



AMERICAN JOURNAL OF MULTIDISCIPLINARY RESEARCH AND INNOVATION (AJMRI)

ISSN: 2158-8155 (ONLINE), 2832-4854 (PRINT)

VOLUME 2 ISSUE 2 (2023)



PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

Unpacking the Effects of High Staff Turnover in Zimbabwean Government Hospitals

Tawanda Dzvairo^{1*}

Article Information

Received: January 27, 2023

Accepted: March 07, 2023

Published: March 25, 2023

Keywords

*Staff, Turnover, Government
Hospitals, Zimbabwe*

ABSTRACT

Economic factors in the international scene have attracted trained and qualified health personnel in other countries. The mass exodus has been happening at an alarming rate, resulting in disadvantaged countries losing effective hospital staff. Staff turnover has been witnessed in Government administered hospitals in Zimbabwe. Both low and high staff turnover has proven to affect the healthcare system. This is evident in the poor health service that is being delivered after qualified and experienced doctors, nurses and other related personnel have left their work places in search of better opportunities and greener pastures. The study gathered findings from related literature and distributed questionnaires around selected hospitals in an attempt to evaluate and assess the effects of high staff turnover in Zimbabwean hospitals. Thus, a survey on the results of being short staffed due voluntary hospital staff turnover has shown the negative effects of staff turnover in Zimbabwean hospitals. The study included four government hospitals (GH) as case studies, these are; Chivhu, Sadza, Kotwa and Marondera Hospitals. The study reviewed that 95% of the respondents indicated that there was a record of staff turnover at their respective hospitals. The research results showed that nurses constituted the most staff members leaving government hospitals, making up 29.49% of the total turnover in the four GH involved in the study. The destination for those nurses and other medical practitioners was regarded as 'g mainly regarded as 'greener pastures' in the United Kingdom effects of staff turnover was the shortage of qualified and experienced staff members in hospitals in Zimbabwe which affected the quality-of-service delivery. This article gives in detail the objectives, results and recommendations for the topic in question.

INTRODUCTION

It is challenging to efficiently staff healthcare facilities due to high turnover rates, which has a variety of implications on the caliber of care provided to patients. Poor nurse staffing is related to greater patient mortality rates because low nurse-to-patient ratios lead to fewer nursing care hours for each patient. Due to the terrible economic circumstances now existing in Zimbabwe, healthcare professionals have crossed borders and irregularly migrated in search of better economic possibilities within the region and overseas. This problem has an effect on both patient welfare and service delivery in the health sector. The gap that was identified in the literature analysis indicated that the consequences of excessive staff turnover in Zimbabwean GH needed to be thoroughly evaluated. This study was unique in that it chose four public hospitals as its target population. In order to determine the presence and effects of staff turnover specifically in GH, the study addresses significant elements.

Objectives

- To assess the effects of staff turnover in Zimbabwean GH.
- An evaluation of challenges associated with staff shortages in hospitals.
- Determining possible challenges that the government can employ to retain government hospital staff.

LITERATURE REVIEW

The past few years have seen a lot of research on staff turnover across disciplines. Healthcare related research has also been excluded on the subject of staff turnover. As a result, hospitals have been experiencing negative effects from employee turnover that are felt by both patients and hospitals. In a study published in 2020, Kanyumbaya and Msosa examined the impact of a hospital's retention strategies on service quality. The findings of this study showed a strong link between service delivery and retention strategies. This research contributes to the corpus of information on retention strategies in the health sector in developing nations with poor working and economic conditions. This is in line with the study made by Kanyumbaya, and Msosa (2020). While they fought valiantly to retain competent and talented medical workers, Zimbabwe's public sector institutions lost the majority of their trained experts. This began in the years 2008 and 2009. Examining the causes, impacts, and strategies for lowering staff attrition in the health industry were the main objectives of the study by Madhekeni and Taderera, (2012). The study made the case that the status of the economy has a big impact on how much employee attrition occurs in organizations by using council clinics as case studies. Because hospital workers are in demand abroad, the study's conclusion by Madhekeni and colleagues advised improving working conditions. They depart from the underdeveloped nations

¹ College of Health, Agriculture and Natural Sciences-Department of Public Health and Nursing, Africa University, Zimbabwe

* Corresponding author's e-mail: thabanidzvairo@gmail.com

where they are unappreciated in order to get employment in other, more developed nations the better wages and working conditions.

In addition to the above, Chikanda, (2007) looked on the emigration of medical professionals from Zimbabwe amid a worsening political and economic crisis. To prove that this movement was significant and that economic difficulties are mostly to blame, Chikanda chose a few health institutions in his study. Therefore, this outflow has had a severe influence on the health system's beneficiaries, particularly the poor who are unable to pay for the alternative health services offered by the better-staffed and equipped private clinics and instead turn to traditional and faith healers. Based on the study's findings, Chikanda (2007) came to the conclusion that long-term solutions to stem Zimbabwe's medical mass emigration must address both economic and political issues.

In Zimbabwe, nurses have been moving from the public to private health sectors in addition to the aforementioned contributing factors. Consequently, the mass mobility has led to the establishment of private healthcare facilities in surrounding nations (Chikanda, 2005, Chimbari et al, 2008 and Liang, et al, 2012). The effects of hospital staff turnover have been shown to be a loss for hospitals, which experience significant financial losses each year as a result of the high turnover rate (Zhakata, Bhebbhe & Karedza, 2017). In Zimbabwean mission hospitals, Maverutse (2015) found that job satisfaction and working conditions are positively correlated with one another. The study promoted stronger benefit programs, rules, and pay scales to recruit and retain more skilled healthcare professionals for Zimbabweans' benefit (Maverutse, 2015).

Non-managerial employees have a higher labor turnover rate, partly attributed to ineffective reward system administration (Malvern, Michael & Crispen 2010). The study is corroborated by Hongoro (2001), who suggested that fundamental policy design faults related to how hospitals are financed, governed, and managed have an impact on hospital performance. The hospital staff appears uninterested in managing their institution because there aren't enough incentives in place. Thus, it was discovered that a variety of internal hospital problems had an impact on hospital performance which in turn had direct impact on turnover intention.

According to the Chimbari, Madhina, Nyamangara, Mtandwa, Damba's study from 2008, the Zimbabwean health system prioritizes qualified staff while not giving value to candidates in training for the existing posts (Chimbari, Madhina, Nyamangara, Mtandwa & Damba,

2008). Thus, earlier studies supporting literature has outlined the causes of health workers' migration.

As a result of the high staff turnover rate, studies have identified a strong negative correlation between nurse staffing levels and mortality. According to statistics linking nurse staffing to patient mortality, increasing the number of nurses on duty proved to aid in improving quality of service delivery. Numerous studies, have demonstrated the need of adequate nurse staffing levels for obtaining positive patient outcomes (Person, et al, 2004 and Rothberg, et al, 2005). This study addressed the gap of turnover in GH in Zimbabwe. Thus, unlike earlier researches presented in the related literature, this research focusses specifically on state managed public hospitals.

METHODOLOGY

A descriptive cross-sectional study approach was used. Using a planned random sample technique, four government hospitals were selected. Data was gathered through interviews and questionnaires that were created with the research aims in mind. The data were examined using Statistical Package for Social Sciences (SPSS) software to calculate the effect of hospital staff turnover. The researcher used Cronbach's alpha coefficients. This helped solve the issue of validity and reliability of the study's findings.

RESULTS

This section describes the demographic characteristics of the respondents of the study. These profiles include gender, age, working experience and academic qualifications. The majority, 60%, of the study respondents specified that they were male while 40% indicated that they were female. It can be noted that most of the respondents (40 %) indicated that they were in the 31 to 40 years age group, followed by a considerable proportion (35%) who said they were between the ages of 41 to 50 years. An additional 17.5% of the respondents specified that they were between 21 to 30 years while the minority, 7.5% were above 50 years of age.

According to survey data, most of the study respondents had 11 to 20 years of working experience in the operation field under consideration, constituting 47.5% of the participants. These were followed by 30% who specified that they had five to ten years of working experience with the minority, and 10%, who specified that they possessed over 20 years of working experience. Lastly, Table 1 below depicts the academic qualification responses obtained from the survey in which most of the respondents (52.5%) specified that they had attained a first degree.

Table 1: Academic qualifications

Academic qualification		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	15	37.5	37.5	37.5
	First degree	21	52.5	52.5	90.0
	Masters' degree	4	10.0	10.0	100.0
	Total	40	100.0	100.0	

The results further indicate that 37.5% indicated that they had a diploma in nursing while those who had attained a master's degree only constituted 10% of the participants.

Reliability tests

To test the reliability of the scales of measurement used in coming up with the questionnaires, the researcher used Cronbach's Alpha test, and the following results were obtained.

Table 2: Reliability test results

Constructs	Cronbach's Alpha coefficient
Causes of staff turnover	0.756
Effects of staff turnover	0.769
Strategies to retain hospital staff	0.883

From the results table shown above, it can be noted that all coefficients were reliable as these were above 0.7 which according to Connelly (2014) is the acceptable benchmark for consistency and dependability. Moreover, according to Guenzi and Pelloni (2004), measurement scales that have alpha coefficients less than 0.6 are considered unacceptable.

Causes of turnover in hospitals

The first objective of the research was to determine the causes of staff turnover in hospitals in Zimbabwe. However, responses were first inquired to indicate whether there had been a record of staff turnover at their respective hospitals. Of the four hospitals and the 40 participants involved in the study, 95% of the study respondents indicated that there was a record of staff turnover at their respective hospitals. However, only 2.5% noted that staff turnover was not a cause for concern while another 2.5% indicated that they were not sure. Table 3 below shows the descriptive statistics that were generated from the responses obtained on the inquiry.

Table 2: Reliability test results

Statistics		
Can you say that there has been a record of staff turnover at this hospital?		
N	Valid	40
	Missing	0
Mean		1.0750
Std. Deviation		.34991

Source: Survey data

A response-generated mean score of 1.0750 indicates that, on average, respondents indicated "yes" implying that they were on average of the opinion that there had been a record of staff turnover at their respective hospitals. Furthermore, the research also sought to establish the department of staff mostly affected by turnover. In this regard, the hospital management and administration were inquired to provide details of the number of staff

that have left the included institutions since 2020. Table 4 below depicts the results obtained from the study.

Table 4: Prevalence of staff turnover

Department of staff	Frequency	Percentage of total turnover
Doctors	16	7.37%
Nurses	64	29.49%
Medical aides	20	9.22%
Clerical staff	23	10.60%
Food services staff	9	4.15%
Pharmacy staff	11	5.07%
ICT staff	7	3.23%
Volunteers	54	24.88%
Therapists	11	5.07%
Social workers	2	0.92%
Total	217	100.00%

Source: Survey data

From the results presented in Table 4 above, it can be noted that nurses constituted the most staff members leaving hospitals and these made up 29.49% of the total turnover in the four hospitals involved in the study. It can also be noted that volunteers constituted 24.88% of the total turnover, medical aides 9.22%, doctors 7.37% and therapists 5.07% of the total turnover in the hospitals involved in the study. As illustrated in Table 4 above, the least affected group or department of staff was the hospital's social workers department with a turnover percentage of 0.92.

Upon establishing the prevalence of staff turnover in GH involved in the study, the study in pursuit of fulfilling the first objective, sought to determine the causes of staff turnover in these hospitals. To achieve the objective and solicit responses, the study utilized a five-point Likert scale with responses ranging from one (strongly disagree) to five (strongly agree) with the mid-point, three representing a neutral perspective on the inquiry. Frequencies, means, and standard deviations were used to present the findings of the study. Means were rounded off to the nearest integer on the Likert scale used to represent the average opinion of respondents. For example, a mean of 2.6 would be rounded off to three, which on the five-point Likert used would represent a neutral perspective. Table 5 below presents the results obtained from the study.

According to the results presented above, 45% of the respondents agreed on the point that staff turnover in Zimbabwean GH was a result of poor working conditions within the four hospitals. These were supported by a similar proportion of the participants who strongly agreed to the cause inquired. However, 10% of the participants were neutral. The responses generated in this regard generated a mean score of 4.3500 which implies that, on average, respondents agreed that poor working conditions

Table 5: Causes of staff turnover in hospitals

Cause	1	2	3	4	5	Mean	St. Dev.
Poor working conditions	0%	0%	10%	45%	45%	4.3500	0.66216
Poor remuneration and incentives	0%	0%	0%	0%	100%	5.0000	0.00000
Poor living conditions	0%	0%	10%	65%	25%	4.1500	0.57957
Inadequate, obsolete and unavailable work-related infrastructure	0%	0%	10%	50%	40%	4.3000	0.46487
Inadequate medical supplies and drugs	0%	5%	32.5%	50%	12.5%	3.7000	0.75786
Lack of career prospects	0%	2.5%	5%	55%	37.5%	4.2750	0.67889
Poor management	0%	5%	15%	55%	25%	4.0000	0.78446

Source: Survey data

in hospitals were causing staff turnover. A small standard deviation of 0.66216 which is less than one implies that responses were relatively clustered around the mean thus cementing or supporting the general representativeness of the obtained mean.

It can also be noted that there was unanimous agreement among respondents regarding the implications of poor remuneration and incentives on staff turnover in Zimbabwean GH as all respondents specified that they strongly agreed. Moreover, most of the study respondents, 65%, also agreed that poor living conditions were causing high staff turnover in Zimbabwean GH. A response-generated mean score of 4.1500 implies that respondents, on average, agreed with the causes under consideration. Similar results can also be observed concerning inadequate, obsolete and lack of work-related infrastructure as a cause of high labour turnover in hospitals as implied by a mean score of 4.3000 and a small standard deviation of 0.57957.

Upon being inquired on whether the inadequacy of medical supplies and drugs was a cause for concern when it comes to staff turnover, the majority of the study respondents (50%) agreed and these were also supported by 12.5% who strongly agreed. However, the minority, 5% disagreed while 32.5% chose to be neutral to the

inquiry. The responses, however, generated a mean score of 3.7000, implying that respondents agreed with the assertion on average. Similarly, respondents, on average, also agreed that staff turnover was caused by the lack of career prospects and poor employee and hospital management as implied by respective mean scores of 4.2750 and 4.0000.

In addition to the determination of the causes of staff turnover in the four hospitals involved in the study, the study also sought to establish the department of staff mostly affected by turnover. In this regard, the hospital management and administration were inquired to provide details of the number of staff that have left the included institutions since 2020 from the government.

Effects of turnover

The second objective of the study sought to assess the effects of staff turnover in Zimbabwean GH. Table 6 below illustrates the results obtained from the study.

Results presented above indicate that most of the respondents, 67.5%, strongly agreed that high staff turnover results in the shortage of qualified and experienced staff members in hospitals in Zimbabwe. These were supported by 32.5% of the study participants who also indicated that they agreed with the assertion

Table 6: Effects of staff turnover

Effect	1	2	3	4	5	Mean	St. Dev.
Shortage of qualified and experienced staff	0%	0%	0%	32.5%	67.5%	4.6750	0.47434
Increased stress, anxiety and work overload on existing employees	0%	0%	0%	15%	85%	4.8500	0.36162
Costly to train new staff	0%		15%	55%	30%	4.1500	0.66216
Compromises service delivery	0%			5%	95%	4.9500	0.22072
Costs the hospital a lot of resources	0%	5%	12.5%	55%	27.5%	4.0500	0.78283
Results in low staff morale	0%	5%	15%	47.5%	32.5%	4.0750	0.82858
Delays in transfers	0%	12.5%	20%	50%	17.5%	3.7250	0.90547
Challenges in maintaining organizational culture	0%	2.5%	22.5%	47.5%	27.5%	4.0000	0.78446
Longer waiting periods for patients	0%	0%	0%	62.5%	37.5%	4.3750	0.49029
Disruption in service delivery	0%	0%	0%	50%	50%	4.5000	0.50637
Low productivity	0%	0%	0%	45%	55%	4.4000	0.59052

Source: Survey data

probed. These responses generated a mean score of 4.6750 implying that, on average, respondents strongly agreed that staff turnover has a negative impact in Zimbabwean GH as it results in a shortage of qualified and experienced staff who are most likely going to be replaced by comparably less qualified and experienced members. A small standard deviation of 0.47434 implies that responses were relatively clustered around the mean thus cementing or supporting the general representativeness of the obtained mean.

In addition, respondents were also inquired to indicate their level of agreement with the assertion that staff turnover increases stress, anxiety and the workload of existing employees. In response to the inquiry, the majority, 85%, of the study respondents strongly agreed. Again, these were supported by the remaining 15% who also specified that they agreed with the statement probed. A mean score of 4.8500 and a standard deviation of 0.36162 indicate that, on average, respondents strongly agreed that staff turnover increased stress, anxiety, and work overload on existing employees. More similar results were also obtained with the regard to the effect of staff turnover on service delivery as implied by a mean score of 4.9500. This, therefore, implies that respondents, on average, strongly agreed that staff turnover disrupts and comprises service delivery.

Results in Table 6 further indicate that most of the study respondents, 55%, agreed that high staff turnover costs the hospital a lot of resources in terms of training and mentoring new staff members. An additional 30% of the participants strongly agreed with the assertion. However, the minority, only 15% of the respondents remained neutral to the inquiry. A mean score of 4.1500 and standard deviation of 0.66216 however implies that, on average, respondents agreed that labour turnover is costly for the hospitals in Zimbabwe.

Furthermore, a mean of 4.0750 also indicates that on average, respondents agreed that staff turnover in hospitals affects the morale of the remaining employees. Results in Table 6 also show that respondents were, on average, in agreement with the assertions that staff turnover results in delays in transfer with a mean of 3.7250, challenges in maintaining organizational culture (4.0000), longer waiting periods for patients (4.3750) and low employee productivity (4.4000).

Proposed strategies the government can employ to retain hospital staff

The study also sought to determine the strategies the government can employ to retain hospital staff. The following results were obtained from the survey using the same criteria as used above.

Table 7: Strategies to retain hospital staff

Strategy	1	2	3	4	5	Mean	St. Dev.
Increase in remuneration packages	0%	0%	0%	0%	100%	5.0000	0.00000
Improving working conditions	0%	0%	0%	12.5%	87.5%	4.8750	0.33493
Procurement of new equipment	0%	0%	0%	30%	70%	4.7000	0.46410
Maintenance of existing infrastructure	0%	0%	0%	15%	85%	4.8500	0.36162
Employee training and development	0%	0%	0%	17.5%	82.5%	4.8250	0.38481
Give employees as much autonomy	0%	2.5%	25%	50%	22.5%	3.9250	0.76418
Career developmental opportunities	0%	0%	0%	7.5%	92.5%	4.9250	0.26675
Address the socio-economic needs of health workers	0%	0%	0%	0%	100%	5.0000	0.0000
<i>Source: Survey data</i>							

Results presented in Table 7 above indicates that there was unanimous agreement among respondents that the government should increase remuneration packages to retain hospital staff and reduce turnover rate as all respondents strongly agreed with the inquired strategy. Moreover, results from the study also indicate that most respondents (87.5%) agreed that working conditions need to be improved and conducive to curb high staff turnover. These were again supported by 12.5% who also agreed with the strategy. A mean score of 4.8750 and a standard deviation of 0.33493 imply that, on average, respondents strongly agreed that working conditions in hospitals need to be improved to retain employees who might have intentions to leave.

Additionally, a response-generated mean of 4.7000 indicates that respondents, on average, strongly agreed

that the government ought to procure new health-related equipment in hospitals to curb labour turnover. Again, results obtained also indicated that respondents, on average, strongly agreed the government should maintain existing infrastructure in hospitals to curb the menace of high labour turnover in government hospitals. This is implied by a mean score of 4.8500 obtained after 15% and 85% of the study respondents agreed and strongly agreed, respectively, that the government needs to maintain existing infrastructure to retain employees with intentions to leave as a result of poor and dilapidated infrastructure in government hospitals.

Moreover, results also show that respondents, on average, strongly agreed that to retain hospital staff, the government should endeavor to train and develop hospital employees as implied by a mean score of 4.8250 and a small standard

deviation of 0.38481. Similarly, respondents, on average, also strongly agreed that the government should offer career development opportunities and address the social economic needs of employees as implied by respective mean scores of 4.9250 and 5.0000 and smaller standard deviations that are less than one.

Results also show that most respondents (50%) agreed that employees should be given as much autonomy as they can handle in conducting their duties as a strategy to retain employees. These were supported by a considerable proportion, 22.5%, of the study participants who also indicated that they strongly agreed with the strategy inquired. However, a quarter of the study respondents remained neutral while the minority, only 2.5%, disagreed with the notion that employees should be given as much autonomy as a strategy to curb staff turnover in hospitals. A mean score of 3.9250, which corresponds to four on the Likert scale utilized, implies that respondents were on average in agreement with the strategy of providing employee autonomy in their daily task.

DISCUSSION

In accordance with the findings above, 45% of respondents concurred that the unfavorable working conditions in Zimbabwean GH contributed to high staff turnover. According to the study's findings, nurses made up the largest group of employees who left hospitals, accounting for 29.49% of all staff turnover in the four hospitals examined. Additionally, it should be highlighted that all respondents said that they highly agreed, demonstrating unanimity among respondents regarding the effects of inadequate compensation and incentives on staff turnover in Zimbabwean GH.

The majority of study participants also concurred that the high staff turnover in Zimbabwean GH was a result of poor living circumstances. Similar findings may be made about poor, out-of-date, and lack of workplace infrastructure as contributors to high staff turnover in hospitals. When asked if inadequate medical supplies and drug availability was a reason for concern when it came to staff turnover, the majority of research participants agreed, and this was reinforced by 12.5% of those who strongly agreed. In a similar vein, respondents generally concurred that bad employee and hospital management, a lack of career possibilities, and high staff turnover were to blame. Thus, once the staff was employed, there were no career development programs by the government to improve or advance the career prospects. Hence, if by chance one finds the first chance to further their career opportunities, they leave their jobs for better ones. Therefore, hospital turnover has had a detrimental impact. In Zimbabwean GH, staff turnover is detrimental because it causes a shortage of skilled and experienced employees who are most likely to be replaced by individuals who are similarly under qualified and inexperienced. Additionally, respondents were asked to rate how much they agreed with the statement that staff turnover makes existing employees more stressed, anxious, and overworked. The

majority, 85%, of the study participants strongly agreed with the probed statement in response to the question, and this was further corroborated by the other 15% of participants who also explicitly agreed. Finally, the study showed that staff turnover disrupts and comprises service delivery.

RECOMMENDATIONS

Firstly, the study recommended that the government raise compensation packages to retain hospital workers and lower the turnover and turnover intention rate. Furthermore, to counter the threat of excessive staff turnover in GH, the government should sustain the current infrastructure in hospitals. This will improve working conditions in hospitals and aid in retaining staff members who may otherwise plan to quit. With the suggestions made by this study, the government would keep on board workers with turnover intention.

CONCLUSION

There has been significant staff turnover in GH due to poor remuneration and dilapidated infrastructure in Zimbabwe. This was evident in this study that was carried out at these four study sites. Government should address the highlighted challenges so that Health care workers can be retained thereby improving the quality of services that are offered to the population of Zimbabwe. If this achieved then the country can meet its mission of offering quality health care services which in-line with its mandate of the National Development Strategy 1 from year 2021 to 2025 (NDS1) which has a strong relationship with the United Nations Sustainable Development Goals.

REFERENCE

- Aiken LH, Clarke SP, and Sloane DP, (2002). Hospital staffing, organization, and quality of care: cross-national findings. *Int J Qual Health Care.*, 14, 5-13. <https://doi.org/10.1093/intqhc/14.1.5>
- Blegen MA, Goode CJ, and Reed L, (1998). Nurse staffing and patient outcomes. *Nurs Res.*, 47, 43-50. <https://doi.org/10.1097/00006199-199801000-00008>
- Blegen MA, Vaughn T: (1998). A multisite study of nurse staffing and patient occurrences. *Nurs Econ*, 16, 196-203.
- Chiboiwa, W.M., Samuel, O.M, and Chipunza, C., (2010). An examination of employee retention strategy in a private organization in Zimbabwe. *African journal of business management*, 4(10), 2103-2109.
- Chikanda, A., (2005). Nurse migration from Zimbabwe: analysis of recent trends and impacts. *Nursing Inquiry*, 12(3), 162-174. <https://doi.org/10.1111/j.1440-1800.2005.00273.x>.
- Chikanda 1, A., (2007). Medical migration from Zimbabwe: Magnitude, causes and impact on the poor. *Development Southern Africa*, 24(1), 47-60.
- Chimbari, M.J., Madhina, D., Nyamangara, F., Mtandwa, H., Damba, V. and Africa, S., (2008). Retention incentives for health workers in Zimbabwe.

- Hongoro, C., (2001). Costs and quality of services in public hospitals in Zimbabwe: implications for hospital reform (Doctoral dissertation, London School of Hygiene & Tropical Medicine). <https://doi.org/10.17037/PUBS.01649006>
- Kanyumbaya, B. and Msosa, S.K., (2020). Retention Strategies of Healthcare Professionals as a Tool for Effective Service Delivery in the Zimbabwean Health Sector. *Eurasian Journal of Business and Management*, 8(2), 51-62.
- Liang, Y.W., Chen, W.Y., Lee, J.L. and Huang, L.C., (2012). Nurse staffing, direct nursing care hours and patient mortality in Taiwan: the longitudinal analysis of hospital nurse staffing and patient outcome study. *BMC Health Services Research*, 12(1), 1-8. <https://doi.org/10.1186/1472-6963-12-44>
- Madhekeni, A. and Taderera, H., (2012). Medical staff attrition in local authorities' experiences from Harare City Council Maternity Clinics, *Journal of Public Administration and Governance*, 2(2). <https://doi.org/10.5296/jpag.v2i2.1614>
- Maverutse, W., (2015). Impact of working conditions on job satisfaction: The case of employees in Zimbabwean Mission Hospitals. <https://cris.library.msu.ac.zw//handle/11408/2366>
- Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K: (2002). Nurse-staffing levels and the quality of care in hospitals. *N Engl J Med*, 346, 1715-1722. 10.1056/NEJMsa012247.
- Needleman J. (2004). Nurse staffing and patient outcomes in hospitals. Final Report for Health Resources Services Administration, Contract No. 230990021.
- Person SD, Allison JJ, Kiege CI, Weaver MT, Williams OD, Centor RM, & Weissman NW. (2004). Nurse staffing and mortality for Medicare patients with acute myocardial infarction. *Med Care.*, 42, 4-12. 10.1097/01.mlr.0000102369.67404.b0.
- Rothberg MB, Abraham I, Lindenauer PK, Rose DN, (2005) Improving nurse-to-patient staffing ratios as a cost-effective safety intervention. *Med Care.*, 43,785-791. 10.1097/01.mlr.0000170408.35854.fa.
- Zhakata, L., T. B. Bhebhe, and G. Karedza. (2017). An Investigation of Factors Affecting Employee Performance among Millennials in the Public Service in Zimbabwe: A Case of Hospitals in Zvimba District. *IOSR Journal of Economics and Finance*, 8(1). <https://10.9790/5933-08010390108>