrimental effect such as burnout on the remaining health care professionals and resulting to poor health care services (Gray & Phillips, 1996; Tai, Bame & Robinson, 1998; Shields & Ward, 2001; Buchan, 2010; Simon, Müller & Hasselhorn, 2010). Bland & Jones, 2004; Waldman, Kelly, Arora & Smith, 2004; O'Brien-Pallas & Griffith; Shamian, 2006, are emphatic on the cost of healthcare professionals regarding high turnover, especially on the payment of overtime and recruitment of new employees.

It is worth noting that recruitment and retention strategies are required as intervention mechanisms to attract and retain healthcare professionals, particularly, in the rural areas. Hayes, O'Brien-Pallas, Duffield & Shamian (2006) in Jelfs, Knapp, Giepmans & Wijga (2012) highlight three factors that are usually considered as interventions on recruitment and retention of healthcare professionals. These factors include external factors such as general economic and labour market; individual factors such as educational level, length of service and non-professional commitments and organisational factors relating to the way in which health care facilities are managed. In this regard, Wiskow, Albrecht and Pietro (2010) provide a framework that can serve as an approach to effectively recruit and retain healthcare professionals in the health sector. This framework is based on three dimensions that are focusing on quality, for instance, employment quality, work quality and organisational quality. Jelfs, Knapp, Giepmans and Wijga (2012) differentiate these dimensions that: Employment quality refers to the contractual relationships between employer and employee; work quality refers to the material characteristics of the tasks that employees carry-out and the work environment in which they perform their work, and organisational quality relates to the

measure wherein the organisation is able to adapt to changes in the outside world.

Rabinowitz, Diamond, Markham and Paynter (2001) in their study conducted in Israel on critical factors for designing programs to increase the supply and retention of rural primary physicians, observed strategies that may assist in the recruitment and retention of healthcare professionals in the rural areas. For instance, a systematic review of financial incentives found that incentives targeting medical students who are struggling with tuition fees were somewhat successful in drawing medical specialists and medical doctors to rural areas. However, this was less effective when unenforced or a buy-out option is made available. Creating medical schools in rural areas is another strategy, which was tried in high, low and middle income areas in the Middle East (Rabinowitz *et al.*, 2001). Strategies to address the determinants of practice, such as increasing medical school and medical equipment may create confidence of healthcare professionals to remain employed in the rural areas. Successful policies and interventions are likely to address multiple dimensions of the problem. For example, programmes need to focus on retention and motivation of health workers in underserved areas as well as recruitment (Rabinowitz *et al.*, 2001).

Recent innovations in the 21st century mean that there are multiple avenues through which the problem relating to recruitment and retention of health care professionals can be addressed. For instance, the growing sophistication and capability of information technology (IT) holds some promise. Telemedicine programs in Australia have been used to increase referrals to medical specialists, but could also be used to enhance the supervision and support provided to healthcare professionals located in remote areas. Specialist outreach program, which aim to increase coverage by bringing specialist care out of the hospital, also create hope for the healthcare professionals in the rural areas. In addition to these strategies outlined in Rabinowitz *et al.* (2001), Aliyu, Mathew, Paul, Shinaba and Olusanya (2014) suggest various approaches that need to be taken into consideration to attract and retain healthcare professionals in the health sector. These approaches are briefly discussed below.

2.1 Policies on Personal Characteristics of Healthcare Professionals

Analysis of personal characteristics relating to age, gender and education can provide factors that need

to be taken into consideration when developing policies on recruitment and retention of healthcare professionals. For instance, Gray, Philipps and Normand (1996) and Murray (1999) point out that turnover rates are higher among younger workers due to flexibility and ambitions on their careers. Murray (1999) further indicates that more than 70% of those who are leaving health profession were aged between 26 and 35 years. However, the turnover rates may also be related to length of service (Aliyu *et al.*, 2014).

Some studies (Krausz, Koslowski, Shalom & Elaykim, 1995; Kirshenbaum & Mano-Negrin, 1999) suggest that nurses who are more educated would tend to consider other employment more than those who are less educated. Aliyu *et al.* (2014) maintain that this relationship could be explained by the fact that it is easier for better-educated people to consider other employment possibilities. Aliyu *et al.* (2014) further state that a lack of empirical data and the ethics of a policy on some specific personal characteristics explain why such a policy has not been systematically implemented. However, there could be some considerable benefits in recognising that younger, well-educated healthcare professionals are likely to develop their careers. This may result in healthcare professionals moving from one employer to another, or even changing professions. Offering good professional development opportunities, reflected in career structure and pay enhancement, may serve as a strategy to attract and recruit healthcare professionals. It is worth mentioning that older healthcare professionals are likely to be a more stable workforce. Therefore, policies to attract them back to work (for example, retraining, flexible shifts or child care facilities) should be considered (Aliyu *et al.*, 2014).

2.2 Monetary Incentives

Remuneration and financial incentives are usually seen as the most common approaches used to improve recruitment, retention, motivation and performance. Financial incentives include direct or indirect payment such as wages or salary, bonuses, pension, insurance, allowances, fellowships, loans and tuition reimbursement. Providing adequate and timely remuneration is important to guarantee the recruitment of motivated and qualified staff (Martinez & Martineau, 1998). Rabinowitz *et al.* (2001:108) accede that financial incentives focusing at healthcare professionals may need to be packaged together with interventions that address some of the structural barriers

to location in rural areas such as adjusting resource allocation mechanisms to enhance the resources available within the health system in under-served areas, or policies that specifically address career development for healthcare professionals in under-served areas.

However, the impact of monetary incentives seems to be unrealistic to attract and retain healthcare professionals, particularly in the developing countries as compared to developed countries. In their literature review of monetary incentives in the health professional's labour supply, Chiha & Link (2002) and Antonazzo, Scott, Skatun & Elliot (2003) found that there is poor positive relationship between monetary incentives and labour supply. For instance, wage and salary differentials between developed and developing countries, between the public and private sectors as well as the long delays in salary payment in the public sector are often likely to have an influence on recruitment and retention of the healthcare professionals in developing countries.

2.3 Promoting Work Autonomy

Work autonomy can be viewed as control over one's own work, and is among the key variables explaining job satisfaction of employees in the organisation (Aliyu *et al.*, 2014). Autonomy was reported to be significant in explaining health professional's job satisfaction in a study of reviewing nursing in hospitals (Gleason-Scott, Sochalski & Aiken, 1999). It has also been revealed that hospitals with supportive managers and favouring greater latitude in decision-making by staff experience lower turnover rates (Mason, 2000; Aiken, Havens, & Sloan, 2000). Judge, Thoresen, Bono, & Patton (2001); Sousa-Pouza & Sousa-Pouza (2000); Vroom (1964) in Myung and Young Lee (2012) acceded that job satisfaction has been mostly used as a performance indicator in terms of reducing absenteeism and turnover and in terms of increasing productivity in the workplace.

2.4 Career Development

The possibility of career development for healthcare professionals is central in attracting and retaining healthcare professionals, especially in an environment characterised by a phenomenal growth in knowledge related to health sciences and technological advancement. It is observed that career development opportunities encourage the retention of healthcare professionals and provide the positive effects of

professional development opportunities. In addition, the provision of internal promotion opportunities has been shown as a means to reduce turnover of healthcare professionals in health facilities (Rambur, Palumbo, McIntosh & Mongeon, 2001; Kingma, 2003).

2.5 Adapting Flexible Working Time and Shift Work

Limitations on working hours and the provision of rest periods have a direct impact on the quality of services, particularly to healthcare professionals who are already over-burdened. The increased use of overtime and absenteeism is frequently cited as a key area of job dissatisfaction among healthcare professionals (Aliyu *et al.*, 2014) and flexible working time is often considered as a means of improving recruitment and retention of healthcare professionals. Although, problems of recruitment and retention of nurses in the developed countries such as United Kingdom (UK) and France persist, there are some indications of successful application of flexible working time and shift work (Arrow-Smith & Sisson, 1999; Frijters, Shields & Price, 2003).

2.6 Strengthen Safety of Healthcare Professionals in the Workplace

Unlawful attacks against healthcare professionals seem to be a serious concern and pose a threat to attract and retain healthcare professionals, particularly in the rural areas (Dalphon, Gessner, Giblin, Hijazi & Love, 2000). Violent acts against healthcare professionals arise mainly from patients, criminals and communities who are protesting against service delivery. It is observed that the most frequent violent acts often are described as bullying, physical violence and assaults (Jackson, Clare & Mannix, 2002). Some findings suggest that there is a direct relationship between aggression and increases in sick leave, burnout and staff turnover (O'Connell, Young, Brooks, Hutchings, & Lofthouse, 2000). Therefore, to strengthen safety of healthcare professionals in the workplace is likely to reduce turnover rate. The costs of improving nursing protection in the workplace should be balanced against the costs associated with the lost hours and turnover resulting from violence against healthcare professionals.

2.7 Healthy Leadership and Management

Leadership is defined as the process whereby individual influences group of people to achieve a

common goal, while management is described as the process of managing systems to realise such a common goal (Northouse, 1997). In the public health care sector, studies have found that leadership and management are positively correlated with healthcare professional's job satisfaction and commitment towards institutional goals (Stordeur, D'hoore, & Vandenberghe, 2001). Boyle, Hansen, Woods & Taunton (1999) observed that manager's positional power and influence over work coordination had a direct relationship with attracting and retaining healthcare professionals in the health care facilities and also regarded as a source of job satisfaction of healthcare professionals. The study concluded that managers with leadership styles that seek and value contributions from staff and sound management systems, promote a climate in which information is shared effectively, involved decision-making, and influence coordination of work to provide a milieu that maintains a stable cadre of healthcare professionals.

In addition to these strategies, Rose and Janse van Rensburg (2015) suggest some of the recommendations as mechanisms to attract and retain healthcare professional, particularly, in the rural areas. These include, a focus on health professionals with a passion to serve rural areas should be identified, and their move to these areas well facilitated, establishment and strengthening of collaboration between the community and the health team needs to be promoted, establishment of health teams, rather than the employment of individuals, would facilitate a better work environment and encourage the retention of healthcare personnel in rural areas, good referral systems and strong management would encourage health professionals to remain in rural areas and distribution of medicine in the rural areas should be developed as an independent discipline.

3. Conclusion and Recommendations

The literature as discussed in this article has clearly analysed recruitment and retention strategies for healthcare professionals, particularly measures to attract and retain healthcare professionals in the rural areas. However, it is important to note that to identify and analyse such strategies is considered as one aspect while, implementation is another (Aliyu, Mathew, Paul, Shinaba, & Olusanya, 2014; Rose & Janse van Rensburg, 2015). Most suggested strategies usually fail at the implementation phase and therefore, it is necessary that effective

implementation measures be adapted in order to ensure that healthcare professionals are attracted and retained in the health care facilities.

References

- Aiken, L., Havens, D. & Sloan, D. 2000. The magnet nursing services recognition program. *American Journal of Nursing*, 1000(3):26-36.
- Alam, G.M. 2009. The Role of Science and Technology Education at Network Age Population for Sustainable Development of Bangladesh through Human Resource Advancement. *Journal of Sci. Res. Essays*, 4(11):1260-1270.
- Alam, G.M. & Hoque, K.E. 2010. Who Gains from "Brain and Body Drain" Business. Developing/developed World or Individuals: A comparative Study between Skilled and Semi/unskilled Emigrants. *African Journal of Business Management*, 4(4):534-548.
- Aliyu, U.K., Mathew, O.K., Paul, R.Y., Shinaba, S.T. & Olusanya, M.O. 2014. Strategies for Recruiting and Retaining an Effective Nursing Workforce in Nigeria: *IOSR Journal of Nursing and Health Science*, 3(5):2320-1959.
- Anand S. & Barnighausen T. 2007. Health workers and vaccination coverage in developing countries: an econometric analysis: *The Lancet*, 36(9):77-85.
- Antonazzo, E., Scott, A., Skatun, D. & Elliot, R. 2003. The Labour Market for Nursing: A Review of the Labour Supply Literature. *Health Economics*, 12(6):465-478.
- Arrow-Smith, J. & Sisson, K. 1999. Pay and working time: Towards organization-based systems? *British Journal of Industrial Relations*, 37(1):51-75.
- Boyle, D.K., Bott, M.J., Hansen, H.E., Woods, C.Q. & Taunton, R.L. 1999. Managers' leadership and critical care nurses' intent to stay. *American Journal of Critical Care*, 8(6):361-371.
- Buchan, J. & Black, S. 2011. *The impact of pay increases on nurses' labour market: a review of evidence from four OECD countries*. Paris: Organisation for Economic.
- Chiha, Y. & Link, C. 2002. The shortage of registered nurses and some new estimates of the effects of wages on registered nurses labour supply: a look at the past and a preview of the 21st century. *Health Policy*, 6(4):349-375.
- Dalphon, D., Gessner, M., Giblin, E., Hijazzi, K. & Love, C. 2000. Violence against emergency nurses. *Journal of Emergency Nursing*, 26(2):105-116.
- De Villiers, M. & De Villiers, P. 2004. Doctors' views of working conditions in rural hospitals in the Western Cape. *South African FAM Practice*. 46(3):21-26.
- Dolea, C., Stormont L. & Braichet J.M. 2010. Evaluated strategies to increase attraction and retention of health workers in remote and rural areas. *Bull World Health Organ*. 8(8):379-385.
- Frijters, P., Shields, M. & Price, S. 2003. *Investigating the quitting decisions of nurses: Panel data evidence from the British National Health Services, UK*.
- Gleason-Scott, J., Sochalski, J. & Aiken, L. 1999. Review of magnet hospital research: Findings and implications for professional nursing practice. *Journal of Nursing Administration*, 29(1):9-19.
- Gray, A.M. & Phillips, V.L. 1996. Labour turnover in the British National Health Service: a local labour market analysis. *Health Policy*, 3(6):273-289.
- Gray, A.M., Phillips, V.L. & Normand, C. 1996. The costs of nursing turnover: evidence from the British National Health Service. *Health Policy*, 3(8):117-128.
- Hayes, L.J., O'Brien-Palias, L., Duffield, C. & Shamian, J. 2006. Nurse turnover: a literature review. *International Journal of Nursing Studies*, 4(3):237-263.
- Jackson, D., Clare, J. & Mannix, J. 2002. Who would want to be a nurse? Violence in the workplace –a factor in recruitment and retention. *Journal of Nursing Management*, 10(14):13-20.
- Jelfs, E., Knapp, M., Giepmans, P. & Wijga, P. 2012. Creating good workplaces: retention strategies in health care organizations. *Health professional mobility in a changing Europe*, 1(5):345-366.
- Kingma, M. 2003. Economic incentive in community nursing: attraction, rejection or indifference? *Health human resources* 1(1):2.
- Kirshenbaum, A. & Mano-Negrin, R. 1999. Underlying labour market dimensions of "Opportunities": The case of employee turnover. *Human Relations*, 52(10):1233-1255.
- Krausz, M., Koslowski, M., Shalom, M. & Elaykim, N. 1995. Predictors of intention to leave the ward, the hospital, and the nursing profession: A longitudinal study. *Journal of Organizational Behaviour*, 1(6):277-288.
- Martinez, J. & Martineau, T. 1998. Rethinking human resources: an agenda for the millennium. *Health Policy and Planning*, 13(4):345-358.
- Mason, D. 2000. Nursing's best kept secret. *American Journal of Nursing*, 100(3):7-10
- Murray, B. 1999. A report on the analysis of the pattern of nurses entering and exiting employment in three Dublin Maternity Hospitals 1996-1998. *Health Services Employers Agency*. Dublin: Ireland.
- Myung, H.J. & Young Lee, M.I. 2012. The effects of autonomy, experience, and person-organization fit on job satisfaction: the case of public sector, *International Journal of Social Sciences*, 6(1):18-44.
- Northouse, P. 1997. *Leadership. Theory and practice*. New York: Sage Publications.
- O'Brien-Pallas, L., Griffin, P. & Shamian, J. 2006. The impact of nurse turnover on patient, nurse, and system outcomes: a pilot study and focus for a multicenter international study. *Policy, Politics, and Nursing Practice*, 7(16):169-179.
- O'Connell, B., Young, J., Brooks, J., Hutchings, J. & Lofthouse, J. 2000. Nurses' perceptions of the nature and frequency of aggression in general ward settings and high dependency areas. *Journal of Clinical Nursing*, 9(4):602-610.
- Rabinowitz, H.K., Diamond, J.J., Markham, F.W. & Paynter, N.P. 2001. Critical factors for designing programs to increase the supply and retention of rural primary care physicians. *JAMA*. 286(9):104-118.

- Rambur, B., Val Palumbo, M., McIntosh, B. & Mongeon, J. 2001. A statewide analysis of RN's intention to leave their position. *Nursing Outlook*, 5(1):183-188.
- Rose, A. & Janse van Rensburg-Bonthuyzen, E. 2015. The factors that attract healthcare professionals to and retain them in rural areas in South Africa. *Journal of South African Family Practice*, 57(1):44-49.
- Rural Health Information Hub, 2019. Recruitment and Retention for Rural Health Facilities: Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). Available at: <https://www.ruralhealthinfo.org>. Accessed 19 April 2019.
- Shields, M.A. & Ward, M. 2001. Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit. *Journal of Health Economics*, 20(5):677-701.
- Simon, M., Muller, B.H. & Hesselhorn, H.M. 2010. Leaving the organization or the profession: a multilevel analysis of nurses' intentions. *Journal of Advanced Nursing*, 66(3):616-626.
- Sousa-Pouza, A. & Sousa-Pouza, A. 2000. Well-being at work: A cross-national analysis of the levels and determinants of job satisfaction. *Journal of Socio-Economics*, 29(6):517-538.
- South Africa. Limpopo Department of Health Annual performance reports for 2016-2018.
- South Africa. Public Service Bargaining Council, Resolution 1 of 2007. Department of Public Service and Administration. Government printers: Pretoria.
- Stilwell, B. 2001. Health worker motivation on Zimbabwe. World Health Organization, Department of Organization of Health Care Delivery, Geneva, Switzerland.
- Stordeur, S., D'hoore, W. & Vandenberghe, C. 2001. Leadership organizational stress and emotional exhaustion among nursing hospital staff. *Journal of Advanced Nursing*, 35(4):533-542.
- Tai, T., Bame, S. & Robinson, C. 1998. Review of nursing turnover research, *Social Science and Medicine*, 47(12):1905-1924.
- Vroom, V. 1964. *Work and motivation*. New York: Wiley.
- Waldman, D., Kelly, F. & Smith, H.L. 2004. The shocking cost of turnover in health care. *HealthCare Management Review*, 29(1):2-7.