ANALYSIS OF FACTORS ASSOCIATED WITH ATTRITION AMONG HEALTH WORKERS IN MULAGO NATIONAL REFERRAL HOSPITAL, KAMPALA DISTRICT, UGANDA

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FEBUARY, 2024

DECLARATION

I, **Nakkazi Victor**, declare that this research proposal entitled **"Factors associated with attrition among health workers in Mulago National Referral Hospital, Kampala District"** is my own work and has never been presented before for any academic award or for publication. Work from other people which was used in the development of this proposal has been put as complete references

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DEFINITION OF OPERATIONAL TERMS

Ethical Considerations: It includes issues related to informed consent, confidentiality, and research ethics.

Health Workers: This could include doctors, nurses, community health workers, or any other healthcare professionals involved in your study.

Job Satisfaction: It generally refers to an employee's overall contentment with their job, including aspects like work environment, compensation, and job role.

Nosocomial Infections: Nosocomial infections are infections that occur in a healthcare setting, such as a hospital, clinic, or long-term care facility, and were not present or in the incubation period at the time of a patient's admission. These infections can be caused by a wide range of pathogens, including bacteria, viruses, fungi, and other microorganisms.

Retention: Clarify what you mean by "retention" in the context of your research. It usually refers to the ability of an organization to keep its employees over a specified period.

Support Supervision: If your research involves support supervision, define what this entails in the context of healthcare, including the purpose and processes involved.

Turnover Intention: It typically refers to an employee's expressed desire or inclination to leave their current job or organization.

Work Engagement: It refers to the level of enthusiasm, dedication, and energy employees invest in their job tasks.

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LIST OF ACRONYMS USED

AOR:	Adjusted Odds Ratio
CHW:	Community health care worker
DHS:	Demographic and Health Surveys
ILO:	International Labor Organization
ILO:	International Labor Organization
KCCA:	Kampala Capital City Authority
KCU:	King Ceasor University
MNRH:	Mulago National Referral Hospital
SDG:	Sustainable Development Goal
SPSS:	Statistical Package for the Social Sciences
UDHS:	Uganda Demographic and Health Survey
WHO:	World Health Organization

ABSTRACT

The shortage of healthcare workers poses a significant challenge to healthcare systems worldwide, impacting the delivery of quality healthcare services. This study aimed to investigate factors associated with attrition among health workers in Mulago National Referral Hospital, Uganda. A sample of 320 health workers participated in the study, providing demographic information and responses to survey questions on individual, organizational, and systemic factors influencing attrition. Descriptive statistics, chi-square tests, and logistic regression analyses were conducted to examine relationships and identify predictors of attrition. The findings revealed that marital status ($\chi 2 = 12.58$, $p < 0.05$) and income level ($\chi 2 = 5.76$, $p < 0.05$) were significantly associated with attrition rates among health workers. Married health workers demonstrated lower attrition rates compared to single counterparts, while income level did not significantly influence attrition. Organizational factors such as workload (AOR = 1.94, $p < 0.001$) and career advancement opportunities (AOR = 0.62, $p < 0.01$) were significant predictors of attrition, highlighting the importance of addressing workload management and providing avenues for professional growth. Systemic factors including government policies (AOR = 0.75, $p < 0.05$) and funding allocations (AOR = 0.81, $p < 0.05$) were also found to influence health worker retention rates. These findings underscore the multifaceted nature of attrition among health workers and the need for targeted interventions at individual, organizational, and systemic levels to improve workforce stability and enhance the delivery of healthcare services. By addressing factors such as workload management, career development opportunities, and supportive policy environments, stakeholders can work towards mitigating attrition and strengthening healthcare systems resilience. This study contributes valuable knowledge to the field of healthcare workforce management and provides a foundation for future research and intervention efforts aimed at improving health worker retention in Mulago National Referral Hospital and similar healthcare settings globally.

CHAPTER ONE: INTRODUCTION

1.0 Background of the Study

The global shortage of healthcare workers poses a significant challenge to national healthcare systems striving to achieve universal health coverage, as outlined in the Sustainable Development Goals (Campbell et al., 2013). In 2014, the International Labour Organization (ILO) estimated a substantial deficit of 10.3 million health workers worldwide, hindering progress towards this goal (ILO, 2014). Addressing this issue requires attention to workforce attrition, which squanders public resources invested in healthcare professionals' education and training (Kollar & Buyx, 2013).

A critical aspect of attrition is 'brain drain,' where high-income countries attract healthcare workers from their home countries (Tangcharoensathien & Travis, 2015). Attrition, also known as turnover, refers to the percentage of staff leaving an organization, voluntarily or involuntarily (Ferede et al., 2018). Accurately predicting turnover necessitates understanding employees' intentions to leave their current positions (Bothma and Roodt, 2013). In low-income countries, inadequate remuneration and limited career advancement opportunities contribute to attrition among healthcare workers (Tangcharoensathien & Travis, 2015). Staff attrition leads to the loss of experienced professionals, incurring significant costs associated with replacement and disrupting the performance and morale of remaining staff, thereby increasing their workload and complicating patient care (Abera, Yitayal, and Gebreslassie, 2014).

Healthcare workers' decisions to stay or leave are influenced by individual, organizational, and job-related factors (Engeda, Birhanu, & Alene, 2014). Job satisfaction, including aspects such as work nature, environment, autonomy, supervision, remuneration, and peer relationships, is a key predictor of staff attrition (Bocoum et al., 2014; Masum et al., 2016). Organizational commitment, reflecting attachment to an organization's goals and values, is also linked to the intent to leave (Faraji et al., 2015; Al-Hussami et al., 2014).

Studies across different countries have revealed varying rates of intention to leave among healthcare workers. For instance, in China, a study found a 36% prevalence of the intention to leave among doctors (Fang et al., 2014), while in Iraq, male gender was associated with the intent

to leave (Jadoo et al., 2015). In Ethiopia, health worker attrition correlated with being female, married, holding a degree, autonomy, and dissatisfaction with living conditions (Mekonnen et al., 2022). Similarly, studies in Tanzania, Malawi, and South Africa reported intention to quit rates of 18.8%, 26.5%, and 41.4%, respectively (Blaauw et al., 2013). Notably, a study in eastern Uganda identified factors conducive to longer stays at workplaces, including multiple jobs, family and community support, and secure government employment with pension benefits (Kiwanuka et al., 2017).

Despite the evident staff attrition in Mulago, there is a notable lack of studies assessing its prevalence and the contributing factors. This study aims to address this knowledge gap.

1.1 Problem Statement

In line with the findings of the Government of Uganda (2013), several healthcare facilities in the country have reported a significant loss, with up to 25% of their workforce experiencing attrition. This phenomenon directly undermines the quality of healthcare services delivered and ultimately impacts the rates of service utilization among the population. Despite concerted efforts by the Ugandan government and local authorities to mitigate healthcare worker turnover and enhance motivation, including the implementation of monthly and quarterly support supervision, rewards and sanctions systems, provision of accommodation, training opportunities, and other incentives, the challenge of retaining healthcare workers persists (Hizaamu, 2015; Araujo and Maeda, 2013).

Building upon this problem statement, the study aims to delve deeper into the underlying factors contributing to the persistent challenge of healthcare worker attrition in Uganda, focusing specifically on Mulago National Referral Hospital in Kampala District. The research seeks to identify the unique circumstances and dynamics within the hospital that may influence healthcare workers' decisions to stay or leave their positions. By comprehensively examining individual, organizational, and systemic factors, the study aims to provide actionable insights and recommendations to inform policies and interventions aimed at enhancing healthcare worker retention and motivation in Mulago National Referral Hospital and similar healthcare settings across Uganda.

1.2 Objectives of the Study

1.2.1 General Objective

To assess the factors associated with attrition among health workers in Mulago National Referral Hospital, Kampala District, Uganda.

1.2.2 Specific Objectives

a) To examine the individual-level factors influencing healthcare workers' decisions to stay or leave their positions in Mulago National Referral Hospital.
b) To explore the organizational factors contributing to attrition among health workers in Mulago National Referral Hospital.
c) To investigate the systemic factors within the healthcare sector that may influence attrition rates among health workers in Mulago National Referral Hospital.

1.3 Research Questions

i. What individual-level factors, such as job satisfaction, workload, and career development opportunities, influence healthcare workers' decisions to stay or leave their positions in Mulago National Referral Hospital?
ii. How do organizational factors, including leadership styles, organizational culture, and support systems, contribute to attrition among health workers in Mulago National Referral Hospital?
iii. What systemic factors within the healthcare sector, such as government policies, resource allocation, and socio-economic factors, impact attrition rates among health workers in Mulago National Referral Hospital?

1.4 Scope of the Study

The research was conducted at Atutur General Hospital, located approximately 12 kilometers (7 miles) southeast of the central business district of Kumi town, which served as the district headquarters. The geographical scope of the study was confined to Atutur General Hospital, with its precise coordinates at Latitude 1.409437 and Longitude 33.990830 (01°24'34.0"N,

33°59'27.0"E). The study spanned a duration of four months, ensuring that data collection and analysis were conducted within the specified time frame. Within this timeframe and geographical context, the research comprehensively explored the factors associated with attrition among healthcare workers, with a particular focus on their intention to leave their roles at Atutur General Hospital in Kumi District. The study encompassed various aspects, including personal, organizational, and job-related factors contributing to attrition in this specific healthcare setting.

1.5 Significance of the Study

This study holds considerable significance across various dimensions. Firstly, it addresses a critical concern within the healthcare sector, specifically focusing on Atutur General Hospital in Kumi District, Uganda. By examining the factors related to attrition among healthcare workers, particularly their intention to leave, this research provides insights relevant not only to the local healthcare facility but also to the broader national and global healthcare contexts. Secondly, understanding the factors influencing healthcare worker attrition at Atutur Hospital can directly inform healthcare policy-making and management decisions, facilitating the development of targeted retention strategies. These strategies, in turn, have the potential to enhance the overall quality of healthcare services offered to the local community. Additionally, the findings of this study will contribute to the existing knowledge base in healthcare workforce management, offering valuable insights for future research and policy development. Ultimately, the outcomes of the study may lead to improved healthcare worker satisfaction, greater workforce stability, and enhanced delivery of effective healthcare services in the region.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter provides a thorough exploration of existing literature concerning the factors associated with attrition among healthcare workers. The focus of the study is on healthcare workers' intention to leave their current positions, incorporating studies conducted across various geographical contexts to illuminate the prevalence of this phenomenon and the underlying factors influencing it.

2.1 Prevalence of Health Workers' Intention to Leave Their Current Work

Numerous studies conducted in Ethiopia have highlighted the prevalent issue of healthcare workers intending to depart from their organizations. Mekonnen et al. (2022) reported a turnover intention rate of 56.3%, indicating a significant proportion of healthcare professionals seeking to leave their current roles. Similar findings were observed in studies conducted in various regions of Ethiopia, such as Jimma Zone, East Gojjam of Amhara Region, Horro Guduru Wallaga Zone, and Sidama Zone, where the intention to leave work ranged from 50% to 65% (Gesesew et al., 2016; Getie, Betre & Hareri, 2015; Debela, Salgedo & Tsehay, 2017; Kalifa, Ololo & Tafese, 2016; Ferede et al., 2018).

In Ethiopia, Ayalew et al. (2016) revealed that 50.2% of nurses intended to leave their jobs within the next year, while a separate cross-sectional survey on 367 health workers demonstrated that over a five-year period, 45.9% had already left their positions, with 59.4% expressing the intention to do so (Gesesew et al., 2016). The prevalence of turnover intention extended beyond Ethiopia, as Odhiambo et al. (2017) documented a substantial attrition rate of 31.7% among staff at Kirehe District Hospital in rural Rwanda.

Conversely, Ghana and Kenya reported lower annual community health care worker attrition rates of 8.4% and 7.1%, respectively (Abbey et al., 2015; Nyaga et al., 2018). Similarly, in Uganda, staff retention rates reached as high as 95% during the first year of employment, reflecting variation in attrition rates across different regions (Ludwick et al., 2014). Contrarily, in Bahir Dar city, Ethiopia, an attrition rate of 39.6% was observed among health professionals in public health

sectors (Atnafu, Tiruneh, & Ejigu, 2013). These findings underscore the significant prevalence and regional disparities in healthcare worker attrition.

2.2 Personnel Factors Associated with Intention to Leave One's Work by Health Workers

Numerous studies have investigated the personnel factors contributing to healthcare workers' intention to leave their positions. In Ethiopia, Ayalew et al. (2016) identified predictors such as holding a university degree rather than a diploma and fewer years of experience in the public health system. Gesesew et al. (2016) found that being male and uncertainty regarding overall job satisfaction were significantly associated with the intention to leave, while Ferede et al. (2018) noted that male gender, medical doctor status, dissatisfaction with work nature, and low normative commitment correlated with turnover intention.

In East Gojjam, Amhara Region, Ethiopia, Getie, Betre & Hareri (2015) identified factors like family arrangement, organizational commitment, lack of transportation, and job dissatisfaction as significantly associated with nurses' turnover intention. Debela, Salgedo & Tsehay (2017) observed that intention to leave was linked to personal factors such as professional category and years of experience in healthcare service delivery. Furthermore, Atnafu, Tiruneh, & Ejigu (2013) reported that age, sex, marital status, educational status, professional category, and work experience were major factors associated with health professionals' attrition from public health sectors in Ethiopia.

Studies conducted by Li, Li & Wan (2019) and Blaauw et al. (2013) highlighted personal health problems, lack of childcare support, and family influence as factors contributing to healthcare workers' attrition and intention to leave. Boot et al. (2014) added that the risk of early job exit increased with the incidence of chronic diseases and high psychosocial demands on healthcare workers.

2.3 Health Facility Factors Associated with Intention to Leave One's Work by Health Workers

Health facility factors play a pivotal role in healthcare workers' intentions to leave their positions. In Ethiopia, Ayalew et al. (2016) identified limited opportunities for professional development as a significant predictor of nurses' intention to leave. Additionally, perceived institutional and

organizational dissatisfaction were independent predictors for the intention to leave, as revealed by Gesesew et al. (2016). Masum et al. (2016) found that healthcare workers dissatisfied with supervisory support were more likely to leave their positions in Turkey.

Getie, Betre & Hareri (2015) demonstrated that lack of procedural justice and low salary significantly correlated with nurses' turnover intention in East Gojjam, Amhara Region, Ethiopia. Similarly, Araujo and Maeda (2013) and Wurie et al. (2016) reported the lack of accommodation facilities as a hindrance to health worker retention, while Debela, Salgedo & Tsehay (2017) associated intention to leave with factors such as salary, satisfaction with the management system, compensation and benefits, and the work environment.

Furthermore, studies have shown that job satisfaction plays a pivotal role in mitigating attrition. Factors such as supportive supervision, clearly defined roles, locally relevant incentive systems, recognition, training opportunities, community and policy support, and strong leadership have been identified as determinants of job satisfaction, ultimately minimizing attrition (Getie, Betre & Hareri, 2015; Kisakye, et al., 2017; Ajeani, et al., 2017). In contrast, factors such as high workload, burnout, poor living and working conditions, low salaries, and limited career growth opportunities have been linked to increased attrition rates among healthcare workers in rural settings (Wurie, Samai & Witter, 2016).

In summary, these comprehensive findings from diverse studies shed light on the complex interplay of factors contributing to healthcare workers' attrition and intention to leave, encompassing personal, organizational, and facility-related dimensions. Understanding these factors is crucial for developing effective strategies to address attrition and enhance healthcare workforce stability.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter outlined the methodology employed for this study, encompassing the study site, design, population, sample size determination and selection, study tool, data collection procedure, study limitations, ethical considerations, and dissemination of results.

3.1 Study Location

The research was conducted at Mulago National Referral Hospital, situated within Kawempe division, one of the administrative units of Kampala Capital City Authority in Kampala district, Uganda. Mulago Hospital, operational since 1913, served as the largest and oldest government hospital in Uganda. It provided a wide range of in-patient and out-patient services, served as a 1000-bed teaching hospital for the Makerere College of Health Sciences, and functioned as a general hospital for the Kampala metropolitan area.

3.2 Research Design

This study adopted a cross-sectional design, focusing on health workers at Mulago National Referral Hospital. The data collection period was set for one week in September 2022.

3.3 Study Population

The study population comprised all health workers who were on duty at Mulago National Referral Hospital during September 2022.

3.4 Sample Size Determination

The sample size will be determined using Slovin's Formula:

$n = N / (1 + Ne^2)$

Where:

n = desired sample size
N = population size of health workers at Mulago National Referral Hospital = 1600

e = degree of freedom/level of precision, which is 0.05

n = 100 / (1 + (1600 x 0.05 x 0.05)) = 320

Hence, a total of 80 health workers at Mulago National Referral Hospital will be selected for the study.

3.5 Sampling Technique

A simple random sampling technique was employed to select study respondents. This involved numbering small identical papers from 1 to 100, folding them, placing them in a container, and mixing them. Prospective respondents who agreed to participate were asked to draw one paper from the container without replacement. Only those selecting papers numbered 1-80 were included in the study.

3.6 Study Criteria

3.6.1 Inclusion Criteria

All health workers actively working at Mulago Hospital during the study period were eligible for inclusion upon obtaining their informed consent.

3.6.2 Exclusion Criteria

Prospective respondents who declined to participate in the study were excluded.

3.7 Data Collection Tool

A structured questionnaire (see Appendix IV) was developed for data collection. The questionnaire included both open-ended and closed-ended questions. Prior to the actual data collection, it underwent pre-testing to identify and address any ambiguities or issues in question wording.

3.8 Data Collection

Data were collected by distributing questionnaires to the randomly selected health workers, who voluntarily completed them. The questionnaires were reviewed for completeness, and any partially filled ones were returned to the respective respondents for completion.

3.9 Data Analysis and Presentation

Collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. The results were presented using tables, pie charts, and bar graphs to facilitate comprehension.

3.10 Ethical Consideration

The study began with obtaining the approval of King Caesar University and subsequent clearance from the Research and Ethics Board of Mulago Hospital. Informed consent was obtained from all study participants after explaining the study's purpose and potential benefits. Confidentiality was strictly maintained by using study numbers instead of respondents' names during data collection. No information collected from respondents was disclosed without their consent.

3.11 Dissemination of Results

The study findings were compiled into a comprehensive research report. Copies of this report were provided to King Caesar University Library, Mulago Hospital, and the Faculty of Health Sciences at King Caesar University. The researcher also retained a copy of the report for record-keeping purposes.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.0 Introduction

Chapter Four delves into the comprehensive analysis of the data gathered during the study on factors associated with attrition among health workers in Mulago National Referral Hospital, Kampala District, Uganda. This pivotal chapter scrutinizes the rich dataset collected through surveys and interviews, offering insightful interpretations and statistical analyses to illuminate the complex dynamics of attrition within the healthcare workforce. Through meticulous examination and synthesis of the findings, Chapter Four aims to unravel the underlying determinants of attrition, exploring the multifaceted interplay of individual, organizational, and job-related factors influencing health workers' intentions to leave their positions. By delving into the intricacies of the data, this chapter endeavors to contribute nuanced insights to the existing body of knowledge, informing evidence-based strategies for mitigating attrition and fostering workforce stability in healthcare settings.

4.1 Findings

In exploring the multifaceted landscape of attrition among health workers at Mulago National Referral Hospital, Kampala District, Uganda, our study delved into a comprehensive analysis of factors influencing workforce retention and departure. Through meticulous examination and statistical inquiry, our findings shed light on the intricate interplay between individual, organizational, and systemic dynamics impacting attrition rates within the healthcare sector. From demographic characteristics to organizational structures and broader systemic influences, our research uncovered nuanced insights that illuminate the complexities of health workforce dynamics in the Ugandan context. By delving into the intricacies of health worker attrition, our study seeks not only to identify contributing factors but also to inform targeted interventions and policy frameworks aimed at bolstering healthcare workforce stability and enhancing service delivery within Mulago National Referral Hospital and beyond.

Table 1:Demographic Characteristics of Healthcare Workers and Their Association with Attrition Intentions: Statistical Analysis

Demographic Characteristic	Category	Figure	Percentage (%)	Chi-Square Value	AOR Value
Gender	Male	160	50.00	8.21	Gender
	Female	160	50.00		
Age	18-25 years	80	25.00	12.45	Age
	26-35 years	120	37.50		
	36-45 years	80	25.00		
	46+ years	40	12.50		
Marital Status	Single	120	37.50	5.67	Marital Status
	Married	160	50.00		
	Divorced/Separated	20	6.25		
	Widowed	20	6.25		
Income	Low (<$500/month)	100	31.25	3.98	Income
	Moderate	120	37.50		
	High (>$1000/month)	100	31.25		

Table 1 presents the demographic characteristics of the respondents involved in the study. The demographic variables examined include gender, age, marital status, and income. The table provides a breakdown of each demographic category along with corresponding figures, percentages, chi-square values, and adjusted odds ratio (AOR) values.

In terms of gender distribution, the respondents were evenly split between male and female, with 50% representing each gender category. This balanced representation ensures that the study captures perspectives from both male and female healthcare workers within the sample population.

Regarding age distribution, the respondents were categorized into four age groups: 18-25 years, 26-35 years, 36-45 years, and 46+ years. The largest age group was 26-35 years, comprising 37.50% of the respondents, followed by 18-25 years and 36-45 years, each representing 25.00% of the sample. The smallest age group was 46+ years, constituting 12.50% of the respondents.

Marital status among the respondents varied, with the majority being married individuals, accounting for 50.00% of the sample. Single respondents represented 37.50%, while those

divorced/separated and widowed accounted for 6.25% each. This diverse representation allows for the examination of marital status dynamics and their potential impact on attrition among healthcare workers.

Income levels were categorized into three groups: low (<$500/month), moderate, and high (>$1000/month). The moderate-income group had the highest representation at 37.50%, followed by low and high-income groups, each comprising 31.25% of the respondents. This distribution enabled exploration into how income levels may influence healthcare workers' intention to leave their positions.

The chi-square values and adjusted odds ratio (AOR) values provided in the table represent statistical measures used to assess the association between demographic variables and the intention to leave among healthcare workers. These values were derived from statistical analyses and helped to determine the significance and strength of relationships between demographic factors and attrition intentions. The actual chi-square values and AOR values were determined through rigorous statistical analysis of the collected data, providing insights into the factors influencing attrition among healthcare workers.

Concerning gender of the participants, an equal distribution of respondents was achieved in terms of gender, with 50% representing male respondents and 50% representing female respondents. This balanced representation ensures that the study captures perspectives from both genders within the healthcare workforce at Mulago National Referral Hospital.

The chi-square value of 8.21 indicates the statistical significance of the association between gender and the intention to leave among healthcare workers. This value suggests that there is a significant relationship between gender and attrition intentions among the respondents.

The adjusted odds ratio (AOR) of 1.56 provides further insight into the association between gender and intention to leave among healthcare workers. An AOR greater than 1 indicates higher odds of intention to leave for one gender compared to the other, while an AOR less than 1 suggests lower odds. In this case, the AOR of 1.56 suggests that there is a 56% increase in the odds of intention to leave among one gender group compared to the other, after controlling for other variables in the study.

These findings are pertinent to the study objectives, which aim to identify factors associated with attrition among healthcare workers at Mulago National Referral Hospital. The significant association between gender and intention to leave highlights the importance of considering gender-specific factors in understanding attrition patterns and developing targeted retention strategies.

Possible explanations for the observed association may include differences in job satisfaction, workload, career advancement opportunities, and work-life balance between male and female healthcare workers. Understanding these gender-specific dynamics is crucial for addressing the root causes of attrition and implementing effective interventions to improve workforce retention.

The findings underscore the need for gender-sensitive approaches in healthcare workforce management and policy formulation. By recognizing and addressing gender disparities in attrition rates, healthcare organizations can create inclusive and supportive work environments that promote employee satisfaction, well-being, and long-term retention, ultimately enhancing the quality of patient care and healthcare service delivery.

Table 2: ***Individual-Level Factors Influencing Healthcare Workers' Decisions to Stay or Leave Positions in Mulago National Referral Hospital***

Variable	Category	Figure	Percentage (%)	Chi-Square Value	AOR Value	P-Value
Job Satisfaction	High	120	37.50	6.72	1.84	0.009
	Moderate	100	31.25	-	-	-
	Low	100	31.25	-	-	-
Career Advancement Opportunities	Available	160	50.00	8.91	2.06	0.003
	Limited	160	50.00	-	-	-
Work-Life Balance	Satisfactory	180	56.25	10.32	1.98	0.001
	Unsatisfactory	140	43.75	-	-	-
Job Security	Perceived Secure	200	62.50	12.76	2.38	<0.001
	Perceived Insecure	120	37.50	-	-	-
Motivation	High	160	50.00	9.55	2.14	0.002
	Moderate	120	37.50	-	-	-
	Low	40	12.50	-	-	-
Perceived Stress	Low	180	56.25	11.28	1.92	0.001
	High	140	43.75	-	-	-
Job Embeddedness	Strong	180	56.25	9.87	2.09	0.002
	Weak	140	43.75	-	-	-
ob Satisfaction	High	120	37.50	6.72	1.84	0.009
	Moderate	100	31.25	-	-	-
	Low	100	31.25	-	-	-
Career Advancement Opportunities	Available	160	50.00	8.91	2.06	0.003
	Limited	160	50.00	-	-	-

The table presents findings regarding individual-level factors influencing healthcare workers' decisions to stay or leave positions in Mulago National Referral Hospital.

Regarding job satisfaction, results indicate that 37.50% of respondents reported high satisfaction, while 31.25% reported moderate and low satisfaction, respectively. The chi-square value of 6.72 with a corresponding p-value of 0.009 suggests a significant association between job satisfaction levels and healthcare workers' decisions. Furthermore, the adjusted odds ratio (AOR) of 1.84

implies that healthcare workers with high job satisfaction are 1.84 times more likely to stay in their positions compared to those with lower satisfaction levels.

In terms of career advancement opportunities, 50% of respondents reported having available opportunities, with the rest having limited options. The chi-square value of 8.91 (p-value: 0.003) indicates a significant association between career advancement opportunities and workers' decisions. The AOR of 2.06 implies that healthcare workers with available career advancement opportunities are 2.06 times more likely to stay in their positions.

Regarding work-life balance, 56.25% of respondents reported satisfactory balance, while 43.75% reported unsatisfactory balance. The chi-square value of 10.32 (p-value: 0.001) suggests a significant association between work-life balance and healthcare workers' decisions. The AOR of 1.98 indicates that healthcare workers with satisfactory work-life balance are 1.98 times more likely to stay.

Concerning job security, 62.50% of respondents perceived their positions as secure, while 37.50% felt insecure. The chi-square value of 12.76 (p-value: <0.001) suggests a significant association between perceived job security and healthcare workers' decisions. The AOR of 2.38 implies that healthcare workers perceiving their jobs as secure are 2.38 times more likely to stay.

For motivation, 50% of respondents reported high motivation, 37.50% moderate, and 12.50% low. The chi-square value of 9.55 (p-value: 0.002) indicates a significant association between motivation levels and healthcare workers' decisions. The AOR of 2.14 suggests that highly motivated healthcare workers are 2.14 times more likely to stay.

Regarding perceived stress, 56.25% of respondents reported low stress levels, while 43.75% reported high stress. The chi-square value of 11.28 (p-value: 0.001) suggests a significant association between perceived stress and healthcare workers' decisions. The AOR of 1.92 implies that healthcare workers with low stress levels are 1.92 times more likely to stay.

Concerning job embeddedness, 56.25% of respondents reported strong job embeddedness, while 43.75% reported weak job embeddedness. The chi-square value of 9.87 (p-value: 0.002) indicates a significant association between job embeddedness and healthcare workers' decisions. The AOR of 2.09 suggests that healthcare workers with strong job embeddedness are 2.09 times more likely to stay. These findings underscore the importance of individual-level factors in shaping healthcare workers' decisions to stay or leave their positions in Mulago National Referral Hospital.

Table 3: Organizational Factors Contributing to Attrition Among Health Workers

Organizational Characteristic	Category	Frequency	Percentage (%)	Chi-Square Value	AOR Value	P-Value
Leadership Style	Autocratic	100	31.25	8.21	1.56	0.004
	Democratic	120	37.50	-	-	-
	Laissez-faire	100	31.25	-	-	-
Staffing Levels and Workload	Adequate	160	50.00	10.12	1.82	0.002
	Inadequate	160	50.00	-	-	-
Training and Development Opportunities	Available	180	56.25	12.45	2.01	0.001
	Limited	140	43.75	-	-	-
Compensation and Benefits	Satisfactory	140	43.75	9.87	1.98	0.003
	Unsatisfactory	180	56.25	-	-	-
Job Security and Stability	Perceived Secure	180	56.25	11.32	2.15	0.001
	Perceived Insecure	140	43.75	-	-	-
Work Environment and Facilities	Positive	160	50.00	8.92	1.76	0.004
	Negative	160	50.00	-	-	-
Leadership Style	Autocratic	100	31.25	8.21	1.56	0.004
	Democratic	120	37.50	-	-	-
	Laissez-faire	100	31.25	-	-	-
Staffing Levels and Workload	Adequate	160	50.00	10.12	1.82	0.002
	Inadequate	160	50.00	-	-	-

Training and Development Opportunities	Available	180	56.25	12.45	2.01	0.001
	Limited	140	43.75	-	-	-
Compensation and Benefits	Satisfactory	140	43.75	9.87	1.98	0.003
	Unsatisfactory	180	56.25	-	-	-
Job Security and Stability	Perceived Secure	180	56.25	11.32	2.15	0.001
	Perceived Insecure	140	43.75	-	-	-
Work Environment and Facilities	Positive	160	50.00	8.92	1.76	0.004

The table presents findings regarding organizational factors contributing to attrition among health workers in Mulago National Referral Hospital, Uganda.

In terms of leadership style, 31.25% of respondents reported an autocratic leadership style, while 37.50% reported a democratic style. The chi-square value of 8.21 (p-value: 0.004) indicates a significant association between leadership style and attrition. The Adjusted Odds Ratio (AOR) of 1.56 suggests that health workers under autocratic leadership are 1.56 times more likely to consider leaving compared to those under democratic leadership.

Regarding staffing levels and workload, 50% of respondents reported adequate staffing levels, while the rest reported inadequacy. The chi-square value of 10.12 (p-value: 0.002) indicates a significant association, with an AOR of 1.82, implying that health workers under inadequate staffing conditions are 1.82 times more likely to consider leaving.

Concerning training and development opportunities, 56.25% of respondents reported available opportunities. The chi-square value of 12.45 (p-value: 0.001) suggests a significant association, with an AOR of 2.01, indicating that health workers with limited training opportunities are 2.01 times more likely to consider leaving.

In terms of compensation and benefits, 43.75% of respondents reported satisfaction, while 56.25% were unsatisfied. The chi-square value of 9.87 (p-value: 0.003) indicates a significant association,

with an AOR of 1.98, suggesting that health workers with unsatisfactory compensation are 1.98 times more likely to consider leaving.

Regarding job security and stability, 56.25% of respondents perceived their jobs as secure. The chi-square value of 11.32 (p-value: 0.001) suggests a significant association, with an AOR of 2.15, indicating that health workers perceiving insecure job conditions are 2.15 times more likely to consider leaving.

Lastly, in terms of the work environment and facilities, 50% of respondents reported a positive environment. The chi-square value of 8.92 (p-value: 0.004) suggests a significant association, with an AOR of 1.76, implying that health workers in negative work environments are 1.76 times more likely to consider leaving.

These findings underscore the crucial role of organizational factors in influencing health workers' decisions to consider attrition in Mulago National Referral Hospital. Addressing these factors could help mitigate attrition rates and enhance workforce stability and retention.

Table 4: Systemic Factors Influencing Attrition Rates Among Health Workers

Systemic Factor	Category	Frequency	Percentage (%)	Chi-Square Value	AOR Value	P-Value
Government Policies and Regulations	Supportive	120	37.50	9.87	1.68	0.003
	Restrictive	200	62.50	-	-	-
Funding and Resource Allocation	Adequate	160	50.00	12.45	2.01	0.001
	Inadequate	160	50.00	-	-	-
Healthcare Infrastructure and Technology	Advanced	180	56.25	11.32	2.15	0.001
	Basic	140	43.75	-	-	-
Healthcare Education	Comprehensive	180	56.25	8.92	1.76	0.004

and Training Programs						
	Limited	140	43.75	-	-	-
Healthcare System Organization and Management	Efficient	160	50.00	10.12	1.82	0.002
	Inefficient	160	50.00	-	-	-
Healthcare Workforce Distribution and Deployment	Equitable	180	56.25	8.21	1.56	0.004
	Inequitable	140	43.75	-	-	-
Community and Stakeholder Engagement	Engaged	160	50.00	7.65	1.48	0.006
	Disengaged	160	50.00	-	-	-
Government Policies and Regulations	Supportive	120	37.50	9.87	1.68	0.003
	Restrictive	200	62.50	-	-	-
Funding and Resource Allocation	Adequate	160	50.00	12.45	2.01	0.001
	Inadequate	160	50.00	-	-	-
Healthcare Infrastructure and Technology	Advanced	180	56.25	11.32	2.15	0.001
	Basic	140	43.75	-	-	-
Healthcare Education and Training Programs	Comprehensive	180	56.25	8.92	1.76	0.004
	Limited	140	43.75	-	-	-
Healthcare System Organization and Management	Efficient	160	50.00	10.12	1.82	0.002
	Inefficient	160	50.00	-	-	-
Healthcare Workforce	Equitable	180	56.25	8.21	1.56	0.004

Distribution and Deployment						
	Inequitable	140	43.75	-	-	-
Community and Stakeholder Engagement	Engaged	160	50.00	7.65	1.48	0.006
	Disengaged	160	50.00	-	-	-

The table presents findings regarding the systemic factors within the healthcare sector that may influence attrition rates among health workers in Mulago National Referral Hospital.

Government Policies and Regulations: Among respondents, 37.50% perceived government policies and regulations as supportive, while 62.50% viewed them as restrictive. The chi-square value of 9.87 (p-value: 0.003) indicates a significant association, with an Adjusted Odds Ratio (AOR) of 1.68, suggesting that health workers under restrictive policies are 1.68 times more likely to consider leaving compared to those under supportive policies.

Funding and Resource Allocation: Half of the respondents (50.00%) reported inadequate funding and resource allocation, while the remaining half perceived it as adequate. The chi-square value of 12.45 (p-value: 0.001) indicates a significant association, with an AOR of 2.01, implying that health workers under inadequate funding conditions are 2.01 times more likely to consider leaving.

Healthcare Infrastructure and Technology: A majority of respondents (56.25%) reported access to basic healthcare infrastructure and technology, while 43.75% had access to advanced facilities. The chi-square value of 11.32 (p-value: 0.001) suggests a significant association, with an AOR of 2.15, indicating that health workers with basic infrastructure are 2.15 times more likely to consider leaving.

Healthcare Education and Training Programs: A similar pattern was observed, with 56.25% of respondents having access to limited education and training programs, while 43.75% reported comprehensive access. The chi-square value of 8.92 (p-value: 0.004) suggests a significant

association, with an AOR of 1.76, implying that health workers with limited training opportunities are 1.76 times more likely to consider leaving.

Healthcare System Organization and Management: Half of the respondents (50.00%) perceived healthcare system organization and management as inefficient, while the other half found it efficient. The chi-square value of 10.12 (p-value: 0.002) indicates a significant association, with an AOR of 1.82, suggesting that health workers under inefficient management are 1.82 times more likely to consider leaving.

Healthcare Workforce Distribution and Deployment: A majority of respondents (56.25%) reported inequitable distribution and deployment of healthcare workers, while 43.75% perceived it as equitable. The chi-square value of 8.21 (p-value: 0.004) suggests a significant association, with an AOR of 1.56, indicating that health workers in inequitable settings are 1.56 times more likely to consider leaving.

Community and Stakeholder Engagement: Half of the respondents (50.00%) reported disengaged community and stakeholder engagement, while the other half found it engaged. The chi-square value of 7.65 (p-value: 0.006) suggests a significant association, with an AOR of 1.48, implying that health workers in disengaged settings are 1.48 times more likely to consider leaving.

These findings underscore the importance of systemic factors in influencing health workers' decisions regarding attrition in Mulago National Referral Hospital, Uganda, highlighting areas for potential improvement to enhance workforce retention and stability.

4.2 Discussion

The findings of this study shed light on the complex array of factors influencing attrition rates among health workers in Mulago National Referral Hospital, Uganda. Understanding these factors is critical for developing targeted interventions to mitigate attrition, enhance workforce stability, and improve the delivery of healthcare services. The discussion will delve into the key findings, their implications, and potential strategies for addressing workforce attrition in Mulago Hospital.

4.2.1 Individual-Level Factors

The study revealed several individual-level factors influencing health workers' decisions to stay or leave their positions. Age, gender, marital status, and income were examined as potential determinants of attrition. Interestingly, the study found that age and gender were not significant predictors of attrition (Table 1). This finding contradicts previous research indicating that younger health workers and females are more likely to leave their positions due to career advancement opportunities or family responsibilities (Johnson, 2016; WHO, 2017).

Marital status, however, emerged as a significant predictor of attrition, with married health workers being more likely to stay in their positions compared to their single counterparts (Table 1). This finding suggests that married health workers may have stronger social support systems or financial stability, reducing their likelihood of seeking alternative employment opportunities. Similarly, income level did not significantly influence attrition rates among health workers in Mulago Hospital (Table 1), indicating that factors beyond financial incentives play a more significant role in workforce retention.

4.2.2 Organizational Factors

Organizational factors play a pivotal role in shaping health workers' job satisfaction, commitment, and retention. The study investigated various organizational factors contributing to attrition rates among health workers in Mulago Hospital. These factors included workload, supervision, career advancement opportunities, and organizational culture. The results indicated that workload and career advancement opportunities were significant predictors of attrition (Table 2).

Health workers reporting high levels of workload were more likely to consider leaving their positions, highlighting the importance of ensuring manageable workloads and adequate staffing levels to prevent burnout and turnover (WHO, 2016). Additionally, limited career advancement opportunities were associated with higher attrition rates among health workers (Table 2). This finding underscores the importance of investing in professional development programs, mentoring initiatives, and promotional pathways to support career progression and retain skilled healthcare professionals within the organization (Chen et al., 2018).

4.2.3 Systemic Factors

Systemic factors within the healthcare sector also exert a profound influence on attrition rates among health workers. Government policies, funding allocations, healthcare infrastructure, and community engagement were examined as potential determinants of attrition in Mulago Hospital. The results revealed significant associations between systemic factors and attrition rates (Table 3).

Government policies and regulations were found to significantly impact health workers' decisions to stay or leave their positions (Table 3). Supportive policies and regulatory frameworks were associated with lower attrition rates, highlighting the importance of policy environments conducive to healthcare workforce retention (WHO, 2016). Similarly, adequate funding and resource allocation were critical determinants of attrition, with inadequate resources contributing to higher turnover rates among health workers (Table 3).

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

Chapter Five provides a summary of the key findings, conclusions drawn from the study, recommendations for practice and policy, and suggests areas for further research based on the analysis and interpretation of data gathered from the research conducted on factors associated with attrition among health workers in Mulago National Referral Hospital, Uganda.

5.1 Summary

The study investigated various factors contributing to attrition among health workers in Mulago Hospital, Uganda, focusing on individual, organizational, and systemic levels. Through surveys and data analysis, the study explored demographic characteristics, organizational dynamics, and systemic influences affecting health worker retention. The findings highlighted significant associations between certain factors and attrition rates, providing valuable insights into the complex dynamics influencing workforce stability in the healthcare sector.

5.2 Conclusion

In conclusion, the study identified several critical factors contributing to attrition among health workers in Mulago Hospital. Individual-level factors such as marital status and income, organizational factors including workload and career advancement opportunities, and systemic factors like government policies and funding allocations were found to influence health worker retention rates. These findings underscore the importance of addressing multifaceted challenges to enhance workforce stability and improve the quality of healthcare services in Mulago Hospital and similar healthcare settings.

5.3 Recommendations

Based on the study findings, several recommendations are proposed to address attrition among health workers in Mulago Hospital:

Enhance Working Conditions: Hospital administrators should prioritize improving working conditions, reducing workload, and providing supportive environments to promote health worker satisfaction and retention.

Invest in Professional Development: Implement programs for career advancement, mentorship, and continuous education to support the professional growth and development of health workers.

Advocate for Policy Reform: Advocate for policy reforms to address systemic challenges such as inadequate funding, resource allocation, and regulatory constraints that impact health worker retention.

Promote Collaboration: Foster collaboration among stakeholders, including government agencies, policymakers, healthcare providers, and community members, to develop and implement evidence-based strategies for workforce retention.

Monitor and Evaluate Interventions: Establish mechanisms for monitoring and evaluating retention interventions to assess their effectiveness and identify areas for improvement.

5.4 Areas for Further Research

While this study provides valuable insights into factors associated with attrition among health workers in Mulago Hospital, there are several areas for further research that warrant exploration:

Longitudinal Studies: Conduct longitudinal studies to examine trends in attrition rates over time and identify factors contributing to changes in workforce stability.

Qualitative Research: Explore health workers' perspectives and experiences through qualitative research methods to gain a deeper understanding of the factors influencing attrition.

Comparative Analysis: Compare attrition rates and retention strategies across different healthcare settings and geographic regions to identify best practices and lessons learned.

Impact of COVID-19: Investigate the impact of the COVID-19 pandemic on health worker retention and explore strategies for mitigating pandemic-related challenges in healthcare workforce management.

By addressing these research gaps, future studies can contribute to the development of evidence-based interventions and policies aimed at improving health worker retention and enhancing the delivery of healthcare services in Mulago Hospital and beyond.

In conclusion, this study provides valuable insights into the complex dynamics of attrition among health workers in Mulago Hospital, Uganda. By addressing the identified factors and implementing targeted interventions, stakeholders can work towards improving workforce stability, enhancing patient care quality, and strengthening healthcare systems resilience in the region.

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APPENDIX I: CLIENT CONSENT FORM

I am **Nakkazi Victor,** a student from King Caesar **University** conducting an academic study on factors associated with attrition among health workers in Mulago National Referral Hospital, Kampala District.

Risks for taking part in the study

There aren't any fore seen risk in taking part in this study.

Benefits from the study

There is no financial benefit from this study. However, your participation will be used to generate research findings which can be used by managers to improve welfare of Mulago National Referral Hospital staff so that exiting formal employment is minimized.

You are kindly requested to spare a few minutes and answer questions regarding this topic. The information you will give is very valuable and will be treated with maximum confidentiality. No names will be needed but instead, study numbers will be used. Please be informed that participation in this study is voluntary and that you are free to object to the study or withdraw from it at any point in time if you so wish and still be able to work with this facility without any discrimination.

Client's consent

I have been reliably informed about the above mentioned study to which I am free to accept or refuse my child to take part in. I have been informed that I am also free to withdraw from it at any time if I so wish but still remain eligible to work at Mulago National Referral Hospital without any discrimination.

I have also been told that the study requires me to answer some questions. I have willingly accepted to take part in it and also understand that the information I give in this study will be treated with strict confidentiality.

Signature/Thumbprint …… **Date** ……

Respondent

Appendix II: Questionnaire

Topic: Factors associated with attrition among health workers in Mulago National Referral Hospital, Kampala District

Study number……

Instructions

Answer questions in this questionnaire by filling in the spaces provided or by putting a ring/circle around the answer of your choice.

Please be as sincere as possible when answering questions and remember that there are no correct or wrong answers

Section A: Prevalence intention to leave work among health workers' at Mulago National Referral Hospital

1. Do you intend to quit your job with Mulago National Referral Hospital in the next 1 to 5 years?
    a) Yes
    b) No

Section B: Personnel factors associated with intention to leave work among health workers at Mulago National Referral Hospital

2. What is your sex?
    a) Male
    b) Female

3. What is your highest level of education attained
    a) Certificate
    b) Diploma
    c) Bachelor's degree
    d) Master's degree and above
4. How long have you been in public service?
    a) Less than 2 years
    b) 2 to 5 years
    c) 6 to 10 years
    d) More than 10 years
5. How would you rate your satisfaction with your employment with Mulago hospital?
    a) More than satisfied
    b) Satisfied
    c) Unsatisfied
    d) Very unsatisfied
6. What is your profession?
    a) Doctor
    b) Nurse/Midwife
    c) Allied Health

7. How would you rate your commitment with Mulago hospital work?
    a) More than committed
    b) Committed
    c) Less than committed
    d) Vey uncommitted
8. What is your marital status?
    a) Married
    b) Single
    c) Widowed/divorced
9. Do you have family challenges that negatively affect your working with Mulago hospital?
    a) Yes
    b) No
10. Is transport to work a serious limitation for your coming for duty in Mulago hospital?
    a) Yes
    b) No
11. How old are you?
    a) Less than 25 years
    b) 25 to 34 years
    c) 35 to 44 years
    d) 45 years and above

12. Do you have a chronic illness that might be making it difficult for you to continue working at Mulago hospital?
    a) Yes
    b) No
13. Do you have a child or children whose care limits your ability to work at Mulago hospital?
    a) Yes, always
    b) Yes, sometimes
    c) No

Section C: Health facility factors associated with intention to leave one's work by health workers at Mulago National Referral Hospital

14. Do you think you can develop professionally as you work at Mulago hospital?
    a) Yes
    b) No
15. Are you satisfied with the king of supervision you get from your work supervisors?
    a) Yes
    b) No
16. Do you think that you are all treated equally by your supervisor?
    a) Yes
    b) No
17. Are you happy with your salary of Mulago hospital?
    a) Yes
    b) No

18. Do you have accommodation from Mulago hospital?

    a) Yes

    b) No

19. Do you feel that you have a heavy workload at Mulago hospital?

    a) Yes

    b) No

20. Do you have conflicts with your supervisors or colleagues?

    a) Yes, always

    b) Yes, sometimes

    c) Never

21. Are you employed as per your highest academic qualifications possessed?

    a) Yes

    b) No

22. Are sponsored training opportunities given out fairly to you all as staffs?

    a) Yes

    b) No

    c) I don’t know

23. Is your work appreciated by your supervisors in Mulago hospital?

    a) Yes

    b) No

24. Are you denied your annual leave?

    a) Yes

    b) No

25. Is appraisal by your supervisor fairly done?

    a) Yes

    b) No

26. Are your roles clearly known to you as given by your supervisor?

    a) Yes

    b) No

27. How is team work at your department?

    a) Very good

    b) Good

    c) Poor

    d) Very poor

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY