Effects of capacity building initiatives on performance of health workers in Rubanda District, Uganda

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ABSTRACT

This study specific objective was to examine the effects of capacity building initiatives on performance of health workers in Rubanda District. This study was guided by Social Cognitive Theory (SCT). The study followed a descriptive design. Data from 120 respondents was collected and analyzed quantitatively complemented with qualitative analysis. Self-administered questionnaires were applied.. Since descriptive analysis entailed description of a single variable and its attributes, frequency tables were used to present the data. At the bivariate level, a Pearson correlation matrix was conducted to ascertain the relationships between the predictor variables and the dependent variable. A linear regression model was used to fit the data. Respondents strongly agreed that capacity building initiatives improve health workers' performance. Regression analysis showed a strong, significant positive correlation ($r = 0.762$, $p < 0.05$) between capacity building initiatives and health worker performance, explaining 82.5% of performance variance ($R^2 = 0.825$). The regression coefficient was 0.921 ($p < 0.001$), indicating that increased capacity building significantly improves performance. The main conclusion drawn from this research is that capacity building initiatives affects performance significantly and positively. The study recommends that Rubanda district should continue to invest in structured and relevant capacity building initiatives.

Keywords: Capacity Building Initiatives, Health Workers, Performance, Rubanda District, Uganda

I. INTRODUCTION

Programs for continuing professional development are essential for enhancing health human resource effectiveness, particularly in settings like Rubanda district. The subsequent subsection delves deeper into examining several facets of capacity building programs in relation to health workers' performance. According to DeCorby-Watson *et al*. (2018), capacity building programs are planned procedures that are used and put into action to improve knowledge, skills, self, efficiency, behaviors, and organizational capacity at the individual, organizational, or community levels. In this study, training, peer support programs, and access to technical services will be the basis for evaluating capacity building initiatives. Measuring health-care performance began in the United States of America (USA) before the 1990s (Abate et al., 2022). Performance was assessed using licensing, protocol adherence, and patient outcomes in hospital settings. The 1990s and 2000s saw the introduction of performance-based payment models (pay-for-performance) and clinical audits. The Agency for Healthcare Research and Quality (AHRQ) developed standardized quality indicators.

According to Agbele and Humphrey (2021), new developments in health worker performance measurement have emerged, such as the use of Electronic Health Records (EHRs) to track productivity and quality. While some countries have long-standing traditions of assessing health worker performance, particularly in primary care, the formalization and standardization of these systems, including the use of electronic medical records (EMRs) and specific performance frameworks, has gained traction in recent years, particularly in light of universal health coverage objectives. According to Babatunde and Akintola (2023), the success of Performance-Based Financing (PBF) in countries such as Cambodia and the Philippines can be attributed to the development of health worker capacity through training, peer support, and access to technological equipment. There was an increased emphasis on client feedback, clinical audits, and data digitization.

Babatunde and Akintola (2023) explain that the performance of healthcare workers in Europe has evolved over time, with formal systems emerging in the latter half of the twentieth century (Babughirana, 2016). While some form of monitoring had existed previously, the formalization and widespread adoption of performance measurement frameworks gained traction in the 1980s and 1990s. Even before formal systems, healthcare providers and institutions would keep track of certain work-related metrics (Bandura, 2001). This could include fundamental statistics such as patient volume, length of stay, and basic outcome information. Beginning in the early 1980s, the UK's National Health

Service (NHS) led the way in the development and dissemination of performance data. This was motivated by a desire to increase accountability and transparency in the healthcare system. The European Commission then took steps to standardize and coordinate performance measurement across member states. The European Core Health Indicators (ECHI) initiative, for example, was launched to collect relevant indicators (Berrick et al., 2020). Performance measurement in healthcare is evolving, with a greater emphasis on patient-reported outcomes, quality of care, and equity. Measuring and improving performance in primary healthcare settings is becoming increasingly important, particularly in terms of universal health coverage and primary health care system strengthening.

Performance management of health workers in Africa is a relatively new development, with formal implementation gaining traction in the late 1990s and early 2000s, particularly as part of health sector reforms and decentralization efforts (Basajja & Nambobi, 2022). Several factors contributed to the gradual adoption of performance measurement for health workers in Africa. Many African countries, including Uganda, implemented decentralization policies in the 1990s, transferring management of health services to local governments. This shift necessitated the development of mechanisms to monitor and evaluate the performance of health workers at the local level.

Bell *et al.* (2022) explains that, broader push for health sector reforms, often linked to achieving the Millennium Development Goals (MDGs) and later the Sustainable Development Goals (SDGs), also drove the need for performance management. These reforms aimed to improve the efficiency and effectiveness of health systems, and performance measurement was seen as a crucial tool for achieving these goals. International organizations such as the World Health Organization (WHO) and the Joint Learning Initiative (JLI) helped to raise awareness about the value of human resources in health and advocate for better performance management systems in Africa. Many African countries faced persistent challenges in providing adequate healthcare services, including a lack of skilled health workers and inefficiencies in service delivery. Performance measurement was viewed as a means of identifying areas for improvement and holding healthcare workers accountable. While the concept of performance management is relatively new, its implementation is not consistent across the continent. According to some studies in Uganda, while performance is used to some extent, there are frequently gaps in its implementation, such as insufficient performance target setting and planning.

Capacity building for health workers is an ongoing effort that has evolved over time in Africa, East Africa, and Uganda. Disease outbreaks, resource limitations, and shifting global health priorities have all had an impact on initiatives. According to Basajja, and Nambobi (2022), globally, capacity building efforts for health workers have been ongoing for decades, dating back to the mid-twentieth century. The World Health Organization (WHO) and other international organizations have played an important role in promoting these efforts, especially since the emergence of HIV/AIDS and other global health issues. The focus has shifted from solely training to a more comprehensive approach that includes leadership, management, and system strengthening.

Berrick *et al.* (2020) reported that capacity building in Africa gained traction in the late twentieth century, particularly with the rise of community health worker programs and initiatives aimed at addressing specific health crises. The East, Central, and Southern Africa Health Community (ECSA-HC) has played an important role in promoting regional cooperation and capacity building within the ECSA region. More recently, the African Union has made strategic commitments to strengthen the health workforce, such as deploying community health workers. Capacity building initiatives have primarily aimed to strengthen health systems and improve healthcare service quality (Bell et al., 2022). The Uganda Capacity Program, for example, aimed to strengthen institutions that plan, develop, and manage the health workforce. Other initiatives have focused on specific areas such as nursing and midwifery, with collaborations from organizations such as the Johnson & Johnson Foundation, Aga Khan University, and the Aga Khan Foundation East Africa.

Capacity building for health workers in Uganda has been ongoing since the 1980s, with various initiatives. The Health Manpower Development Centre (HMDC) in Mbale was founded in 1982 as a national in-service training facility to promote ongoing professional development (Akiba *et al.*, 2019). Other notable efforts include the "Institutional Capacity Building project in Planning, Leadership, and Management" launched in 2009 to address leadership and management gaps in the health sector. Intra Health International also implemented a USAID-funded program to strengthen Ugandan institutions' capacity to manage their health workforce. More recently, the Global Capacity Building (GCB) programme has helped Ugandan health partnerships implement innovative healthcare-improvement projects. It is from this background that has motivated the researcher to examine the effect of capacity building on the performance of health workers in Rubanda District.

1.1 Statement of the Problem

Highly motivated, well, trained and retained health workers are crucial for high quality service delivery and patient satisfaction within Rubanda District, it is therefore vital for the district to be equipped with competent health teams. However, the district is experiencing the following challenges; inadequate number of health workers, poor health worker efficiency, and no ability to retain specialized human resources (Mugisha et al., 2019). Still, health workers have low performs with negative attitude, low motivation and poor service delivery (Mbacha *et al*., 2022; Khanal *et al*., 2020;

Kwikiriza *et al*., 2020) even with very many Capacity building programs such as SPARS, CODES, CQI programs and assessment of quality sexual reproductive health and HIV, integrated services (Trap *et al*., 2021) If such problems are not checked they may result in continued compromises in service delivery morale and workforce shortages that are likely to affect healthcare quality and health of the population in the area of operation (Zulu *et al*., 2015; Mutale *et al*., 2013). The purpose of this research is therefore to assess the impact of capacity building programmes on health worker performance in Rubanda District. Thereby, the research aims to develop solutions to the challenges and deficiencies identified in the quest to improve the healthcare delivery in the area. The relevance of this solution is underlined by the fact that it offers important suggestions as to how Capacity building programs enhance the performance of HI and overall health systems.

1.2 Research Objective

To examine the effects of capacity building initiatives on performance of health workers in Rubanda District

1.3 Research Question

What are the effects of capacity building initiatives on the performance of health workers in Rubanda District?

II. LITERATURE REVIEW

2.1 Theoretical Review

This study was guided by Social Cognitive Theory (SCT) developed by Bandura (2001). The theory states that, human behavior is learned and influenced by the interaction of personal factors, environmental factors, and the behavior itself. It emphasizes that learning occurs not only through direct experience but also through observing others and the consequences of their actions. Key aspects include reciprocal determinism, observational learning, and self-efficacy. Social Cognitive Theory (SCT) assumes that learning occurs through observation and modelling, and that behaviour is influenced by a continuous interplay of personal factors, environmental factors, and the individual's own behaviour. This means that people learn not only through direct experience, but also by observing others and reflecting on their own thoughts and feelings about their actions.

Social cognitive theory's (SCT) strengths include its comprehensive approach to understanding behaviour, emphasis on self-efficacy and reciprocal determinism, and broad applicability across multiple domains. It focuses on the interaction of personal factors, environmental influences, and behaviour in shaping human actions. Social cognitive theory, while comprehensive, has several flaws. It can be overly broad, making it difficult to operationalize and test in one study. The theory's emphasis on the interaction of person, behaviour, and environment can be ambiguous, leaving it unclear which factor is most influential. It may also fail to adequately address emotional and motivational factors, as well as biological and genetic predispositions.

Social Cognitive Theory (SCT) is relevant to the capacity building and performance of health workers in Rubanda District because it provides a framework for understanding how individuals learn, develop skills, and change behaviour, all of which are critical components of capacity building. SCT emphasizes how individual factors (such as self-efficacy and outcome expectations), environmental factors (such as social support and organizational resources), and behavioural factors (such as skills and knowledge) interact to shape performance. Understanding these relationships allows interventions to be designed to increase health workers' capacity and performance.

2.1.1 Conceptual Perspective

Capacity building is "the process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time(United Nations Development Programme (UNDP), (2023). Capacity building is the process of developing and strengthening the skills, abilities, processes, and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world (Organisation for Economic Co-operation and Development (OECD), 2016). Capacity building refers to investment in people, institutions, and practices that will, together, enable countries to achieve their development goals (World Bank, 2023).

Training is "a process that attempts to teach employees the skills they need to perform their jobs. Training is a planned effort by a company to facilitate employees' learning of job-related competencies, including knowledge, skills, or behaviours that are critical for successful job performance (Noe, 2020). Training is the use of systematic and planned instruction activities to promote learning. Peer support programs are "a system of giving and receiving help founded on key principles of respect, shared responsibility, and mutual agreement of what is helpful (Mead et al., 2001). Peer support is "social emotional support, frequently coupled with instrumental support that is mutually offered or provided by persons having a mental health condition to others sharing a similar mental health condition to bring about a desired social or personal change (Trap et al., 2021). Peer support programs involve trained individuals who have lived

experience with mental health challenges and recovery, offering support to others experiencing similar issues in a structured, recovery-oriented way (Mental Health Commission of Canada, 2016).

Access to technical services refers to the ability of individuals, especially farmers, to obtain expert advice, training, and support on improved technologies, practices, and innovations to enhance productivity and sustainability (Food and Agriculture Organization, 2020). Access to technical services includes the availability and use of specialized knowledge, equipment, and support systems necessary for effective healthcare delivery, particularly in low-resource settings. Access to technical services involves the provision and utilization of expert knowledge, tools, and resources aimed at building the capacity of individuals or institutions to perform specific functions effectively (Rowe, 2020).

Performance is "the achievement of quantified objectives, and the extent to which work is done efficiently and effectively. Performance refers to "the behaviors and actions that are relevant to the organization's goals and can be measured in terms of the level of contribution to those goals (Aguinis, 2019). Performance is defined as the extent to which an intervention or institution achieves its objectives in terms of effectiveness, efficiency, and relevance (Organisation for Economic Co-operation and Development. (2016). Client satisfaction is "the patient's reaction to aspects of the service experience, including technical care, interpersonal relationships, and the physical environment (Donabedian, 2020). Client (or customer) satisfaction is "a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations (Hotchkiss et al., 2015).

Client satisfaction is "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience. Health worker satisfaction refers to "the degree to which health workers feel personally fulfilled and professionally rewarded by their job roles, responsibilities, and work environments (Ontario, 2020). Health worker satisfaction is "a multidimensional psychological response to one's job, including affective reactions to job conditions, roles, relationships, and rewards (Mukasa et al., 2019). Job satisfaction (including that of health workers) is "a positive feeling about a job resulting from an evaluation of its characteristics (Mutale et al., 2013).

Targets met by health workers" refers to the extent to which health personnel achieve predefined service delivery objectives such as immunization coverage, antenatal visits, or disease treatment outcomes within a specific timeframe. Meeting targets by health workers means fulfilling specific quantitative and qualitative benchmarks related to service provision, such as number of clients served, adherence to clinical protocols, or time-bound treatment goals (Rowe, 2020) Targets met by health workers are measured as the proportion of key health indicators achieved at individual or facility level, such as outpatient department attendance, supervised deliveries, and health education sessions conducted (Noe, 2020).

The performance of health workers depends on motivators such as incentives, satisfaction, supervision, and organizational health systems environment. Knowledge of these dynamics can help enhance the attainment of heath goals where the major focus is on the continual enhancement of the delivery of health services, particularly in LMICs (Abate et al., 2022). Driven by financial rewards, company careers, as well as resources, motivation is core to performance (Fillol et al., 2019). Nonetheless, there as found out that interpersonal relationship/Supervision quality is also a very important factor which cannot be bought (Ojokuku & Salami, 2011; Alhassan *et al*., 2013; Daneshkohan *et al*., 2014).

Through efficient supervision, encouraging teamwork, self-management, and autonomy really increases production and significantly lessens the impact of a staffing shortfall in an institution (Frimpong *et al*., 2011; Zulu *et al*., 2014). Perceptions of responsibilities, resources, and organizational support all influence quality of work life, which has been identified as a significant factor of motivation and performance (Ojokuku & Salami, 2011; Mutale *et al*., 2013; Hotchkiss *et al*, 2015). Performance is also determined in large part by organizational capabilities, culture, and policies (Mbacha *et al*., 2022).Recalling the literature on motivation and performance, it becomes clear that a favourable culture based on decentralized cooperation is conducive to high performance (Mbacha *et al*., 2022; Bertone & Writter, 2015). To assess outcomes for the purpose of this research, performance will be evaluated based on client satisfaction, health worker satisfaction and on targets.

2.1.2 Contextual Perspective

Rubanda District, carved from Kabale in July 2016, operates several key health centers including Muko and Hamurwa Health Centre IVs, plus Bubare HC III. These serve large rural catchments but are not fully studied in terms of systematic performance assessments. Instead, reports focus on infrastructural and resource gaps that indirectly impact worker performance. According District health officer report of 2024, there are key Infrastructure and Resource Shortcomings Muko and Hamurwa HC IVs receive ~17 dental referrals monthly due to lack of equipment, Critical drugs like amoxicillin, septrin, metronidazole, and gloves were out of stock since June 2018; staff report patient abuse due to lack of supplies , Bubare HC III records ~40 deliveries/month but has only 6 beds (1 delivery bed). Hamurwa HC IV performs ~150 deliveries monthly but has only ~28 beds total, with 2 for labor; Muko HC IV has 17 beds. Inconsistent electricity prevents utilization of blood fridges, affecting transfusions, Both HC IVs lack functional theatres (no anesthetic officers), senior nurses, and maternity capacity; surgeries and blood transfusions are referred elsewhere. Staff

housing <15%, leading to late arrivals and absenteeism. Rubanda reportedly withholds attendance-linked salaries and disciplinary measures to enforce presence.

Performance tracking in Rubanda is limited to anecdotal reporting, lacking standardized metrics or formal evaluations (Mistry et al. 2021). Available data from the district indicates that, Dental referrals: ~17/month from each HC IV due to lack of equipment. Delivery and bed ratios: Bubare HC III: ~40 deliveries/month with 6 beds (1 delivery bed) Hamurwa HC IV: ~150 deliveries/month with only 28 beds (2 delivery beds) Muko HC IV: 100+ monthly deliveries, including ~6 C-sections weekly, yet only 8 maternity beds. These figures highlight high service demand vs low capacity, but no metrics on clinical quality, patient satisfaction, or staff productivity are documented in formal studies.

2.4 Empirical Review

DeCorby,Watson et al. (2018) conducted a systematic analysis that evaluated several public health Capacity building initiatives, identifying six categories: Web based teaching and learning, face to face and online workshops, consultancy services, through computer self-study, and communities of practices and multiple approach. They enhanced knowledge, skills, and confidence as its positive individual learned gains. Nevertheless, only moderate quality studies were identified and no wider effects of the interventions were investigated; thus, future research should focus on the organizational consequences. Bertone and Writter (2015) systematically set out a meta-authorization of theory application of capacity building in public health where 28 approaches were found. They also stressed that such frameworks are deliberately used within the auspices of programs.

In their analysis of the NSW Framework's use in health promotion, Ontario (2020) noted the five action areas' ongoing relevance as well as the importance of community collaboration and outside experts. Another study emphasized the need for additional clarification of the impact of managerial assistance at the organizational and individual levels. In the context of improving public health programs, DeCorby-Watson et al. (2018) also emphasized the significance of choosing and assessing program mechanisms based on specific outcomes. Khanal et al. (2020) analyzed the problems and solutions for the capacity development in health research in sub-Saharan Africa highlighting an African driven model. They therefore championed the ability of African driven scholarship pointing to the SANTHE research collaborative as an example of a well-run program. Important strategies for future activities include personnel development of local researchers, second, qualitative mentees formation for the junior scientists and third, cooperation. This kind of review means further international investment and African national funding are needed for building research intensive institutions for transforming the future aqueously.

The QUIPU survey conducted by the Rowe (2020) indicated weak distribution of health personnel in Africa; some with over one hundred thousand personnel while others were below five thousand. The regional average health worker density was 2.9 per 1000 populations a requirement that was much below the 13.4 recommended for 70% UHC. Challenges in governance and inept performance evaluations pointed to a lack of education, training and management to fill shortfalls for attaining UHC and SDGs.

Mbacha et al. (2022) discussed capacity development in Africa suggesting high rates of economic growth while pointing out major shortcomings in getting to the full capacity. They proposed four research areas: promoting attitude modification, attaining economic diversification, improving resource mobilization and skills management. This aspect highlighted the plight of other institutions such as the ACBF in the consideration of the capacity development coordination.

A systematic review conducted by DeCorby-Watson *et al.* (2018) showed that knowledge, skills, and system, level capacities are enhanced following facility of Capacity building programs. However, most of these studies centred on the individual level effects without capturing other effects. In the same vein, Mead et al., (2001) reported positive relationships between programs and quantity of child health management. The study by Fillol *et al*. (2019) stressed leadership as well as organizational factors in order to promote HWs' motivation through PbF. Full assessments inclusive of organizational effects are mandatory for efficiency of the programs.

The studies on range and usefulness of many capacity building initiatives including peer support programs and access to technical services indicate that professional development can improve knowledge and effectiveness among health workers. Technical services are also important for the performance of libraries which has been pointed out by Decker et al.(2015) and Mistry et al. (2021). Nevertheless, there is a lack of knowledge regarding the enduring effects of such programs and their adjustment for the specific conditions of various healthcare settings, so future studies should centre on follow-up investigations of the effects and the incorporation of these programs into corresponding healthcare promotion plans.

In Sub-Saharan Africa, some capacity strengthening interventions like the SHARP in Malawi and Tanzania feelers and the CARTA project have been proven that has enhanced the health worker productivity and effectiveness (Akiba et al., 2019; Adedokun et al., 2014). Mugabo et al. (2015) confirmed that non, academic training studies can be efficient, and Kruk, et al. (2016) found that technologies in digital health led to enhancements in service provision. Still,

there are apparent research limitations focusing on the particular effects on the process of health worker performance as well as the replicability of the programmes in various locations.

Over the years, capacity building interventions have played a resource role in enhancing and responding to public health concerns in Uganda. Asingura et al (2022)'s and Kruk et al (2016)'s articles emphasize the need for developing target programs and such concepts as the absence of sufficient health workers and mental health. Mugisha et al. (2019) and Mukasa et al. (2019) leave a good argument on the importance of integrating multifaceted approaches in the improvement of mental health services and workforce challenges. Furthermore, there is a dearth of detailed evidence on the achievement of such programmes in relation to health worker performance and impact on health systems.

III. METHODOLOGY

3.1 Research Design

The cross-sectional research design was used in this study. The cross-sectional research approach of this study allowed data to be gathered at one particular moment in order to examine capacity building initiatives and their effects on the performance of health professionals in Rubanda District. In order to capture the then-current level of capacity building interventions and their impact on the performance of health workers, this design allowed for the quick and efficient collection of data from a large population of health professionals at a specific point in time. It made it possible to find correlations and differences between or among various groups without having to look back over years, months, or weeks.

3.3 Target Population

According to the District Health Officer's Report of 2024, Rubanda District has 20 health centre twos (HC11),6 health centre threes (HC111), and 2 health centre fours (HC1V). This totals to 28 health facilities. For this study, the focus was on health workers directly involved in clinical care, diagnostics, public health, and data management, such as nurses, midwives, medical officers, clinical officers, laboratory staff, health assistants, and health information assistants, because they were the primary beneficiaries of capacity building initiatives like training, mentorship, and technical support. Support staff such as security guards, porters, drivers, and typists, while essential to facility operations, were typically not the target of such programs and therefore fell outside the scope of this study. This made a total of 31 staff members from each of the Health Centre Fours and 62 from the two Health Centre Fours. Therefore, the total population of the study was 274 health staff members, including 62 from HCIV, 72 from HCIII, and 140 from HCII, respectively

3.4 Sample Size and Sampling Technique

The researcher used Morgan formular to determine the sample population as follows. The sample size for this study will be determined by the Krejcie and Morgan formula as shown below

$$n = \frac{x^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

Where n = required sample size

N = population size (205)

X^2 = the table value of Chi-square for 1 degree of freedom at the desired confidence level (typically 3.841 for a 95% confidence level

P = the population proportion (assumed to be 0.5 since this provides the maximum sample size)

d = the degree of accuracy expressed as a proportion (typically 0.05 for a 5% margin of error)

Substituting in the values us the following

$$n = \frac{3.841 * 274 * 0.5(1-0.5)}{0.05^2(274-1) + 3.841 * 0.5(1-0.5)}$$

$$n = \frac{263.1085}{0.6825 + 0.96025}$$

$$n = \frac{196.85125}{1.64275}$$

$$n = 120$$

Therefore, this study considered a sample population of 120 participants.

3.5 Data Collection Instrument

Self-administered questionnaires were applied. In this case, the respondents independently completed these surveys in the absence of an interviewer. In this research, self-administered questionnaires were utilized in an attempt to obtain information from a large sample size of people while minimizing the impacts of interviewer bias.

In this research, an interview guide was employed for the following reasons: the use of the interview guide ensured that all relevant topics were captured during the interview. It provided consistency in the interviews and increased the chances of obtaining consistent data. The researcher effectively responded to concrete research questions, asked participants questions, and yielded detailed qualitative data by employing the interview guide.

3.6 Data Analysis

Quantitative data analysis was carried out using both descriptive and inferential statistics. Data was analyzed by computing frequencies which included the means and percentages so as to get the perception of respondents on the effect of capacity building on performance of health workers in Rubanda District. The researcher organised all the collected qualitative data from the interviews with key informants and document analysis and thereafter, it was coded and analyzed and key themes were generated to build understanding of the phenomenon under study

IV. FINDINGS & DISCUSSION

4.1 Response Rate

The study achieved 100% response rate. The purpose of the study was to examine the effects of Capacity building programs on performance of health workers in Rubanda District. This chapter presents the findings in accordance with the study's objectives, namely; to examine the effects of capacity building initiatives on performance of health workers in Rubanda District, to assess the effects of Peer Support programs on performance of health workers in Rubanda District and to examine the effects of access to technical services on performance of health workers in Rubanda District. This section presents descriptive statistics, correlations, and regression based on questionnaire responses and qualitative insights from the conducted interviews as thematically examined.

4.2 Descriptive Statistics

4.2.1 Capacity Building Initiatives on Performance of Health Workers in Rubanda District

Examining the effect of to assess the effects of Peer Support programs on performance of health workers in Rubanda District was the first goal. The primary and secondary sources provided the data needed to accomplish this. This was done using a five-scale questionnaire of strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD). A summary of the responses is presented in the table below**.** Key: Strongly Agree (SA)+ (Agree (A) all agreed. Undecided (UD) were neutral, Disagree (D) + Strongly Disagree (SD) all disagreed.

Table 1

Analysis on the Five Statements that were Subjected to the Respondents

Response	Agree		Undecided		Disagree	
	F	%	F	%	F	%
I have attended formal training sessions relevant to my job as a health worker in the past year.	100	83.3	20	16.7	00	00
Peer mentoring has contributed to my professional development	98	81.7	22	18.3	00	00
Performance has increased at my work place because of peer support programs	99	82.5%	21	17.5	00	00
The infrastructure and equipment available at my workplace are sufficient to perform my duties effectively	101	84.2	00	00	19	15.8
There is high performance because of technical access	98	81.7	22	18.3	00	00

Table 1 above analyses the five statements given to respondents to assess the effect of capacity building initiatives on the performance of health workers in Rubanda District. When asked if they had attended formal training sessions relevant to their job as a health worker in the previous year, 83.3% did, while 16.7% were unsure. The data indicates a strong uptake of formal capacity building initiatives among health workers in Rubanda District, which is a positive sign for capacity-building efforts. Furthermore, Peer mentoring has contributed to my professional development as noted by 81.7% who agreed. When respondents were asked that performance has increased at my work place because of peer support programs, 82.5% agreed, while 17.5% disagreed. On infrastructure and equipment available at the workplace are sufficient to perform my duties effectively in relation to 84.2% who agreed while 81.7% agreed that there was high performance because of technical access

> *"Without capacity building initiatives, we would not have performed as well as we do in the Rubanda district local government. This is why Rubanda District is performing well compared to other districts in Uganda.".*

Capacity building initiatives is viewed as a critical factor behind the improved performance and service delivery of health workers in Rubanda District. These outcomes are supported by Mugisha et al. (2019) who noted that a district's

relative success in health care performance is believed to be the result of continuous investment in training, peer support program and technical services which has enhanced knowledge, skills, and service quality among health personnel. The study confirmed that there was a relationship between quantitative and qualitative findings after doing a qualitative data analysis. The two data sets agreed, and it was obvious that qualitative data supported quantitative data.

4.1.2 Performance of Health workers

This section summarizes the research on the performance of health workers in Rubanda District as the dependent variable, utilizing questions designed to elicit data from respondents. The information required for this task was gathered using both primary and secondary sources. The table below shows a summary of the responses.

Table 2

Performance of Health Workers in Rubanda District

Statements on performance	**Agree**		**Undecided**		**Disagree**	
	F	%	F	%	F	%
I provide high-quality care to my clients, which enhances their satisfaction.	120	100	00	00	00	00
Capacity building programs have helped me achieve my health performance targets.	120	100	00	00	00	00
Team work increase performance	120	100	00	00	00	00

When asked whether they provide high-quality care to clients that enhances client satisfaction, 100% of the respondents agreed, indicating a strong commitment to quality service delivery. Similarly, when asked whether capacity building programs have helped them achieve their health performance targets, all respondents (100%) agreed, suggesting that training and development initiatives are effectively supporting performance improvement. Lastly, respondents were asked whether teamwork increases performance, and again, 100% of the respondents agreed, highlighting the value placed on collaboration and collective effort in achieving better health outcomes. The unanimous agreement across all three statements aligns with Noe's (2020) study which reflects a high level of confidence and positive perception among health workers regarding the quality of care they provide, the effectiveness of capacity building programs, and the role of teamwork in enhancing performance.

4.2 Hypothesis Testing

In order to be able to generalize the results from the population samples, this study tested the potential hypotheses. Statistical inference was used to accomplish this. In order to create a relationship model, test the hypotheses, and determine whether there was a relationship at all between the independent and dependent variables, correlation and regression analyses were carried out. As a result, the degree of the association was ascertained by using the Pearson's product moment correlation coefficient.

Table 3

Correlation analysis for Capacity Building Initiatives on Performance

		Performance	**Capacity Building initiative**
Performance	Pearson Correlation	1	.762**
	Sig. (2-tailed)	.000	.000
	N	120	
Capacity building initiatives	Pearson Correlation	.762**	1
	Sig. (2-tailed)	.000	0.000
	N	120	120

**. Correlation is significant at the 0.05 level (2-tailed).

This result demonstrates a strong positive and significant correlation for capacity building initiatives and performance (0.762: p less than 0.05). This results corroborates with Kruk's (2016) who analyzed the problems and solutions for the capacity development in health and deviates from Fillol *et al.* (2019) who assessed the impact of capacity building initiatives on development of health workforce in three African states, they observed that majority of the trainees stayed with the identified institutions enhancing management as well as policy. However, some left because of discontent in some of the conditions which were offered to them with an intention to work in different areas.

Table 4

Showing the model summary of Capacity building Initiatives

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762[a]	.825	.824	.15216

a. Predictors: (Constant), Capacity building initiatives

The coefficient of determination (.825) indicates that the capacity building initiatives has an impact on performance. As a result, a substantial positive significance exists. This suggests that the more capacity building initiatives health workers receive, the better their performance. Thus, in terms of performance, capacity building initiatives account for 82.5% of the Rubanda District. The findings demonstrate that capacity building initiatives are a key driver of health worker performance in Rubanda District. With 82.5% of performance changes linked to capacity building initiatives, the district can confidently attribute improvements in service delivery, skills, and efficiency to these capacity-building efforts. This strong correlation underscores the importance of continuous and targeted capacity building initiatives to enhance health sector performance. Asingura *et al* (2022)'s and Kruk *et al* (2016)'s found that capacity building initiatives has a positive significant effect on performance of health workers sufficient health workers and mental health. Mugisha *et al*. (2019) and Mukasa *et al* (2019) leave a good argument on the importance of integrating multifaceted approaches in the improvement of mental health services and workforce challenges.

Table 5

Regression output summary on, Capacity building initiatives Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.385	.134		2.882	.005
Capacity building initiatives	.921	.030	.762	30.953	.000

Dependent Variable: Performance

The outcome again showed a regression coefficient of .762 at a 0.01 level of significance, indicating a significant difference in favor. With a Beta value of 0.762 at a 99% level of confidence, the results further demonstrate that capacity building initiatives have an effect on performance of health workers in Rubanda District. This findings agrees with Bell et al. (2022) who found that capacity development affects performance of health workers. This deviates from Aguini's (2019) who assessed the impact of capacity building initiatives on development of health workforce in three African states of which the variables were of insignificant effect.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

According to the research and analysis shown above, performance of health workers in Rubanda District is impacted by training initiatives, peer support programs and access to technical services. Based on the research findings and analysis presented, it is clear that capacity building initiatives significantly improve the performance of health workers in Rubanda District. The majority of respondents agreed that formal training, improved their ability to provide quality health care, meet performance goals, and collaborate more effectively as a team. The high levels of agreement ranging from 81.7% to 100% across various performance-related indicators strongly suggest that ongoing capacity building is critical for improving knowledge, skills, and service delivery outcomes among health workers. As a result, investing in structured and relevant capacity building programs is critical for maintaining and improving health care performance in the district.

5.2 Recommendations

Based on the findings that capacity building initiatives have a significant effect on the performance of health workers in Rubanda District, the following recommendations are proposed: The District Health Department should institutionalize regular and structured training programs to ensure that health workers continuously upgrade their skills and stay updated with current healthcare practices and policies. Capacity building initiatives should be aligned with the specific duties and capacity gaps of different cadres of health workers to maximize relevance and impact on performance. A robust monitoring and evaluation (M&E) framework should be established to assess the effectiveness of training programs in improving individual and institutional performance. In addition to formal training, the district should encourage peer mentoring, coaching, and supportive supervision as cost-effective ways to reinforce learning and performance at the workplace.

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