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As we embark on this scholarly journey together, I am confident that the Academic Journal of the School of Graduate Studies will not only be a source of inspiration but also a catalyst for transformative research. I invite you all to be active participants, contributors, and beneficiaries of this exciting academic endeavour.

Let our collective scholarly pursuit elevate Bugema University to greater heights and solidify our position as a hub of intellectual curiosity, innovation, and academic excellence.

Best regards,

Rosette Kabuye   (PhD)

Dean, School of Graduate Studies Bugema University

Editorial

FACTORS ASSOCIATED WITH THE FIRST 6 DAYS OF POSTNATAL CARE ATTENDANCE AMONG MOTHERS IN JINJA REGIONAL REFERRAL HOSPITAL, UGANDA

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ABSTRACT

The study assessed the factors associated with the first 6 days of postnatal care attendance among mothers in Jinja Regional Referral Hospital. Its objectives were to determine the prevalence of the First Six Days of postnatal care Attendance and investigate the association between the influencing factors and the First Six Days of Postnatal care among postpartum mothers. The study adopted a cross-sectional study design employing quantitative methods. Data was obtained using an interviewer-administered questionnaire from a total of 215 systematically selected mothers with children aged six weeks and below. Descriptive and inferential analysis was used at a 95% confidence interval in SPSS Version 20.0. The results revealed that only 36.7% of the mothers had their postnatal attendance within the first six days. Being affiliated with Islam (AOR = .31; 95%CI = 0.11-.87; p = .026) was the only factor significantly associated with the first 6 days of postnatal care attendance. The study concluded a low level of timely attendance among mothers in Jinja RRH compared to the National prevalence of 54.3% which exposes them to the risks of postpartum. The study recommended that the government of Uganda through the Ministry of Health should integrate religion into the health care system with well-defined roles like identifying postnatal mothers and encouraging them to attend postnatal care just like VHTs do. In addition, through the Ministry of Health, religious leaders and places of worship should be empowered and made as campaigning grounds to encourage mothers to attend postnatal care from the health facilities.

Keywords: *Postnatal care, Health system factors, community-related factors, Timely, and Late.*

BACKGROUND

Postnatal care services are a crucial element of Essential Obstetric Care (EOC) that helps reduce maternal morbidity, newborn morbidity, and death in low- and middle-income nations. The World Health Organization (WHO) requires that the postnatal period begins immediately after the birth of the baby and extends up to six weeks after birth. It includes an integrated package of routine maternal and neonatal care within the first six days following childbirth to allow the detection of danger signs and the management of complications (Dansou, Adekunle & Arowojolu, 2017).

Globally, 830 women die daily from pregnancy and childbirth-related avoidable causes, with 98% in underdeveloped nations (Alkema et al., 2016). More than 60% of postpartum deaths occur from 1 hour after placenta delivery to 6 weeks afterwards globally, and the attendance of Early Postnatal Care(EPNC) is still at very low levels in Sub-Saharan Africa (Somefun & Ibisomi, 2016). Evidence from 23 Demographic and Health Surveys (DHS) shows that 66.7% of women in sub-Saharan Africa give birth at home, of which only 13 per cent of these women attend postnatal care within the first 6 days (Akibu et al., 2018). While there is a need to understand how such factors influence attendance in the most dangerous puerperal period ending the first six days, there is less scholarly attention.

In Uganda, low EPNC coverage leads to significant maternal mortality with 336 deaths per 100,000 live births (Uganda Bureau of Statistics & ICF, 2017). It was reported that 97% of women received prenatal care (ANC) at least once during pregnancy, but only 54.3% obtained postnatal care within 6 days. The existing research on postnatal care utilization in Uganda has primarily focused on postnatal care occurring beyond the first two days after delivery, as indicated by studies such as Rutaremwa et al. (2015) and Sacks et al. (2020). However, there is a notable gap in examining factors that influence attendance during the early postnatal period as a whole, even though maternal deaths are most prevalent during this timeframe. Other studies in Uganda have focused on postnatal care check-ups among newborns(Kabwijamu et al., 2016).

Postnatal care attendance within the first six days at Jinja Regional Referral Hospital is reported at only 29.7% for mothers, while the figures are slightly higher at 34.9% and 33.3% in Mbale and Soroti, respectively (according to Jinja Regional Referral Hospital Postnatal Reports, 2020, Mbale, and Soroti Regional Referral Hospitals, 2020). These rates fall below the national average of 54.3%, as per the Uganda Demographic and Health Survey (2016), and are notably lower than the WHO standard. Despite the provision of free regular postnatal check-ups, capacity-building for health workers, and community sensitization

efforts by the hospital, attendance levels have persistently remained low, with the highest recorded at 25% in 2017 (Jinja Regional Referral Hospital Postnatal Reports for 2016, 2017, & 2018). Without well-informed interventions, there is a risk of increasing postpartum sepsis, postnatal fatalities, infections, and infant mortality.This study was therefore aimed at determining the factors associated with the initial postnatal care among mothers in Jinja Regional Referral Hospital to improve treatments.

RESEARCH OBJECTIVE(S)

i.   To determine the prevalence of the First Six days' Postnatal Care Attendance among postpartum mothers in Jinja Regional Referral Hospital.

ii. To investigate the association between influencing factors and the First Six Days' Postnatal care among postpartum mothers in Jinja Regional Referral Hospital.

LITERATURE
Prevalence of First Six Days' Postnatal Care Attendance

Different studies have studied the prevalence of first six days' postnatal care attendance. For instance: Tessema et al. (2020) conducted a study with the aim of assessing First Six Days' Postnatal Care Attendance. Utilizing data from Demographic and Health Surveys spanning from 2006 to 2018 across 36 Sub-Saharan African countries, the authors reported a prevalence rate of 52.48%, providing valuable insights into the patterns of early postnatal care utilization. Angore et al. (2018) focused their research on the prevalence of First Six Days' Postnatal Care Attendance specifically within the context of Tanzania. Their study revealed a higher prevalence rate of 83.3%, shedding light on the variations in early postnatal care practices within distinct regional settings.

Alemayehu et al. (2017) investigated the prevalence of First Six Days' Postnatal Care Attendance in Ethiopia. Their findings offer additional insights into cultural and contextual factors influencing postnatal care utilization within the Sub-Saharan African region. Ntambue et al. (2019) conducted a study focused on the prevalence of early postnatal care attendance in Central Africa. Their research contributes to the broader understanding of regional variations in postnatal care practices and identifies potential areas for targeted interventions. Singh et al. (2021) explored the prevalence of First Six Days' Postnatal Care Attendance in West African countries. Their study adds to the growing body of literature, providing nuanced insights into the regional dynamics influencing early postnatal care utilization.

Despite individual studies on First Six Days' Postnatal Care Attendance in Sub-Saharan Africa, a comprehensive synthesis of findings is lacking. The works of Tessema et al. (2020), Angore et al. (2018), Alemayehu et al. (2017), Ntambue et al. (2019), and Singh et al. (2021) provide valuable insights, but there is a gap in integrating these perspectives to discern overarching patterns and regional variations. To address this, a systematic review is needed, offering a cohesive understanding of the prevalence of first six days' postnatal care attendance.. Such an analysis would inform targeted interventions and policy decisions for improving First Six Days' Postnatal Care Attendance across diverse contexts in Sub-Saharan Africa.

Association Between Influencing Factors and the First Six Days' Postnatal Care Among Postpartum Mothers

Bewket et al. (2021) conducted a study with the primary purpose of investigating the association between religious affiliation and postnatal care attendance in Ethiopia. The study revealed compelling findings, indicating that Muslim women were 60% less likely to attend postnatal care compared to their Christian counterparts. The observed disparity was attributed to cultural factors, particularly the need for Muslim women to seek permission from their husbands before engaging in activities outside the home. Gebreslassie et al. (2020) delved into the association between age and First Six Days' Postnatal Care Attendance. The study revealed that younger mothers exhibited a significantly higher likelihood of using early postnatal care services, ranging from 6 to 9 times more compared to mothers in the age group of ≥35 years. This underscores the importance of considering age dynamics in efforts to enhance early postnatal care utilization

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Adhikari and Kumar (2016) conducted a systematic review with the primary purpose of examining the relationship between mothers' age and postnatal care service utilization in developing countries. The systematic review highlighted a significant overall relationship but noted inconsistencies and methodological gaps across studies. This underscores the need for further research and clarification to better understand the nuanced dynamics surrounding the relationship between mothers' age and postnatal care utilization in diverse contexts.Gebrekidan et al. (2018) investigated the impact of maternal age on postnatal care utilization in East Africa. Their study contributes additional regional insights, addressing the complexity of age-related dynamics in accessing postnatal care services.

Mustafa et al. (2019) explored the relationship between maternal age and postnatal care utilization in South Asia. Their findings provide a cross-regional

perspective, adding to the understanding of age-related factors influencing early postnatal care attendance. Oluoch et al. (2020) conducted a study focusing on the age-specific barriers to postnatal care attendance in Sub-Saharan Africa. Their research delves into the nuanced challenges faced by different age groups, offering valuable insights for targeted interventions aimed at improving early postnatal care utilization. Lastly, Existing research on First Six Days' Postnatal Care Attendance lacks a comprehensive exploration of how religious affiliation and maternal age collectively influence early postnatal care utilization. While studies have individually addressed these factors, a holistic understanding of their intersection is absent. To bridge this gap, future research should adopt an integrated approach, examining how religious practices intersect with age-related barriers. Such studies can inform targeted interventions, enhancing strategies to improve postnatal care attendance among diverse demographic groups.

METHODS AND MATERIALS

This study adopted a cross-sectional survey research design that followed a quantitative research approach. The study population comprised mothers who were attending the postpartum clinic and or Young Child Clinic (YCC) at Jinja Regional Referral Hospital. The target study population was children aged six weeks and below who were attending the postpartum clinic and YCC at the study time. The study adopted a survey method of data collection in which a researcher-administered questionnaire was administered to 230 study subjects. Before undertaking this study, the protocol was reviewed and approved by the Mbale Regional Referral Hospital Research & Ethics Committee under reference number MRRH-2021-73. Verbal informed consent was obtained from the mothers who participated in the study. Analysis was done both at descriptive and inferential levels in SPSS Version 20.0. Descriptive statistics especially frequencies and percentages were generated. Both bivariate and multivariate tests were conducted. All variables that appeared to be significant in bivariate analysis were considered for inclusion in the multivariate logistic regression model. The independent variables with p-values less than 5% were reported as being significantly associated with the first Six Days' Postnatal care among postpartum mothers in Jinja Regional Referral Hospital.

FINDINGS

The findings revealed that a great majority, 136(63.3%) reported late attendance in comparison to the report of 79(36.7%) timely attendance within the first six days of postpartum **(Figure 1).**

Figure 1: Prevalence of First Six Days postnatal care Attendance among Postpartum Mothers in Jinja Regional Referral Hospital (n=215)
Source: Primary Data (2021)

At the inferential level, results indicate that religion was significantly associated with the first six days of postnatal care attendance among postpartum mothers. The results indicate that 52.6% of the Anglican mothers timely attended the six days' postnatal care compared to 14.9% of Muslim mothers (Table 1).

Table 1: Multivariate Binary Logistic Results for the Association between the Influencing factors and First Six Days Postnatal Care Attendance among postpartum mothers

		Timely	Late		
		First 6 Days' Postnatal Care Attendance			
		Timely	Late		
Individual factors		N (%)	N (%)	COR(95%CI)	AOR(95%CI)
Religion	Anglican	30(52.6)	27(47.4)	1.75(.82-3.71)	2.08(.91-4.74)
	Catholic	21(36.8)	36(63.2)	.92(.43-1.98)	.89(.39-2.02)
	Muslim	7(14.9)	40(85.1)	.28(.10-.73)	.31(.11-.87)
	Others	21(38.9)	33(61.1)		
Income	Less than 500000	64(42.1)	88(57.9)	1.21(.49-2.94)	1.31(.49-3.49)
	500000-<1000000	6(15.4)	33(84.6)	.30(.09-1.01)	.51(.14-1.91)
	1000000+	9(37.5)	15(62.5)		1
Health System Factors					
Cost of services	Free	21(32.3)	44(67.7)	.53(.27-1.06)	.48(.23-1.02)
	Affordable	23(30.3)	53(69.7)	.48(.25-.94)	.54(.26-1.11)
	Unaffordable	35(47.3)	39(52.7)		
Community Factors					
TBAs existence	Yes	40(43.5)	52(56.5)	1.66(.95-2.90)	1.87(.99-3.54)
	No	39(31.7)	84(68.3)		

Source: Primary Data (2021)

The result is confirmed by the crude odds ratios that show that Anglican religion was significantly associated with the first six days' postnatal care attendance at the bivariate level of analysis (COR= 6.162; 95%CI = 0.82-3.71). When subjected to multivariate analysis, Anglican religion equally indicated a significant association (AOR = 2.08; 95%CI= 0.91-4.74; p = .083). This implies that postpartum mothers that were Anglicans are 2.08 times more likely to attend postnatal care within the first care six days compared to postpartum mothers in other religions. On the other hand, Muslim postpartum mothers were 0.31 times less likely to attend postnatal care within the first six days (AOR = .31; 95%CI = 0.11-.87; p = .026) and the association was significant.
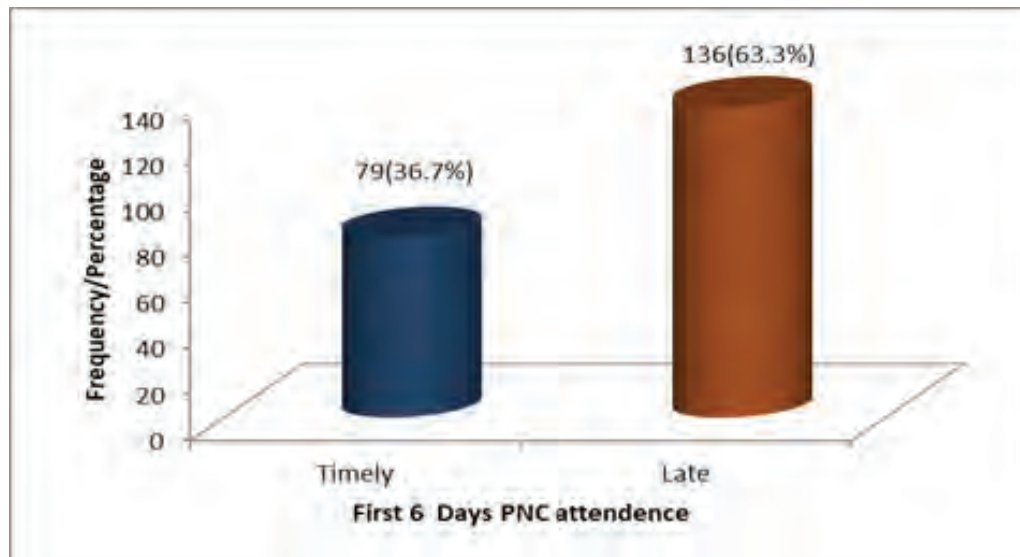
DISCUSSION(S)

The current study found the prevalence of the first six days' postnatal care attendance among postpartum mothers in Jinja Regional Referral Hospital as 36.7%. This attendance level is much lower than the Ugandan national EPNC attendance level of 54.3% and that in 36 SSA countries of 52.48% (Uganda Demographic & Health Survey, 2017; Tessema, et al., 2020). This could be attributed to the health facility-based nature of the study as compared to one that is population-based. In addition, current results indicated that religion was significantly associated with the first six days of postnatal care Attendance among postpartum mothers. The finding is

consistent with a result earlier found in Ethiopia that Muslim women were 60% less likely to attend postnatal care as compared to Christian women (Bewket et al., 2021). On the contrary, several other studies revealed no significant association between the mothers' religion and postnatal care attendance (Mohan et al., 2016; Somefun & Ibisomi, 2016; Izudi, Akwang & Amongin, 2017; Wudineh et al., 2018; Nduuga, Namiyonga & Sebuwufu, 2019; Adane et al., 2020; Gebreslassie et al., 2020; Teshale et al., 2021).

LIMITATIONS

The study findings are limited by the fact that it was health facility-based and results could vary if it were to be population-based. In addition, since it adopted a cross-sectional survey, it was difficult to determine causal relationships between the proposed predictors and the outcomes of interest. Only the association between the dependent and independent variables was determined.

CONCLUSION AND RECOMMENDATIONS

Compared to the National prevalence, there is a lower level of first six days' postnatal care attendance among postpartum mothers in Jinja Regional Referral Hospital at 36.7%. This is still sub-optimal compliance to the first six days of PNC attendance among postpartum mothers which puts them at postpartum risk. Therefore, this remains a priority area of concern for the government of Uganda, and the Ministry of Health in particular. Maternal religion is a critical factor in six days' postnatal care attendance among postpartum mothers which implies the need to make use of religious leaders and places of worship as campaigning grounds to improve timely postnatal care attendance. By involving religious leaders and places of worship in campaigns to improve postnatal care attendance, the Ugandan government can effectively reach and engage with a large portion of the population. These leaders can help spread awareness about the importance of timely postnatal care and address any misconceptions or cultural barriers that may exist. Additionally, by utilizing places of worship as strategic platforms, the government can create a supportive and inclusive environment that encourages mothers to prioritize their health and seek the necessary care after giving birth. This holistic approach has the potential to significantly increase compliance and reduce postpartum risks in Uganda.

Abbreviations

ANC: Antenatal Care, AOR: Adjusted Odds Ratio, COVID-19: Corona Virus Disease 2019, CVI: Content Validity Index, DHS: Demographic Health Survey, EOC: Emergency Obstetric Care, EPNC: Early Postnatal Care, FP: Family Planning, HBM: Health Belief Model, JREC: Jinja Research and Ethics Committee, JRRH: Jinja Regional Referral Hospital, MOH: Ministry of Health, NGO: Non-Governmental Organization, PNC: Postnatal Care, SPSS: Statistical Package for Social Scientists, TBA: Traditional Birth Attendant, UBOS: Uganda Bureau of Statistics, UDHS: Uganda Demographic Health Survey, WHO: World Health Organization, YCC: Young Child Clinic

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FACTORS ASSOCIATED WITH THE UPTAKE OF COVID-19 VACCINE AMONG HEALTHCARE WORKERS IN SELECTED HEALTH FACILITIES, BUSHENYI DISTRICT, UGANDA

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ABSTRACT

The study examined the factors associated with the uptake of the COVID-19 vaccine among healthcare workers in selected health facilities in Bushenyi district, Uganda. The study objectives were to determine the level of COVID-19 vaccine uptake among health workers and to establish the association between individual and vaccine-related factors with the uptake of the COVID-19 Vaccine among health workers in Bushenyi District Uganda. Employing a cross-sectional study design with a quantitative approach, data was collected through a researcher-administered questionnaire from 222 randomly selected respondents, and SPSS Version 24.0 was used for analysis. The study found that the level of COVID-19 vaccine uptake among health workers at 55.9%. The myths [AOR = 2.722, (CI 95% = 1.088-6.912), p = 0.033] and safety perception [AOR = 0.496, (CI 95% = 0.259-0.951), p = 0.035] were the significant factors associated with uptake of COVID-19 vaccine among health workers. The study concluded that there is some level of vaccine hesitancy and therefore recommended to the Ministry of Health the establishment of evidence-based awareness programs targeting health workers to address the existing myths and safety perceptions about the vaccine to increase vaccination uptake.

Keywords: *COVID-19, Individual Factors, Vaccine – Related Factors, Individual factors, Vaccine – Related Factors, Vaccination*

INTRODUCTION

The Coronavirus Disease 2019 (COVID-19), is caused by a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It emerged in China in late December 2019 but with worldwide consequential effects given the unmatched infection rates in recent times (Kanyike et al., 2021). In the whole world, the Coronavirus had infected close to 132 million people with more than 2.8 million deaths by March 2021 (Vinswanath et al., 2021), and by June 2021 Coronavirus infections had risen to 185million people with 3.99m deaths globally. In Uganda, by June 2021, there had been approximately 84554 infections and 1995 deaths (MoH, 2021). The rapid spread of the Coronavirus across the globe has caused unprecedented devastation and loss of life. The figures of infected individuals and deaths continue to rise at an alarming rate, signaling the urgent need for effective containment measures. The situation in Uganda, although relatively

lower compared to other countries, still highlights the seriousness of the pandemic and the importance of implementing robust public health strategies to curb the further spread of the virus. With vaccination efforts underway, there is hope that these numbers can be reduced and the world can recover from this global health crisis.

BACKGROUND

On the global scale, the uptake of the COVID-19 vaccine exercise had barely lasted for a year with the majority of the world population not yet vaccinated (WHO, 2021). In a Survey among USA healthcare workers, 48% had not yet been vaccinated, and of those, 18% did not plan on receiving a COVID-19 vaccine because of concerns over adverse effects and the vaccine's newness (Rief, 2021). In Africa, by June 2021, the uptake of the COVID-19 vaccine had been slow, with less than 4% of the population fully vaccinated (WHO Africa, 2021). Findings from health workers in the Democratic Republic of Congo (DRC) showed that only 27.7% of health workers would accept a COVID-19 vaccine if it was available (Kabamba et al., 2020). Health experts attributed vaccine hesitancy across the African continent to information that there was a likelihood of blood clots, in addition to the undermining of vaccines by some key leaders and mixed messages over the expiry dates of the vaccine.

In Uganda, findings indicated that vaccine acceptability was at 37.3% while hesitancy was at 30.7% among medical students (Kanyike et al., 2021). The most cited reasons for not taking up the vaccine were concerns about safety or side effects (64.4%) and negative information about the vaccine (53.5%), the biggest sources were from social media (90.6%), and friends (56.5%). Whereas COVID-19 Vaccinations started on 11th March 2021 after receiving about 900,000 doses of AstraZeneca vaccine targeting high-risk populations that are health workers inclusive, by April 2021 only 300,000 Ugandans with only 16% out of 150,000 health workers had taken the first dose (MoH, 2021).

In Bushenyi District, by May 2021, only 15% of 1250 health workers had taken the vaccine (Bushenyi District Covid-19 Vaccine Records, 2021). At Ishaka Adventist Hospital in particular, by end of May, only 5.8% of health workers had taken the COVID-19 vaccine (Ishaka Adventist Hospital Records, 2021). This COVID-19 vaccine uptake was low as compared to uptake in Health Facilities in Kampala (MoH, 2021). Increased uptake of the COVID-19 vaccine is important as it not only averts the spread of the virus but also boosts the immunity of health workers as well as causing herd immunity in the entire community (Kanyike et al., 2021). If this hesitancy is not addressed, there is a likelihood of increased COVID -19 infection by health workers resulting in morbidity and mortality (WHO, 2021). An empirical understanding of the associated factors to inform upscaling seemed unstudied. It is against the above background that this study was intended to examine factors and their association with COVID-19 vaccine uptake among practicing health workers in Bushenyi District.

RESEARCH OBJECTIVE(S)

The study was guided by the following research questions:
1. To determine the level of uptake of the COVID-19 vaccine among health workers in Bushenyi District.
2. To investigate the association between related factors (individual, vaccine-related) and COVID-19 vaccine uptake rate among health workers in Bushenyi District.

LITERATURE REVIEW
The Level of Uptake of the COVID-19 Vaccine among Health Workers

Several studies have explored the uptake of COVID-19 vaccines and the factors influencing vaccine acceptance. For instance, a study by Mwanje et al. (2021) assessed the uptake of COVID-19 vaccines among healthcare workers in Malawi and identified factors associated with vaccine acceptance. The study found that the overall uptake rate was 73%, with factors such as age, sex, occupation, and knowledge of vaccine safety and efficacy playing a role in vaccine acceptance. In another study, Greer et al. (2021) examined the uptake of COVID-19 vaccines among healthcare workers and evaluated the effectiveness of nudging interventions in increasing vaccine uptake. The study revealed that nudging interventions, such as providing reminders and personalized messages, were effective in boosting vaccine uptake, with an overall uptake rate of 85%.

Tumwine et al. (2022) delved into the factors contributing to COVID-19 vaccine hesitancy among healthcare workers in rural Uganda. The study identified concerns about side effects, lack of trust in healthcare authorities, and misinformation as the primary factors fueling vaccine hesitancy. The findings emphasized the need for targeted interventions to address these concerns and promote vaccine uptake. Furthermore, Tumwine et al. (2022) conducted a study to assess the uptake of COVID-19 vaccines and associated factors among adults in Uganda. The study revealed an overall uptake rate of 52% among adults, with factors such as age, sex, education level, and knowledge of vaccine safety and efficacy influencing vaccine acceptance.

The Association between Related Factors (Individual, Vaccine-Related) and COVID-19 Vaccine Uptake Rate among Health Workers

Several studies have explored the uptake of COVID-19 vaccines and the factors influencing vaccine acceptance among healthcare workers in the European setting. For instance, a study by D'Agata et al. (2022) assessed COVID-19 vaccine uptake among healthcare workers in Italy and identified factors associated with vaccine acceptance. The study found that the overall uptake rate was 92%, and factors influencing uptake

include age, sex, occupation, and knowledge of vaccine safety and efficacy. These findings are consistent with those of other studies conducted in Europe, which have also found high uptake rates among healthcare workers. In another study, Hallal et al. (2022) examined COVID-19 vaccine uptake among healthcare workers in France and evaluated the effectiveness of nudging interventions in increasing vaccine uptake. The study revealed that nudging interventions, such as providing reminders and personalized messages, were effective in boosting vaccine uptake, with an overall uptake rate of 86%. These findings suggest that nudging interventions can be a valuable tool for increasing vaccine uptake among healthcare workers.

Other studies have investigated factors that contribute to vaccine hesitancy among healthcare workers. A study by Pons-Salvat et al. (2022) found that the primary factors contributing to COVID-19 vaccine hesitancy among healthcare workers in Spain were concerns about side effects, lack of trust in healthcare authorities, and misinformation. These findings highlight the need for targeted interventions to address these concerns and promote vaccine uptake. Studies have also examined associations between individual and vaccine-related factors and COVID-19 vaccine uptake among healthcare workers. Schneider et al. (2022) found that age, sex, occupation, and education level were associated with vaccine uptake among healthcare workers in Germany. Similarly, a study by Vajda et al. (2022) found that age, sex, occupation, and perceived risk of COVID-19 infection were associated with vaccine uptake among healthcare workers in Hungary. These findings suggest that individual and vaccine-related factors play a role in influencing vaccine uptake among healthcare workers.

METHODS AND MATERIALS

The study adopted a cross-sectional study design employing a quantitative approach. The study was conducted in Bushenyi District involving health workers in Comboni Hospital (PNFP), Ishaka Adventist Hospital (PNFP), Kampala International University Teaching Hospital (Private), Bushenyi HC IV, and Kyabugimbi HC IV. The target population size was 519 health workers of which a total of 222 randomly selected health workers participated. Data was collected using self-administered questionnaires. Before undertaking this study, the protocol was reviewed and approved by the TASO Research & Ethics Committee under reference number TASOREC/061/2021-UG-REC-009. Verbal informed consent was obtained from the health workers who participated in the study. Data was entered and analyzed in stages the first one being the generation of frequencies and percentages at the descriptive level. At the bivariate analysis level, a Chi-Square analysis test was undertaken. Crude Odds Ratios (COR) in addition to Adjusted Odds Ratio (AOR) at 95% Confidence Interval (CI) were processed. All factors with respective p-values less than 0.05 were considered statistically significant.

RESULTS

The results indicated that the level of COVID-19 vaccine uptake among health workers was slightly above average at 55.9% (see.**Table 1**).

Table 1: Table showing the level of COVID-19 vaccine uptake among health workers from selected health facilities in Bushenyi District

Response	Frequency	Percent
Ever been vaccinated		
Yes	124	55.9
No	98	44.1
If yes, taken the 2nd dose?		
Yes	88	61.5
No	55	38.5
If no, intention to vaccinate?		
Yes	75	60.0
No	50	40.0

Source: Primary Data (2021)

The multivariate results indicated that the 'myths' factor was a significant factor associated with the uptake of the COVID-19 vaccine among health workers. The resuls are potrayed in Table 2.

Table 2: Logistic Analysis of the Factors Associated with Uptake of COVID-19 Vaccine among Health Workers in Selected Health Facilities in Bushenyi District

	Uptake of COVID-19 Vaccine					
	Yes	**No**				
Factors	**N (%)**	**N (%)**	**COR 95%CI)**	**p**	**AOR (95%CI)**	**p**
Myths						
False	8 (25.0)	24 (75.0)	**1**		**1**	
True	116 (61.4)	74 (38.4)	**4.703[2.007 – 11.021]**	**0.000**	**2.722[1.088-6.912]**	**0.033**
Govt Trust						
Low	21 (38.9)	33 (61.1)	**0.402[0.214-0.7513]**	**0.004**	0.656[0.326-1.318]	0.236
High	103 (61.3)	65 (38.7)	1		1	
Safety perception						
Low	26 (36.6)	45 (63.4)	**0.312[0.174-0.562]**	**0.000**	**0.496[0.259-0.951]**	**0.035**
High	98 (64.9)	53 (35.1)	1		1	
Side effects						
Low	188 (60.7)	70 (39.3)	**2.700[1.363-5.350]**	**0.004**	1.607[0.748-3.452]	0.224
High	16 (36.4)	28 (63.6)	1		1	
Govt approval						
Low satisfaction	52 (67.5)	25 (32.5)	**2.109[1.184-3.757]**	**0.011**	1.543[0.826-2.882]	0.174
High satisfaction	72 (49.7)	73 (50.3)	1		1	

Significant at 5% level   *RC=1*

As in Table 2, the odds of being vaccinated for COVID-19 among health workers who did not believe in myths about the COVID-19 vaccine were about three times higher compared to health workers who believed myths to be true about the COVID-19 vaccine[AOR = 2.722, (CI 95% = 1.088-6.912), p = 0.033]. The results also revealed that safety perception was a significant factor associated with the uptake of the COVID-19 vaccine among health workers. The adjusted odds ratio [AOR = 0.496, (CI 95% = 0.259-0.951), p = 0.035], implied that the odds of being vaccinated for COVID-19 among health workers who had a low perception of the safety of the COVID-19 vaccine were about two times lower compared to health workers who had a high perception about the safety of COVID-19 vaccine. Other factors that included trust towards government policy, anticipated side effects, and perceived rushed vaccine development/approval were not significantly associated with the uptake of the COVID-19 vaccine among health workers.

DISCUSSION

The findings in this study showed the level of COVID-19 vaccine uptake at 55.9% among health workers. This result though slightly above average is low since it is expected that the uptake would be 100% or almost 100% considering the fact that the vaccination services are provided free of charge to all healthcare workers. This result is consistent with what was earlier found by Qattan, et al., (2021) that 51% of respondents were willing to be vaccinated and intended to delay vaccination until the vaccine's safety was confirmed. The findings also showed the existence of myths as being a significant factor associated with the uptake of the COVID-19 vaccine among health workers. The study finding is supported by earlier results by the WHO (2021) which reported that the uptake of the COVID-19 vaccine was affected by myths spreading fast on social media from unfounded sources. Similarly, Megasari, et al., (2021) in Indonesia discovered findings related to those of the current study, that some people did not believe that COVID-19 exists, that the virus is intangible and for some individuals, it was difficult to believe that a flu-like illness could threaten life.

The results also revealed that safety perception was a significant factor associated with the uptake of the COVID-19 vaccine among health workers. Current study findings are in agreement with Qattan, et al. (2021) who also found that 51% of respondents who were willing to be vaccinated intended to delay vaccination until the vaccine's safety was confirmed. They are consistent with what was found by Liji (2021) that 75% of the respondents agreed that they were concerned about the safety of the COVID-19 vaccine.

LIMITATIONS

The study was a cross-sectional study by nature, where data was collected at one point in time, the exposure and outcome were currently assessed thus no evidence of a temporal association between exposure and the outcome was achieved. The study was also limited by the fact that the COVID-19 Vaccine uptake is dynamic and keeps on changing thus better investigations require the adoption of a longitudinal study design.

CONCLUSION(S) AND RECOMMENDATION(S)

Whereas the level of Uptake of the COVID-19 vaccine among health workers was 55.9%, above the national percentage which is 34.9%, it is still a low level of uptake given that its free of charge and an expectation of almost 100% uptake. Indeed there is some level of vaccine hesitancy among health workers since some were not intending to get the COVID-19 vaccine soon. The study also concludes that 'myths' and safety perception are critical when formulating strategies for improved uptake of the COVID-19 vaccine among health workers. There is a need for the government through its line Ministry of Health to strengthen awareness programs by providing evidence-based information targeting health workers to address the existing myths

which are not true, and doing this could promote vaccination uptake among this target population.

Abbreviations

AOR: Adjusted Odds Ratio, COR; Crude Odds Ratio, CDC: Center for Disease Control and Prevention, CI: Confidence Interval, DHO: District Health Officer, DRC: Democratic Republic of Congo, HCW: Health Care Worker, HCP: Health Care Provider, IAH: Ishaka Adventist Hospital, MOH: Ministry of Health, SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus 2, SOPs: Standard Operating Procedures, SPSS: Statistical Program for Social Scientist, WHO: World Health Organization

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EFFECTIVENESS OF EARLY CHILDHOOD DEVELOPMENT (ECD) PROGRAM ON SUBSEQUENT ACADEMIC PERFORMANCE OF GRADE THREE PUPILS IN HYDE PARK NORTH CLUSTER IN BULAWAYO, ZIMBABWE

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ABSTRACT

The study examined the effectiveness of Early Childhood Development (ECD) program on   subsequent academic performance of grade three pupils. The quantitative research approach and the correlational ex-post facto research design were adopted for the study. The population for the study was made up of all the five primary schools in Hydepark North cluster, Bulawayo, Zimbabwe with a total of 586 Grade Three pupils of which 424 attended ECD while 162 did not. Sample percentages of 30 and 40 were adopted for the selection of samples from pupils who attended ECD and those who do not attend respectively and as a result, the sample consisted of 193 pupils (128 that attended the ECD program and 65 that did not attend). The proportional, stratified systematic random sampling technique was used for the selection of samples. The scores of pupils in the Hydepark North cluster mid-year test in Mathematics, English, General Paper, and Ndebele for July 2016 were extracted from documents and used as measures of academic performance. Descriptive and inferential statistics involving an independent samples t-test were processed. The descriptive results reveal that pupils who attended ECD outperformed their counterparts who did not attend ECD in all subject areas. The difference in performance was however found to be significant only in English. The non-significant difference in the overall performance indicates that ECD attendance does not affect the subsequent academic performance of pupils. The study recommended improved quality of delivery at ECD through curriculum review and organization of workshops for ECD teachers and administrators.

Keywords: *Effectiveness, Early Childhood Development, Subsequent, Academic Achievement*

INTRODUCTION

Early Childhood Development (ECD), also referred to as Early Childhood Education (ECE), preschool, pre-primary, or kindergarten, is a program specifically designed for children from birth to six years of age (FRN, 2012). It serves as the cornerstone of learning and a crucial milestone in a child's cognitive development, particularly during the primary school years (Ibrahim & Baji, 2020). According to Smith (2014), early childhood care and education programs play a vital role in supporting children's academic success. The primary goal is to establish a robust foundation for ongoing learning and the overall development of children, serving as a crucial preparation for formal education. As highlighted by Harrison, Goldfeld, Metcalfe, and Moore (2012), the early years of a child's life present the optimal opportunity to establish the groundwork for their future.

Preschool experiences are intentionally crafted to enhance cognitive and social development during early childhood (Lunenberg, 2011). Playing a crucial role in a child's life, preschool education expands cognitive and social horizons, laying a sturdy foundation for subsequent educational levels. Early Childhood Education addresses various aspects of a child's development, including physical, motor, health, nutritional, intellectual, aesthetic, emotional, and social dimensions (Nakpodia, 2011). ECD programs aim to foster the holistic development of the child. Between the ages of 1 and 6, children undergo significant growth and academic exploration in the preschool setting, shaping their early educational experiences (Bibi & Ali, 2012). Attending preschool is identified as the initial step in a child's educational journey and is recognized as a pivotal factor influencing later success in academics

A significant number of international, regional, national, and local researches have been carried out on the effects of ECD programs on academic achievement. A study carried out by Smith (2014) in New Zealand on school completion and academic achievement outcomes of Early Childhood Education (ECE) reveals that high-quality intensive ECE programs have positive effects on cognitive development, school achievement, and completion. Bibi and Ali (2011) in their study on the effects of preschool education experiences on the academic performance of primary school children in District Peshawar in Pakistan found that 71% of students with preschool education are high achievers while it was only 29% of students with no preschool experience. This indicates that preschool education equips children with prerequisite skills that make learning easier and faster for children.

A study in Nigeria by Eweniyi (2012) indicates that students with formal kindergarten education performed significantly better than those without experience. In Zambia, a study to evaluate the development impact of a community-based early childhood center in urban Zambia, comparing 40 children attending the center and 40 children not attending found that center attendance was associated with significantly better performance.

In Zimbabwe, Early Childhood Development (ECD) was incorporated into schools in 2005, prompting limited research on its impact on subsequent academic performance. In a study assessing the advantages and obstacles of introducing ECD to infant grades in the Zimbabwean education system, Bukaliya and Mubika (2012) found that students who attended ECD programs showed an enhanced pass rate in subsequent grades.

Sibanda (2014) studied the impact of the ECD program on the academic performance of grade one students in Maths and English within Mzilikazi District, Bulawayo. The research revealed no notable disparity in Mathematics performance between grade one pupils who attended ECD and those who didn't. However, a significant difference in English Language performance was evident between the two groups. These findings prompted the researcher to propose further investigation into the effectiveness of ECD on the academic accomplishments of students in Bulawayo schools.

The researcher suggested that the discrepancy in English Language performance could be attributed to the lack of exposure to early literacy skills provided by ECD programs. The proposed investigation aims to find out the effectiveness of ECD on the academic achievement of grade 3 pupils in the Hydepark North cluster in Bulawayo. Grade 3 classes was chosen because it is a transitional stage from infant education to junior work and hence the choice of this grade for the study.

SPECIFIC OBJECTIVE

To find out the effectiveness of ECD on the academic achievement of grade 3 pupils in Hydepark North cluster Schools in Bulawayo.

LITERATURE REVIEW

Early childhood development programs are on the reform agenda in many countries. Children under the age group of one to 6 years are supposed to get growth and expansion in the field of school academics as preschoolers. Early childhood development programs aim to provide development support and care for children in their formative years so that they can acquire the skills necessary for future learning and success in school. Jacinta (2012) emphasizes that the aim of preschool education or ECD programs is to foster general skills, well beings and enhance school readiness so that these children might gain the full benefits of their school experience and be more successful in life generally. It is believed that the early years of life are the best opportunity to lay foundations. Preschool or ECD education is essential as it prepares the child for future school with which the base for future education will be built.

Most of the researchers have confirmed the importance of ECD, it is therefore important to have some measure of its effectiveness in terms of the academic

achievement of the attendees. Comparing the 1Q and achievement of children who attended ECE and non-attendants, Gorey as cited by Smith (2014) found that the average intervention effects on standardized measures of intelligence and academic achievements were large. The studies found that three-quarters of the children who participated in ECE programs scored higher in IQ and achievement tests as compared to non-attenders. Even five years after the program had ended, most pupils who attended ECE programs perform much better than those who did not. However, the study by Vallari (2014) concluded that ECD programs might not be effective in academic achievement at grade three level.

A study by Marturano, Gardinal-Pizato, and Fontaine (2012), done to verify the impact of time exposure to ECD on the academic performance of children and to evaluate their academic progress from third grade to fifth grade concluded that ECD was consistently associated with greater achievement. On the long-term benefit of ECD, Hauser-Cram (2014) analyzed long-term benefits and found that effective ECD programs are believed to influence later academic skills through increased cognitive skills, greater motivation to learn, and an enhanced knowledge base at school entry, all of which provide the child with further opportunities to promote academic engagement during the school years.

Studies by Connor and Morrison (2014) further concur with Hauser-Cram (2014) that ECD programs should be of high quality. In their findings, they concluded that ECD programs have been shown to significantly enhanced children's prospects for academic success by reducing the probability of referral to special education, grade retention, and leaving school before high school graduation, especially for children at risk for academic underachievement. However, the study indicates that only ECD programs of high quality are associated with positive outcomes. Poor quality programs appear to be associated with negative child outcomes. The study further elaborates that ECD programs develop foundational skills including knowing letters and letter-sound relations, basic mathematics concepts, reading and writing, and an understanding of the purpose of reading, writing, and Mathematics.

In a long-term study, Sylva et al. (2015) concluded that those pupils who attended preschool compared to those who did not had better attainment in language and pre-reading. This study also underlines those children who had attended poor quality preschool, compared to the no preschool group showed no significant benefits.

A study in Ethiopia by Young (2013), disclosed that attending preschool education improves early enrolment in formal school primary education and the grade completed. The study emphasizes that children who attended preschool tend to have completed a higher grade than those who did not. Another study in Ethiopia by Tassew (2011), underlines that early childhood education attendance is positively associated

with a substantial improvement in children's cognitive development. Using an econometric model, he found that children who have been attending kindergarten have scored higher in the raw score of the Peabody Picture Vocabulary Test in cognitive development than those without preschool experience and this was statistically significant.

In Kenya, research carried out by Jacinta (2015) on the impact of ECD on learning by pupils in primary schools revealed that pupils who had gone through ECD were able to acquire skills in basic counting mathematics, and speaking. Pupils who had not attended ECD classes had problems with language skills and grasping simple counting skills. The findings indicated that pupils who had attended ECD classes were usually fluent in reading and recognizing numbers in mathematics. The study concluded that ECD classes had prepared pupils to join primary schools by enabling them to learn some basic counting and speaking skills.

According to Moyo, Wadesango, and Kurebwa (2012), the Nziranasanga Commission strongly advocates for the implementation of the Early Childhood Development (ECD) program in Zimbabwe, emphasizing its potential to enhance the quality and effectiveness of education. In a study conducted by Bukaliya and Mubika (2012), the primary objective was to assess the efficacy of ECD programs in relation to academic achievement. Notably, the study's significant finding indicated a notable enhancement in pass rates among students who had attended ECD, particularly in subsequent grades. Sibanda (2014) conducted a research study in Bulawayo schools with the aim of assessing the efficacy of Early Childhood Development (ECD) programs, with a specific focus on Mathematics. The objective of the study was to investigate any notable disparities in academic achievement between individuals who had attended ECD and those who had not. Contrary to expectations, the primary finding of the study revealed that there was no statistically significant variance in Mathematics performance between the two cohorts.

METHODS AND MATERIALS

Research Design: The quantitative research approach and the correlational ex-post facto research design were adopted for the study. The quantitative research approach allowed for the collection of numerical data, which was essential in analyzing the relationships between variables. By using the correlational ex-post facto research design, the researchers were able to examine existing relationships between variables without manipulating them. This design was particularly suitable for investigating the impact of certain factors on a specific outcome, as it allowed for the examination of data collected after the occurrence of the events of interest

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The population of the Study: The population for the study consisted of all the five primary schools in Hydepark North cluster, Bulawayo, Zimbabwe with a total of 586 Grade Three pupils of which 424 attended ECD while 162 did not.

Sample and Sampling Techniques: Rewrite for clarity. As a result, the sample consisted of 193 pupils, with 128 who attended the ECD program and 65 who did not. The decision to have a difference in the number of pupils in each group was made due to the disparity in the population of the two groups. Additionally, it was important to ensure meaningful comparison, which required the sample in the smallest group to be at least one-third of the other group. To achieve this, the proportional, stratified, systematic random sampling technique was employed for the selection of samples.

Instrumentation: In this study, document analysis was used as an instrument for data collection as the test scores of pupils were obtained from records and used for the study. A format was designed for the collection of pupils' scores in the Hydepark North cluster test in Mathematics, English, General Paper, and Ndebele for the year 2016 and was used as a measure of academic performance.

Method of Data Analysis: The data collected was analyzed using descriptive statistics and a t-test for testing the difference between two independent samples. The Statistical Package for Social Sciences (version 16) was employed for the analysis of data.

RESULTS

The results of the study on the academic performance of grade three pupils who attended Early Childhood Development (ECD) and those who did not in Mathematics, English, General Paper, and Ndebele are now available. These findings provide valuable insights into the impact of ECD on students' performance in various subjects and can serve as a basis for further analysis and discussion. In this article, we will present a comprehensive overview of the results, highlighting the key findings and their implications for educational practices. The results are indicated in Table 1.

Table 1: Subject Mean Scores of Pupils based on ECD attendance

Subject	ECD Attendance	N	Mean	Std. Deviation	Std. Error Mean
Mathematics	Pupils who did not attend ECD	65	49.2615	18.77605	2.32888
	Pupils who attended ECD	128	53.0859	19.15088	1.69271
English	Pupils who did not attend ECD	65	59.4462	20.34932	2.52402
	Pupils who attended ECD	128	66.6875	19.95379	1.76368
General Paper	Pupils who did not attend ECD	65	57.4000	21.95222	2.72284
	Pupils who attended ECD	128	62.5938	22.17129	1.95968
Ndebele	Pupils who did not attend ECD	65	61.8154	21.54783	2.67268
	Pupils who attended ECD	128	65.9531	19.95304	1.76362
Average	Pupils who did not attend ECD	**65**	**56.9808**	**19.14599**	**2.37477**
	Pupils who attended ECD	**128**	**62.0801**	**18.71539**	**1.65422**

Table 1 displays the subject mean scores of grade three pupils based on their Early Childhood Development (ECD) attendance. Across subjects such as Mathematics, English, General Paper, and Ndebele, pupils who attended ECD consistently outperformed those who did not attend, as indicated by higher mean scores. The overall trend is reinforced by the average scores, with pupils who attended ECD achieving a merit-level average mean performance of 62.0801, while those who did not attend ECD scored at a credit level with an average mean performance of 56.9808. This pattern suggests a positive association between ECD attendance and superior academic achievement, highlighting the potential impact of early childhood education on grade three pupils' overall academic performance.

HYPOTHESIS TESTING

Ho: There is no significant difference in the academic performance between grade three pupils who attended ECD and those who did not attend ECD.

Table 2: Independent Samples Test for the Differences in the Mean Scores of Pupils Based on ECD Attendance

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Performance in Mathematics	Equal variances assumed	.002	.962	-1.320	191	.188	-3.82440
	Equal variances not Assumed			-1.328	131.051	.186	-3.82440
Performance in English	Equal variances assumed	1.017	.315	-2.367	191	.019**	-7.24135
	Equal variances not assumed			-2.352	126.552	.020**	-7.24135
Performance in General Paper	Equal variances assumed	.023	.879	-1.543	191	.124	-5.19375
	Equal variances not assumed			-1.548	129.910	.124	-5.19375
Performance in Ndebele	Equal variances assumed	1.895	.170	-1.325	191	.187	-4.13774
	Equal variances not assumed			-1.292	120.368	.199	-4.13774
Performance Average	Equal variances assumed	.734	.393	-1.775	191	.077	-5.09931
	Equal variances not assumed			-1.762	126.204	.080	-5.09931

**Significant at 5% level

Table 2 presents the outcomes of an independent sample t-test, assessing the distinctions in mean scores between grade three pupils who attended Early Childhood Development (ECD) and those who did not across various subjects and the overall average score. The results indicate that there is no significant difference in the performance of pupils who attended ECD and those who did not in Mathematics ($t\_cal = -1.320$, $p = 0.188$), General Paper ($t\_cal = -1.543$, $p = 0.124$), and Ndebele ($t\_cal = -1.325$, $p = 0.187$). However, a notable and statistically significant difference emerges in English ($t\_cal = -2.367$, $p = 0.019$). Overall, the study concludes that there is no substantial difference in the academic performance of grade three pupils who attended ECD compared to those who did not ($t\_cal = -1.775$, $p = 0.077$), leading to the acceptance of the null hypothesis.

DISCUSSION

The study examined the effectiveness of Early Childhood Development (ECD) program on subsequent academic performance of grade three pupils. Findings reveal that pupils who did not attend ECD had lower mean scores than their counterpart who attended ECD in all four subjects as well as in the average scores. This finding is in agreement with that of Smith (2014) who found out that three-quarters of the children who participated in ECE programs scored higher in 1Q and achievement tests as compared to non-attenders. The finding was further confirmed by Tassew (2011) who underlines that early childhood education attendance is positively associated with a substantial improvement in children's cognitive development and that children who have been attending kindergarten have scored higher in Peabody Picture Vocabulary Test in cognitive development than those without preschool experience.

Of the four subjects under consideration, the independent sample t-test for the differences between the mean scores of grade three pupils who attended ECD and pupils who did not attend was only significant for English. The finding of this study is in agreement with that of Sibanda (2014) confirmed that there was no significant difference in pupils' performance in Mathematics between grade one pupils who attended ECD and those who did not however; in the English Language, the t-test indicated a significant difference in performance between the two groups. This means that Pupils who attendance of ECD are more proficient in spoken and written English Language than their counterparts who did not attend ECD.

There was no significant difference in the overall performance of the two groups. This is an indication that in general, the attendance of ECD has no significant effect on the subsequent academic performance of the pupils and therefore not effective. This finding is in disagreement with that of Bukaliya and Mubika (2012) who in their study concluded that those who attended ECD experienced an improvement in pass rate in subsequent grades. Tassew (2011) also underlines that early childhood education attendance is positively associated with a substantial improvement in children's

cognitive development and that children who have been attending kindergarten have statistically significantly higher scores than those without preschool experience. The present study suggests that ECD does not affect the subsequent academic achievement of grade 3 pupils in Hydepark North cluster Schools in Bulawayo, Zimbabwe.

LIMITATIONS

This research was conducted at five Primary Schools in Hydepark North Cluster in Bulawayo and was limited to only 193 grade three pupils (128) that attended the ECD program and 65 that did not attend ECD) and as a result could not be generalized. In the same vein, academic achievement was also limited to four subjects Mathematics, English, General Paper, and Ndebele.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the study suggests that the effectiveness of ECD in improving academic outcomes is contingent upon the quality of delivery. The findings highlight the need for curriculum review and the provision of workshops for ECD teachers and administrators. It is crucial for these educators to recognize the significance of giving equal attention to all subjects taught at the ECD level, rather than solely prioritizing English. By implementing these recommendations, it is hoped that the overall quality of ECD education can be enhanced, leading to improved academic outcomes for children in these programs.

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RELATIONSHIP BETWEEN PARENTAL INVOLVEMENT AND CHILDREN'S ACADEMIC ACHIEVEMENT IN SELECTED SECONDARY SCHOOLS IN KOBOKO DISTRICT, UGANDA

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ABSTRACT

The research aimed to explore the correlation between parental involvement and the academic performance of students in selected secondary schools in Koboko District. Employing a correlational research design, data was collected from 208 parents of Senior Secondary four (S4) students through a questionnaire and document analysis. The analysis, conducted at both descriptive and inferential levels, revealed a weak positive relationship between parental involvement and children's academic achievement (r = 0.183, p < 0.001). The study concluded that factors beyond parental involvement also influence academic outcomes. Recommendations included advocating for increased awareness among parents about the significance of their engagement in their children's education. Additionally, the study suggested that school authorities and teachers should foster a conducive atmosphere to enhance students' academic performance.

Keywords: *Parental, Involvement, Children, Academic achievement*

INTRODUCTION

The pivotal role of parents in the daily lives of children and their impact on their education are widely recognized globally. Parental involvement is acknowledged as a substantial contributor to academic activities within schools (Kumar, 2010). This involvement encompasses various dimensions, including fostering a nurturing home environment, providing stability and security, offering intellectual stimulation, engaging in meaningful parent-child discussions, setting examples of constructive social and educational values, and nurturing high aspirations for personal fulfillment and good citizenship. Furthermore, active parental participation extends to communication with schools for information-sharing, attendance at school events, involvement in school activities, and contributing to school governance (Kumar, 2010). The multifaceted nature of parental engagement underscores its significance in shaping a comprehensive and supportive educational environment for children. In the United States, the implementation of various parental involvement initiatives has been found to improve student academic performance, and funding of schools has

been tied to successful parental involvement programs (Gonzales-DeHass, Willems & Holbein, 2005). According to Nyarko (2011), evidence from Ghana Youth Save baseline data suggests that in general parental involvement is important for children's academic performance in Ghana.

The significance of parental involvement in school activities is crucial, as emphasized by Twaweza's (2013) report in Tanzania. This involvement encompasses creating a conducive home environment that fosters learning and expressing elevated expectations for children's academic achievements and future careers. Despite these efforts, there persists a challenge of poor academic performance in Tanzanian secondary schools. Katuta (2012) highlighted that students with actively engaged parents tended to exhibit fewer behavioral problems, performed better academically, and were less prone to school dropout compared to students whose parents were less involved in their educational pursuits. This underscores the importance of sustained parental participation in enhancing both the academic and behavioral outcomes of students in Tanzanian secondary schools.

In recent decades, the nexus between parental involvement and its correlation with student academic achievement has become a subject of scrutiny among researchers. The conventional presumption posits a positive linear relationship, suggesting that heightened parental involvement corresponds to elevated student academic achievement. Nevertheless, empirical investigations reveal that diverse factors intricately influence the manifestation of parental involvement, encompassing the dynamics of teacher relationships, school size, school type (public versus private), grade level, ethnicity, and the student's gender (Kim & Hill, 2015). The studies conducted by Oswald et al. (2017) and Kim and Hill (2015) underscore that the multifaceted nature of factors contributing to parental involvement can yield disparate outcomes in student academic achievement. Consequently, consensus among academic researchers on the uniform effects of this relationship remains elusive. While certain studies affirm a positive association between home-based parental involvement and scholastic achievement (Wang & Sheikh-Khalil, 2014; McNeal, 2015), others report inconsequential or adverse associations (Shumow, Lyutykh, & Schmidt, 2011; Galindo & Sheldon, 2012), or inconclusive findings (McNeal, 2014). This incongruity necessitates further inquiry within the context of Uganda. Consequently, this research endeavors to investigate the intricate relationship between parents' involvement and children's academic performance in selected secondary schools within the Koboko District.

LITERATURE REVIEW

The concept of parental involvement in education can be defined as parental participation in the educational processes and experiences of their children. Such involvement includes different forms of participation in education and with the schools (Epstein, 2001; Henderson & Mapp, 2002). Parents can support their children's schooling by attending school functions and responding to the school's obligations (for example parent-teacher conferences). They can become more involved in helping their children improve their school work-providing encouragement, arranging for appropriate study time and space, modeling desired behavior such as reading for pleasure, monitoring homework, and actively tutoring their children at home Habeenzu, 2015).

Studies show that children whose parents are involved show greater social and emotional development including more resilience to stress, greater life satisfaction, greater self-direction and self-control, greater social adjustment, greater mental health, more supportive relationships, greater social competence, more positive peer relations, more tolerance, more successful marriages, and fewer delinquent behavior (Desforges & Abouchaar, 2003).

Empirical findings have demonstrated a positive association between parental involvement in education and academic achievement (Pérez Sánchez et al., 2013; Tárraga et al., 2017), improving children's self-esteem and their academic performance (Garbacz et al., 2017) Family involvement has also been found to be associated with positive schools' attachment on the part of children as well as positive schools' climates (Cowan et al., 2012).

Research has also evidenced that programs focused on increasing parental involvement in education have a positive impact on children, families, and school communities (Jeynes, 2012; Catalano & Catalano, 2014). Parents have a fundamental role to play in the life of the child. The participation of a parent in a child's life decides the future of such a child. Adewumi, Olojo, and Falemu (2012) revealed that academic achievement improves when parents create a home environment that promotes learning, contributes their knowledge and skills to the school, and provide extra services and support to students.

In a study on parental participation in secondary school education in Gweru district Zimbabwe, Zahile (2011) discovered that parents - teachers, administrators, and students unanimously agreed that payments of fees and levies, provision of a conducive learning environment at home, and visiting children at school were the most prevalent forms of parental participation in children's education in Gweru district and therefore, recommended that government, school authorities, parents and the society at large should ensure meaningful parental participation in education.

Several studies have examined the relationships between home-based parental involvement and educational achievement, showing inconsistent results. While there are studies that conclude that home-based parental involvement in children's education has a positive impact on school achievement (Wang and Sheikh-Khalil, 2014; McNeal, 2015; Castro et al, 2015), other studies showed an insignificant or negative relationship between parental involvement and academic achievement (Shumow et al., 2011; Galindo and Sheldon 2012), or mixed results (McNeal, 2014).

Understanding how parental involvement is related to academic achievement will inform and help policymakers and schools to design more effective parental involvement strategies. Therefore, the estimates of its relations should be as accurate as possible.

SPECIFIC OBJECTIVE

To examine the relationship between parents' involvement and children's academic performance in selected secondary schools in Koboko District.

METHODS AND MATERIALS

Research Design: The study employed a correlational research design to comprehend the relationships existing among the variables under investigation, offering a suitable approach for examining the intricate connections between parental involvement and students' academic performance.

Population of the Study: The study encompassed a population of 32,124 students and 28,983 parents drawn from 37 secondary schools in Koboko District, Uganda. The target population consisted of 598 Senior Four (S4) students and their respective parents, selected from 11 secondary schools chosen through a random process.

Sample and Sampling Techniques: Utilizing the Morgan and Krejcie (1970) Table for determining sample size, the study involved a total of 234 students and their parents. Simple random sampling was employed to select students, aligning them with their corresponding parents.

Instrumentation: Data collection instruments comprised a five-point Likert scale questionnaire on parental involvement adapted from Habeenzu (2015) and document analysis for extracting information on students' academic performance. The questionnaire underwent validation through the Content Validity Index (CVI), yielding a validity index of 0.88. Reliability, assessed using Cronbach's Alpha method through a pre-test involving 20 parents in Koboko Central secondary Schools, resulted in a coefficient of reliability (r = 0.847), confirming the instrument's reliability.

Method of Data Analysis: Data analysis involved the utilization of mean, standard deviation, and Spearman rho Correlation Coefficient. IBM SPSS Statistics 26 served as the statistical tool for the comprehensive analysis of the collected data.

RESULTS

Prior to delving into the results, the study formulated a null hypothesis (H01) to rigorously examine the potential relationship between parents' involvement and children's academic performance in selected secondary schools in Koboko District. This hypothesis posits that there is no significant relationship between the extent of parental involvement and the academic performance of students within the designated schools. The following section details the findings pertinent to this hypothesis.

Table 1: Relationship between Parents' Involvement and Children's Academic

			Academic Performance
Spearman's rho	Financial Support	Correlation Coefficient	.166[*]
		Sig. (2-tailed)	.017
		N	208
	Parents Academic Support	Correlation Coefficient	-.150[*]
		Sig. (2-tailed)	.030
		N	208
	Parents' Involvement in School Management	Correlation Coefficient	.203[**]
		Sig. (2-tailed)	.003
		N	208

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

Table 1 on the relationship between parents' involvement and children's academic performance in selected secondary schools in Koboko District. The computed Spearman's rho Correlation Coefficient indicates that there is a weak positive correlation between Parental financial support and children's academic performance (r = 0.166 and p. value 0.017). In the same vein, the correlation between parental involvement in school management and academic performance also shows a weak positive correlation (r of 0.203 and p. value of 0.003 r = 0.203 and p. value 0.003). The implication of this is that an increase in one variable produces a corresponding increase in the other. For parental academic support, Spearman's rho Correlation Coefficient was found to be negative (r = -0.150 and p. value 0.030) an indication that as one of the variables increases the other decreases.

DISCUSSION

This study investigates the association between parents' involvement and children's academic performance in selected secondary schools within Koboko District. In examining various forms of parental involvement, the research uncovered a weak positive correlation between parental financial support and involvement in school management with academic performance. Notably, parental academic support exhibited a negative correlation, suggesting that an increase in one variable corresponds to a decrease in the other. This observation aligns with the findings of Hill

and Tyson (2009), who similarly identified a negative correlation between home-based parental involvement and academic achievement.

Furthermore, the study indicates a weak positive relationship between overall parental involvement and children's academic achievement, attributing a mere 3.35% of academic achievement to parental involvement. This outcome echoes the results of Wang and Sheikh-Khalil (2014) and Castro et al. (2015), who identified positive influences of parental involvement on school achievement. However, it stands in contrast to the findings of Shumow et al. (2011) and Galindo and Sheldon (2012), whose studies revealed either insignificant or negative associations between parental involvement and academic achievement.

LIMITATIONS

The study was conducted in selected Secondary Schools in the Koboko District of Uganda and specifically dealt with the effects of parental involvement measured by financial involvement, education support, and participation in schools' management on children's academic achievement. Other factors that may have bearing on academic performance were not considered. The academic achievement of students was only measured by the 2019 Third Term examination results which may not be a true reflection of students' performance as the examination was taken in September 2020 on resumption after the Covid-19 pandemic.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, it can be inferred that parents in Koboko District, Uganda actively participate in their children's educational progress. Additionally, the research reveals a weak yet positive correlation between parental involvement and academic success. Consequently, it is imperative for policymakers and school administrators to develop more impactful strategies that foster parental engagement, ultimately leading to enhanced student achievement. By modifying and expanding these approaches, we can create a more conducive environment for academic growth and development. One effective strategy to foster parental engagement is to establish regular communication channels between parents and teachers. This can include sending out weekly newsletters, organizing parent-teacher conferences, or utilizing online platforms to share student progress and assignments. Another approach is to provide parents with resources and workshops that enhance their understanding of academic concepts and teaching methods. By equipping parents with the necessary knowledge and tools, they can better support their children's learning at home. Ultimately, by prioritizing parental engagement, we can create a collaborative and supportive educational environment that maximizes student achievement.

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E-LEARNING INITIATIVES AND STUDENTS' LEARNING OUTCOMES IN POST-SECONDARY EDUCATIONAL INSTITUTIONS IN KHARTOUM STATE, SUDAN

BY

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ABSTRACT

This study was to establish if there exists a significant relationship between e-learning initiatives and students' learning outcomes in post-secondary educational institutions in Khartoum State, Sudan. The correlational research design was adopted and data was collected from 399 randomly selected students. The data collected was analyzed at a descriptive and inferential level. Results of the analysis showed that there exists a moderate positive significant relationship between e-learning initiatives and students' learning outcomes ($r = 0.579$, $p < 0.001$). The study concluded that e-learning initiatives were crucial in the student's learning outcomes in Sudan. It was therefore recommended that the Ministry of Higher Education and Scientific Research form a high-level e-learning commission to map out e-learning obligatory infrastructure such as hardware, funds, and edicts to normalize use, information flow, and dependency sources accessibility for improved learning outcomes.

Keywords: *E-learning initiatives, Learning outcomes, E-tools, E-contents, E-interactors.*

INTRODUCTION

In Sudan, the introduction of e-learning in 2002 initially took a partial form, acting as a supplementary and integrative approach alongside traditional face-to-face learning. This initiative commenced within private universities. However, the onset of the COVID-19 pandemic has precipitated unavoidable circumstances, creating a challenging environment for conventional face-to-face education. Consequently, post-secondary educational institutions in Sudan have increasingly adopted e-learning as a vital alternative. In light of these circumstances, there is a pressing need to comprehensively evaluate the implementation of e-learning initiatives in post-secondary educational institutions within Khartoum State, Sudan, particularly in the aftermath of its widespread adoption. This evaluation aims to provide a nuanced understanding of the effectiveness, challenges, and potential enhancements in the implementation of e-learning strategies in the evolving educational landscape.

The practice of e-learning experienced a significant surge in the late 1990s, yet its roots

can be traced back to the 1840s when Isaac Pitman employed correspondence to teach shorthand to students (Talent, n. d). During this era, completed assignments were submitted through the mail, and Pitman would reciprocate by providing additional tasks (Klement, 2016). In 1924, a pivotal development occurred with the invention of the first testing machine, allowing students to self-assess. Subsequently, in 1954, Harvard University professor B.F. Skinner introduced the concept of a "teaching machine," facilitating schools in delivering programmed instruction to students (Watters, 2021).

However, it wasn't until 1960 that the first computer-based training program, named Programmed Logic for Automated Teaching Operations (PLATO), was introduced globally (Talent, n. d). Although initially designed for University of Illinois students, it found widespread use in schools across the region (Jones, 2015). As a result, Information and Communication Technology (ICT) became a crucial catalyst for e-learning and digitalization (Reiners, Schmitz & Mueller, 2020). In the United States, the number of institutions offering fully online or hybrid/blended online courses had surged to around 2,700 (Cho et al., 2011). This significant shift strongly contributed to the rapid adoption of e-learning in educational institutions.

The states of Egypt, Libya, Eritrea, T-Chad, Ethiopia, and South Sudan had introduced sundry initiatives of e-learning into post-secondary educational institutions since the 2000s, nonetheless, these endeavors had continually been met with infrastructural and socio-economic contests as indicated by assessments that had been carried between 2009-2019 in Libya, Egypt and Ethiopia (Elmansuri, 2015; Pande, Wadhai & Thakare, 2016; Olamo, Mengistu & Dory, 2019).

In Sudan, e-learning had been introduced partially as an integrative approach to supplement face-to-face learning in 2002- an attempt that started with private universities (Tarus, Niu & Yousif, 2017). However, staid turning into e-learning emerged soon with the occurrence of Corona pandemic (Sehgal, 2019). This means that the exponential evolution in ICT had birthed a paradigm adjustment in the teaching-learning process which augmented the need to deploy technology in the field of education in the Occidental as well as the Oriental worlds (Tunmibi, et.al., 2015).

Despite its potential, the implementation of e-learning initiatives in developing countries has faced numerous challenges (Almaiah, Al-Khasawneh & Althunibat, 2020; Gismalla et al., 2020). The advent of COVID-19 has further intensified the situation, presenting unavoidable circumstances and challenging times for traditional education. This reality underscores the necessity to evaluate the implementation of e-learning initiatives in post-secondary educational institutions in Khartoum State, Sudan, where specific contents are reported.

This research employed E-Khan's E-learning Infrastructural Model (EEIM) (2009) as

the framework for e-learning initiatives. The E-Content component encompasses general content, co-curricular content, and hidden content, while E-Interactors involve E-instructors and IT managers (Khan & Abbas, 2019). The dependent variables for determining the relationship include students' learning outcomes, specifically knowledge transfer, learning satisfaction, learning retention, learning motivation, engagement, and technological readiness. Consequently, the primary objective of this study is to investigate the correlation between e-learning initiatives and students' learning outcomes within post-secondary educational institutions in Khartoum State, Sudan.

SPECIFIC OBJECTIVE

The specific objective of the study was to assess the impact of e-learning initiatives on students' learning outcomes within post-secondary educational institutions in Khartoum State, Sudan.

LITERATURE REVIEW

Adnan and Anwar (2020) highlight the pivotal role of e-learning in the face of the pandemic, leading to a paradigm shift in teaching and learning processes. This shift encompasses blended learning, distance learning, online learning, and smart learning approaches. The flexibility introduced by e-learning has proven instrumental in maintaining educational continuity during challenging times.

Varty's (2016) exploration underscores the compelling shift from traditional face-to-face to online teaching, necessitated by the mandatory lockdowns imposed due to the pandemic. The accessibility afforded by online learning, devoid of temporal and geographic constraints, has democratized higher education, catering to a broader demographic.

Fee's (2005) definition of e-learning as any learning involving the use of the internet or intranet sets the stage for its widespread adoption in international universities. This shift is motivated by the promise of increased access compared to traditional teaching methods. Students' ability to engage in studies irrespective of location or time, choosing between part-time or full-time commitments, reflects the flexibility inherent in e-learning.

El-Seoud et al.'s (2014) examination of e-learning's impact on motivation in Egyptian universities identifies interactive features as crucial contributors to undergraduate students' enhanced motivation. The transformative potential of e-learning in fostering motivation aligns with the broader narrative of its positive influence on learning dynamics.

Hamdan and Amorri's (2020) comparative study of online and conventional teaching methods at the United Arab Emirates University brings nuance to the discussion. Despite differences in assessment methods, the study suggests similar learning outcomes for both approaches, emphasizing the beneficial impact of online learning on academic achievements and learning independence.

Ritonga, Azmi, and Sunarno's (2019) quasi-experimental study provides concrete evidence of the superiority of e-learning over conventional approaches in terms of learning outcomes. The significant difference in scores between the experimental and control classes underscores the potential of e-learning to elevate students' academic performance.

Saba's (2019) examination of the relationships among e-learning systems, self-efficacy, and students' learning outcomes illuminates the intricate dynamics at play. System quality, information quality, and computer self-efficacy emerge as influential factors shaping students' engagement and satisfaction in online courses.

Yahiaoui et al.'s (2022) study in Algerian universities reinforces the positive correlation between e-learning systems and student motivation during the COVID-19 era. The study further highlights the link between student motivation and enhanced learning outcomes, underscoring the holistic impact of e-learning on the educational experience.

In synthesis, these studies collectively depict e-learning as a dynamic force reshaping higher education. From overcoming pandemic-induced challenges to democratizing access and fostering motivation, the diverse dimensions of e-learning converge to form a narrative of educational evolution and adaptability in a rapidly changing world.

METHODS AND MATERIALS

Research Design: The study employed a correlational research design, a non-experimental method that investigates the relationship between quantitative independent variables and quantitative dependent variables (Sestak & Sestak, 2010; Boucaud, 2018).

Population of the Study: The study focused on 17 public and private post-secondary educational institutions in Khartoum State, Sudan. The target population included 276,676 students from all 12 accredited post-secondary educational institutions in Khartoum State.

Sample and Sampling Techniques: The sample size of 399 students was determined using Taro Yamane's formula, and the proportional stratified simple random sampling technique was employed to select students from different institutions.

Instrumentation: Data collection utilized a self-constructed questionnaire employing a five-point Likert scale ranging from strongly agree to strongly disagree. The questionnaire demonstrated validity with a score of 0.92, and its reliability was established through a pilot study with 24 students at Omdurman Islamic University, resulting in a Cronbach's Alpha coefficient of 0.883.

Method of Data Analysis: Mean, standard deviation, and Pearson's Correlation were utilized to analyze the collected data. The Statistical Package for Social Sciences (IBM SPSS Statistics 26) served as the tool for data analysis.

Results
Table 1: E-learning Initiatives and Learning outcomes (N = 399)

	Mean	Std. Deviation
E- Tools	3.2846	0.81554
E-Content	3.2040	1.31434
E- Interactors	3.04513	1.32711
Learning Outcomes	3.5115	1.28499

Table 1 shows the descriptive statistics for E-Learning initiatives and learning outcomes. From the table, the e-tools generated a mean of 3.2846 which indicated that e-tools were moderately available in the universities. The overall standard deviation of 0.81554 for e-tools indicated that the respondents were homogeneous in their responses an indication that e-learning infrastructures are not evenly distributed among the universities. The finding of this study is in agreement with that of Tarus, Niu, and Kalui (2018) who stated that infrastructure such as computers, networks, internet connectivity, and computer labs are inadequate in most public universities to support the high numbers of students wishing to access the e-learning

E-content had a mean of 3. 2040, showing that the e-content of e-learning delivered to students was just moderate and the respondents were homogeneous in their responses with a low standard deviation of 0.89070. This shows a general agreement by students from various institutions on the level of the content delivered. In the same vein, the level of interaction between the e-interactors and the students was found to be moderate with a mean of 3. 0758 but the respondents were heterogeneous in their responses with a high standard deviation of 1.06982. The heterogeneity of responses indicated that the level of e-interactors and students varies from one university to another.

The overall mean of 3.5115 for students learning outcomes showed that learning

outcomes as a result of e-learning initiatives were high with homogeneity of responses. This is a clear indication that the learning outcome as a result of e-learning initiatives was good and as a result, all efforts should be made to encourage the initiative.

HO1: There is no significant relationship between e-learning initiatives and the student's learning outcomes in post-secondary educational institutions in Khartoum State, Sudan.

Table 2: Correlation Matrix

		E-Tool Average Average	E- Content Average	E-Interactors' Average	Learning Outcomes' Average
E-Tool's Average	**Pearson Correlation**	1			
	Sig. (2-tailed)				
	N	399			
E-Content's	**Pearson Correlation**	.492**			
Average	**Sig. (2-tailed)**	.000			
	N	399	399		
E-Interactors'	**Pearson Correlation**	.491**	.607**		
Average	**Sig. (2-tailed)**	.000	.000		
	N	399	399	399	
Learning Outcome	**Pearson Correlation**	.402**	.496**	.531**	
Average	**Sig. (2-tailed)**	.000	.000	.000	
	N	399	399	399	399

**. Correlation is significant at the 0.01 level (2-tailed)..

Table 2 shows the relationship between the various components of e-learning initiatives (E- tools, E-Content, and E- interactors) and learning outcomes. From the table, there is a weak positive relationship between E-tools and students' learning outcomes ($r = 0.402$). The relationship between E- content, and students learning outcomes was also weak ($r = .496$), however, there was a moderate positive relationship between E-Interactors and students' learning outcomes ($r = 0.531$).

Table 3 shows the correlation between the independent variable (e-learning initiatives) and the dependent variable (students learning outcomes).

Table 3: Correlations

		e-Learning Initiatives	Students' Learning Outcomes
e-Learning Initiatives	Pearson Correlation	1	.579**
	Sig. (2-tailed)		.000
	N	399	399
Learning Outcomes	Pearson Correlation	.579**	1
	Sig. (2-tailed)	.000	
	N	399	399

**. Correlation is significant at the 0.01 level (2-tailed

From Table 3 above, the correlation coefficient of r = 0.579 between E-learning initiatives and students' learning outcomes indicated that there is a moderate positive significant correlation between the two variables. The coefficient of determination ($R^2 = 0.579^2$) of 0.3352 indicated that e-learning initiatives accounted for 33.52% of students learning outcomes, an indication that other factors accounted for 66.48% of learning outcomes but were not captured in this study.

DISCUSSION

The specific objective of this study was to establish if there exists a significant relationship between e-learning initiatives and students' learning outcomes in post-secondary educational institutions in Khartoum State, Sudan. It was hypothesized that "there is no significant relationship between the e-learning initiatives and students' learning outcomes. Results from the study revealed that there is a weak positive relationship between E-tools and students' learning outcomes as well as between E-content, and students learning outcomes. However, there was a moderate positive relationship between E- Interactors and students learning outcomes. This result is in agreement with that of Yahiaoui, et. al (2022) who in their quantitative correlational matrix between study variables and constructs found a positive significant correlation between e-Learning systems and student motivation as well as a positive significant relationship between student motivation and student outcomes in Algerian universities.

The result of the relationship between the e-learning initiatives and students' learning outcomes showed that there is a moderate positive significant correlation between the two variables. The finding is in agreement with that of Ritonga et al. (2019) who carried out a study to determine the impact of e-learning in education on students' learning outcomes and discovered that e-learning has an impact on student learning outcomes.

LIMITATIONS

A noteworthy limitation of this study pertains to its confined scope within post-secondary educational institutions in Khartoum State, Sudan. Specifically, the research focused solely on the 12 accredited institutions within this state. This limitation was a pragmatic decision influenced by both time and financial constraints. While this targeted approach allowed for a comprehensive examination within the specified context, it does impose constraints on the generalizability of the findings to the broader educational landscape of the Republic of Sudan. A more expansive study across all accredited post-secondary educational institutions in the country could have provided a more comprehensive and nuanced understanding of the relationship between e-learning initiatives and learning outcomes. Therefore, future research endeavors should consider broader sampling to enhance the external validity of the findings.

CONCLUSION AND RECOMMEDATIONS

In conclusion, this study sheds light on critical gaps in infrastructure crucial for the successful integration of E-learning initiatives within post-secondary educational institutions in Khartoum State, Sudan. The recognized deficiencies not only highlight current challenges but also emphasize the urgency for targeted and strategic interventions. Addressing these gaps is imperative to fortify the digital learning landscape in the region, fostering an environment conducive to innovative educational practices and ensuring equitable access to quality learning resources for all students. In light of the study's revelations, it is strongly recommended that the Ministry of Higher Education and Scientific Research takes proactive measures. Establishing a high-level e-learning commission is proposed to meticulously strategize and delineate the necessary infrastructure prerequisites. This should encompass hardware provisions, financial allocations, and regulatory frameworks. Such initiatives are paramount to normalize the usage of E-learning tools, ensure seamless information flow, and enhance accessibility to dependency sources. These steps are envisioned to pave the way for an enriched educational experience and improved learning outcomes among post-secondary students in Khartoum State, Sudan.

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Internationalization of Higher Education in Uganda: A Case of Bugema University Status Report
By
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ABSTRACT

The global trend of internationalization in post-secondary education, defined as the intentional integration of international, intercultural, and global dimensions, is expanding. This study focused on assessing the status of internationalization at Bugema University, employing the Project Action Plan (PAP) and utilizing methods such as questionnaires, documentary reviews, and interviews. Results revealed an approximate 50% level of internationalization, with common activities including international student recruitment, the formation of international student associations, and cultural diversity initiatives. Notably, the study identified a lack of a supportive policy for these activities and recommended the implementation of a comprehensive policy to guide and enhance all aspects of internationalization at Bugema University.

BACKGROUND

The internationalization of higher education has become a global phenomenon, reflecting a broader trend toward interconnectedness in the academic landscape (Altbach & Knight, 2007). In recent years, universities and academic institutions worldwide have actively embraced internationalization as a strategic imperative to foster global collaboration, enhance the quality of education, and prepare students for a rapidly changing globalized world (Van der Wende, 2017; de Wit, 2015). This shift is not limited to specific regions; rather, it is a pervasive force shaping the priorities and practices of higher education institutions globally. Governments and higher education bodies in various countries have recognized the importance of internationalization in building a competitive and culturally diverse knowledge society (Marginson, 2012). Initiatives such as the Bologna Process in Europe and the Asia-Pacific Quality Network (APQN) in Asia highlight concerted efforts to standardize and enhance the quality of higher education on a transcontinental scale (Kuroda, 2017; European Higher Education Area, 2020).

Institutions from diverse regions are engaging in collaborative projects, joint research initiatives, and student exchange programs to create a rich tapestry of global learning experiences (Altbach & Knight, 2007; Institute of International Education, 2021). The internationalization of higher education is not merely a strategic choice but a response to the evolving demands of a globalized job market and the need for graduates equipped with cross-cultural competencies (Knight, 2006; OECD, 2018). While challenges such as cultural differences, varying regulatory frameworks, and financial

constraints persist (de Wit, 2015), the global perspective on internationalization underscores its transformative potential in shaping the future of higher education on a worldwide scale (Van der Wende, 2017). This collective endeavor transcends borders, contributing to the development of a truly global and interconnected academic community.

At a glance, Bugema University has been involved in the following internationalization activities: Faculty exchange and technical assistance through Fulbright programs, a collaboration of GESIS and Uganda partners (such as Bugema University) in capacity building and exchange for survey methodology and data management in Africa. In addition, DAAD has also contributed to faculty through skills training in quality assurance management, management at higher education, and capacity building. At the same time, Bugema University enjoys a population of 45% international students and 55% nationals. This position makes Bugema University a global community for diverse training. Politically and culturally, Bugema University subscribes to two accrediting institutions which are the National council for higher education (NCHE) in Uganda and the American Accreditation Adventist Association (AAA) of which the latter is international. Their participation in this relationship makes Bugema University widen its internationalization cultural perspectives let alone a diversity of the faculty who are international. While such relations and several activities enable the university to embrace international culture within its operations, the level of engagement in internationalization remained unknown. It should however be noted that higher education is highly shaped by internationalization (Knight 2012). In Universities, awareness of International studies, education exchange, and technical assistance, global knowledge plus the interconnected network are viewed as major assets to internationalization (Klasek 1992). According to UNESCO (2019), the number of international students increased from 2 million in 2000 to 5.3 million in 2017. This is a clear indication that internationalization is here to stay and Universities should work toward promoting, supporting, and managing the process. This is only possible with appropriate policies that guide the implementation of related internationalization tasks. The establishment of the status of internationalization is crucial in guiding policy hence the current study.

RESEARCH OBJECTIVE(S)

To establish the local conceptualization and determine the status of internationalization among higher educational institutions using evidence from Bugema University.

LITERATURE

At a national and institutional level, internationalization has been defined as the process of integrating international, intercultural, or global dimensions into the purpose, functions, or delivery of post-education (Knight, 2004). Scholars such as de Wit, Hunter, and Egron Polakand Howard (2015) define internationalization as a

deliberate practice of integrating an international, intercultural and global dimension into the functions, purpose, and delivery of post-secondary education to improve the quality of education and research for all students and staff in addition to making a meaningful contribution to society. As put by Hunter (2012), the internationalization approach should be "No one size fits all". The conceptualization of internationalization could depend on the level of utilization an institution has reached and the microscope one uses to view this concept. It could also depend on the position and activities carried out in the internationalization arena. Internationalization could be defined as a multifaceted concept composed of activities of different natures. Different institutions have defined internationalization differently even when the level of related activity engagement is not known. Contextual gaps majorly exist especially in the local university settings which called for further clarifications.

METHOD AND MATERIAL(S)

To achieve the PAP objectives as aligned with this study, a descriptive study design was adopted following both quantitative and qualitative research approaches. To ascertain the internationalization status of Bugema University, the questionnaire, documentary review, and interview methods were adopted in the data collection process. A situational analysis was also undertaken to develop a SWOT profile for the internationalization status of the University. This method was used to understand the prevailing environment in which internationalization operates specifically ascertaining the strengths, weaknesses, opportunities, and threats in the management of internationalization. The PAP study activities included gathering important information from literature, reviewing institutional documents and policies checking for aspects of internationalization, and collecting data from students, faculty, and university administrators. This data was later entered and analyzed in SPSS Version 20.0. Qualitative data was analyzed through a narrative approach.

FINDINGS

Conceptualization of Internationalization

From the interactions and discussions with the various stakeholders including University administration, heads of departments, faculty, and staff plus the student body, the conceptualization of Internationalization seems to depend on the level of utilization an institution has reached and the microscope used to define the concept. It also seems to depend on the position and activities carried out in the internationalization arena. This was further revealed by the academic register when he stated that. "Internationalization is a broad term. …to begin by expanding our catchment area, which is attracting students from various places, from various countries around the region and that is even beyond the region. … I think it is about attracting students, but also about attracting the lecturers and perhaps even setting ... internationally". Respondents further stated that;

Going beyond …national, regional … continental boarders of doing things…. dealing with… students (Malawi, Zambia…) it is internationalization (KII1, Male 2019)

….moving out from the local level to a broader level….situation where… University is not … understood in the world of academia just within... The local setting of Uganda, even outside (KII2, Male 2019)

… The extent the University makes itself available to the international community in terms of services … interaction or collaboration … terms of research, student exchange, working with other universities from other countries…and the way it perceives its service and obligation as intended for the international consumption….preparing learners for Human Resource …not only for the local consumption but a global market... (KII3, Male 2019)

One would further agree that internationalization is a multifaceted concept composed of activities of different nature. Although the level of engagement in internationalization activities was not known at that particular time, different stakeholders had a different understanding. Some members revealed a narrow scope of internationalization.

Student Profile

Bugema University is arguably a cosmopolitan University in East Africa with more than twenty-two (22) nationalities. This compound mix brings with it a rich diversity of cultures, traditions, and beliefs. There were around 45% international students from around the region in the academic year 2016/2017 (Year report 2016/2017). These are students who come to Bugema University for their education. It was however noted that educational policies introduced in the neighboring countries in the five years have tremendously affected the enrollment of international students at Bugema University. It is further important to note that like most higher education institutions in Uganda, the number of foreign students enrolled by Ugandan institutions of higher learning including Bugema University, is almost five times the number of Ugandan students admitted by the collaborating foreign institutions of higher learning (Kasenene, 2011).

International Student Enrolment

Bugema University enrolls a big percentage of its students through its website. In some countries in the region, the university also has contacted agents who help in advertising and recommending students. Qualitative results from the interviews with administration staff however revealed that where international offices were established, it was costly. But even with the agents, the administration revealed that "the number of students that are coming from those agents is not so big compared to those who are attracted by the website".
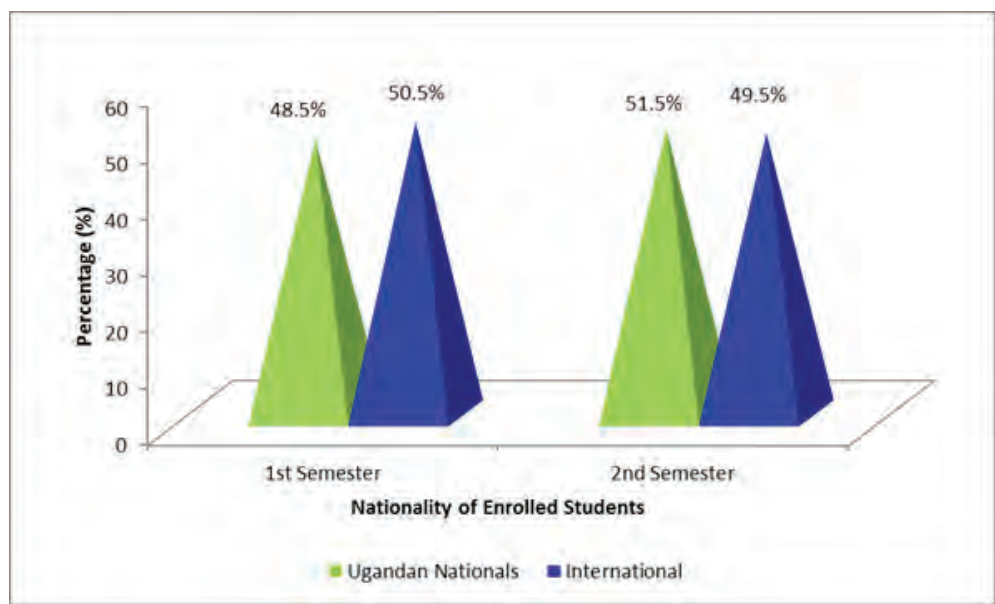
Table 1: Distribution of International students by Country of Origin

Country	1st Semester No.	1st Semester Percentage (%)	2nd Semester No	2nd Semester Percentage (%)	Ac. Year Enrolment No.	Ac. Year Enrolment Percentage (%)
Kenya	998	43.7	709	34.3	1707	39.27
Tanzania	271	11.9	272	13.2	543	12.49
South Sudan	306	13.4	322	15.6	628	14.45
Nigeria	5	0.2	5	0.2	10	0.23
Ethiopia	2	0.1	2	0.1	4	0.09
DRC	133	5.8	144	7.0	277	6.37
Liberia	2	0.1	1	0.0	3	0.07
Madagascar	1	0.0	1	0.0	2	0.05
Somalia	32	1.4	31	1.5	63	1.45
Burundi	47	2.1	57	2.8	104	2.39
Zambia	46	2.0	49	2.4	95	2.19
South Africa	3	0.1	4	0.2	7	0.16
Zimbabwe	8	0.4	13	0.6	21	0.48
Malawi	3	0.1	5	0.2	8	0.18
Rwanda	96	4.2	107	5.2	203	4.67
Angola	7	0.3	4	0.2	11	0.25
Comoros Islands	1	0.0	1	0.0	2	0.05
Other's & Unallocated	321	14.1	338	16.4	659	15.16
Total	**2282**	**100.0**	**2065**	**100.0**	**4347**	**100.00**

In both semesters **I** and **II**, enrolment was respectively highest with Kenyan students (43.7% vs 34.3%), followed by South Sudan (13.4% vs 15.6%), then Tanzania (11.9% vs 13.2%), DRC (5.8% vs 7.0%), Rwanda (4.2% vs 5.2%), Burundi (2.1% vs 2.8%) and then Somalia (1.4% vs 1.5%) (**Table 1**).

Based on the annual academic enrolment, Bugema University (BU) is also home to students from DRC (6.37%), Zimbabwe (0.48%), Zambia (2.19%), Angola (0.25%), Nigeria(0.23%), Malawi (0.18%), South Africa(0.16%), Ethiopia (0.09%), Liberia (0.07%), Madagascar (0.05%), and Comoros Islands (0.05%) in that order. Bugema's aggressive international student enrolment was further revealed when the Ministry of Trade, Industry, and Cooperatives in Uganda awarded Bugema's efforts towards international student enrollment. The University came second after Kampala International University in the whole country

.

Figure 1: Distribution of the Students by Nationality

Source: End of year report 2017

In Semester I as depicted in Figure 1, almost equal proportions of both local and international students were enrolled (48.5% vs 50.5%). A similar trend is shown in semester II enrolment at the University (51.5% vs 49.5%). Equality is thus demonstrated by Bugema University management based on opportunities for admission.

International student associations

Bugema University has about 9 registered associations representing different nationalities based on records. These are associations of international students from the same nationality, and region and they are open to all students. The Bugema University Students Association (BUSA) is an Umbrella organization, and its main goal is to work together with the different countries that are represented in the associations. In addition to the above, the BUSA office is responsible for the existence and operations of the association. Some of the associations are for students from Uganda, Kenya, Rwanda, Burundi, Somalia, Tanzania, D.R.C, Zanzibar, and
Southern Africa. The associations have acted as enablers for intercultural initiatives.

Composition of Student Leadership

The Bugema University Student Association (BUSA) is an organization in which all registered students, including in-service, satellite campuses, and graduate students are members. This Association exists to give leadership opportunities to students and to provide a formal means of communication with the faculty and administration to improve the learning environment of the university. Elections for student government are held once a year. Internationalization ideology practice exceedingly characterizes student leadership at Bugema University. The 2019-2020 Bugema University student Assembly (BUSA) guild president and parliamentary elections were seen with stiff competition from three internationally pronounced students who were from South

Sudan, DR Congo, and Tanzania respectively. The three battled it out for the guild president's office and the candidate from South Sudan won. The right-hand general secretary to the Guild President was a lady from Kenya and the humanitarian minister was from Rwanda taking on the vice presidency. Almost 90% of the student leadership turned out to be international. This was emphasized by the Guild President himself during an interview:

"... actually, I'm an international student myself. I'm a citizen of South Sudan. Though I've been living here for quite a long time. The general secretary was also elected and she is from Kenya. The Vice President is also international, from Rwanda. ...and one from Ethiopia, so all of us here currently are internationals".

Cultural diversity

As a routine one week into an academic year, Bugema University reveals a glimpse of its cultural diversity. The ways of life of the students and staff are displayed. Students go on to display the cultural dances, foods, and material artifacts (literature). Faculty and staff are encouraged to dress in traditional attire, they display different foods and cultural dances on campus.

Student support

In Uganda as well as Bugema University, students tend to finance their education and living expenses. In situations where students have financial difficulty both national and international students, are eligible to apply for student work program. In this program, a student writes an application letter to the university through the departmental head explaining how financially challenged they are and requests to be admitted to the program. It's from this request that the administration makes an assessment and votes the student onto the program. The admitted students are placed in the department they were originally attached. They are assigned tasks by the departmental coordinators who are in charge of monitoring and evaluating them. The departmental program coordinator is the one to account and confirm for how many hours work program students in their department have worked daily. Each student is given a form on which he/she indicates the time-in and time-out in addition to signing against the daily total hours. This form is then taken to his supervisor/coordinator who also signs and approves it. The total hours a student makes a semester are summed up and monetized by multiplying them by a specific rate-hour. This is the amount that is credited to the student's account every semester until the completion of their studies. Although Bugema seems to practice internationalization, there seems to be a lack of details regarding internationalization policies in the available policy documents where one would expect to identify the qualitative and quantitative objectives, described processes, authorities, and resources both financial and human in charge of various internationalization operations. The latter situation renders the existence of non-streamlined operations.

International Alumni
Bugema University Alumni Association Limited started in 2016 allowing international students to keep updated with what is happening at their alma mata. This creates a feeling of togetherness. Working with international alumni has been an important aspect in strengthening Bugema University's international presence as well as valued networking means. Both local and national alumni have hugely contributed to the University's infrastructural development. At every annual graduation, the Alumni through the graduating class present a gift to the University thus contributing to development.

Staff and Faculty Profile
Faculty and staff mobility can take many forms such as academic visits, exchanges, and grants (Bologna process report 2018). Bugema University identifies with employment positions as staff mobility to a larger extent and Sabbatical programs through Fulbright programs to a small extent. Approximately 15% of the academic staff (faculty) at Bugema University are international. The Deans and heads of department positions are occupied by a significantly higher proportion of foreign nationalities than non-academic departments. This high percentage is a clear practical indication of interculturalism at home. This however needs to be understood in the context of the overall institutional holistic employment strategy.
Recognition and Accreditation
Bugema University is recognized and accredited by two bodies; the National Council for Higher Education in Uganda (NCHE) Local institution and the Accrediting Association of Seventh-day Adventists (AAA) an International body. The latter's accreditation emphasizes global obligation which enhances the necessary conditions for Bugema's successful comprehensive development of internationalization. It is against this context that Bugema University provides a curriculum that is evidenced by appropriate outcomes with an equivalent standard to other tertiary institutions both in the country and internationally in preparation for students for global service.

Global Network Partnership
Internationalization, coupled with the government's strategic policy shifts from not just education, but also to skills for income generation and employability. It serves as a vehicle for skills development that has enabled the institution's participation in economic growth at a global level. Through a partnership Wadhwani Foundation, Bugenma University has signed agreement(s) with several technical and vocational institutes in the region to support the introduction of core employability skills education to thousands of students. The foundation already provides a springboard for university students to learn the entrepreneurial skills that will make them better prepared for the world. In Uganda, Wadhwani Foundation has launched its entrepreneurship initiative, the National Entrepreneurship Network (NEN). The initiative has the major aim of developing the ecosystem for new entrepreneurs

through supporting entrepreneurship education. The scheme also facilitates the startup and SME ecosystem by furthering students' access to knowledge, mentor, and investor resources. Through the school of Business in the department of entrepreneurship, the Bugema University senate voted to participate in the Madhwani initiative.

International Collaborations

Summer School System: A collaboration with Leibniz Institute for the Social Sciences (GESIS) has made the realization of summer school for international students from partner institutions since 2018. The partnership is among 12 institutions where participants are from all over the world and from different scientific fields. The topics covered are survey methodology and data management. The eligible group included: graduate or Ph.D. students, post-docs, Junior researchers, or survey professionals who collect and analyze data. Since the cooperation started in the season of 2018, One summer school project has taken place under the "GESIS Summer school and Summer School Uganda". Bugema and Mutesa 1 Royal University University have so far hosted short-term courses as summer school and this has allowed the University to host international professors and students.

The University of the Equator in Burundi: Bugema University encourages the faculty and the students to engage in social and scientific research aimed to enhance the development of society and its institutions with a global perspective. In 2016 Bugema University found it necessary to create a partnership with the University of the Equator in Burundi and a memorandum of understanding was signed. The collaboration focused on capacity building for the working class in Burundi through an academic exchange in research projects. The Bugema University Professors mentored and trained the students in research projects up to the end of their graduate studies.

Languages Introduced For International Students

Internationalization comes with its challenges and hosting institutions should be very dynamic to address those challenges. As a remedy, Bugema University has incorporated internationalization options in the curriculum in which international students with an interest to study at Bugema but do not qualify in terms of language or lower grades requirement undertake an English bridge program for language improvement.

Political/Government Backup for Internationalization

Government guidelines to the institution regarding internationalization seem limited to students' immigration issues and research in Uganda. Information received from the available documents indicates that the ministry of foreign affairs is in charge of internal issues but they seem to handle aspects of student status, research regulations, and collaborations. Little attention is put on the other aspects of internationalization.

Summary of the SWOT Analysis

Table 2: Institutional Analysis concerning Internationalization of Bugema University-SWOT

STRENGTHS	WEAKNESSES
✓ Excellent Brotherly Shared Values among BU Community	✓ Lack of Internationalization Policy
✓ Diversity of Teaching Staff from Countries Beyond Uganda	✓ No documented Internationalization strategy
✓ International Students' Loyalty and word of mouth	✓ Unawareness amongst Personnel implementing Internationalization Related Activities
✓ Supportive Internet and or web Systems	✓ Internationalization scope is limited
✓ Integrative Intercultural Cultural Festivals	✓ Limited Diversity of Foreign Languages Spoken
✓ Diverse Student Political Leadership Ugandans and Foreign at BU	✓ Personnel implementing Internationalization Related Activities
✓ None Racist Character in the Local Community and all Ugandans	✓ No Budget for Internationalization
✓ Political/Government Backup for Internationalization	✓ Lack of Clear Internationalization Structure
✓ Church Founded Support and non-discrimination based on religious affiliation	✓ Limited Staff Handling Internationalization Issues which is overwhelmed
	✓ Limited/No Resources for Internationalization
OPPORTUNITIES	**THREATS**
✓ Open Up Offices for Internationalization Other Countries-Regional Approach	✓ Competition from Other Universities Locally and Regionally
✓ Adventist Church Platforms in different countries can be used for internationalization	✓ Change in government in the upcoming Presidential Elections may come with unfriendly policies
✓ Collaborative Research Publications by Local and International BU staff can be explored	

DISCUSSION

This study found an average level of internationalization in the University. This result is however different from those reported by Kasenene (2011) that the number of foreign students enrolled in Ugandan institutions of higher learning was almost five times the number of Ugandan students admitted in the same. Results also showed that even when international student enrollment, formation of international student associations, and guild president elections with international students highly represented among others were activities of international nature in the University, there as a lack of a supportive policy. The variation in internationalization status, however, could be explained by not only the dynamic changes in the demand for education and the period of over a decade ago but also the number of higher education institutions involved in this study.

LIMITATIONS

The limitations of this internationalization study should be considered within the context of its exclusive focus on a single private university. Caution is warranted when extrapolating findings or making comparisons, as results may differ when applied to a broader spectrum of universities. A more comprehensive understanding of internationalization would require the inclusion of multiple institutions. Furthermore, it is crucial to acknowledge that this study adopts a descriptive approach, providing an overview of the internationalization landscape at the chosen university. However, the descriptive nature of the study means that it does not delve into a detailed analytical examination of the critical factors influencing internationalization within higher educational institutions. To achieve a more nuanced understanding of these critical factors, future research endeavors may need to employ analytical methodologies and involve a more diverse range of universities in their investigations.

CONCLUSION AND RECOMMENDATIONS

This study contributes to the literature about the internationalization of education in higher education by exposing the status of internationalization in Uganda. There is an average level of participation in internationalization activities in universities which needs to be upscaled to widen cultural perspectives and enhances diversity in training. For many universities the activities and level of engagement in internationalization aspects seem to be unknown; however, given the unexplored situation of internationalization, the participation of Universities allows them to reflect on their activities and establish the internationalization status of the university. It is important to note that conceptualization of Internationalization seems to depend on the level of utilization an institution has reached and the microscope used to define the concept. It also seems to depend on the position and activities carried out in the internationalization arena. Several challenges hinder the proper implementation of internationalization and the adoption of the SWOT would strengthen the conceptualization of internationalization activities in Universities. A proper

understanding of several aspects contributes to the establishment of the internationalization status quo of institutions of higher learning. These include conceptualization of internationalization, Student profile, Staff and faculty profile, Recognition and Accreditation, Global Network Partnership, International Collaborations, and government guidelines. As a result, the documentation of appropriate policies is recommended for the universities.

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THE PANDEMIC AND ITS EFFECT ON THE BURUNDIAN ECONOMY
By

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ABSTRACT

This study explores the impact of the COVID-19 pandemic on the Burundian economy by analyzing various economic indicators. Pandemics, defined by widespread contagious diseases, have historically posed threats to global health and economies. The study reviews key pandemics such as Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, and Zika to establish a context for the current situation. The literature highlights the direct, long-term, and indirect costs associated with pandemics, emphasizing the substantial economic burden and potential for instability. The research methodology involves analyzing secondary data, particularly changes in GDP and projections for the primary sector. Findings indicate that Burundi, with its limited integration into the global economy, faces vulnerabilities related to fluctuations in commodity prices and disruptions in supply chains. Noteworthy impacts on the primary sector, including agriculture and exports, are observed. The study also examines the Annual Economic Growth Rate, revealing substantial fluctuations due to the pandemic. The discussion underscores the global history of pandemics and the severe economic consequences, urging effective emergency responses for future preparedness. The study acknowledges limitations such as reliance on secondary data, a focus on Burundi, and a limited study period. In conclusion, the negative impacts of the pandemic on the Burundian economy necessitate effective strategies for mitigation, emphasizing the importance of global collaboration and preparedness for future pandemics.

Key Words: *Pandemic, Economies, Emergency Response*

BACKGROUND

Pandemics are outbreaks of disease that spread as the result of human infection across territorial boundaries of countries. The term "Pandemic" originates from the Greek word 'Pan' meaning "all" and demos' "the people"., and the word is commonly taken to refer to a widespread epidemic of contagious disease throughout the whole of a country or one or more continents at the same time (Honigsbaum, 2009). Nevertheless, over the past decades, the term has not been missed to be defined by many modern medical texts. Even authoritative texts concerning pandemics do not list it in their indexes, including such resources as comprehensive histories of medicine, classic epidemiology textbooks, and the Institute of Medicine's influential 1992 report on emerging infections (Morens, Folkers, & Fauci, 2009). The following have been the

most significant pandemic outbreaks recorded in history; Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, and Zika (WHO, 2011b; Reward, Mirdha, & Reward, 2015; Maurice, 2016).

Some key features of a pandemic include geographic extension, disease movement, novelty, severity, high attack rates and explosiveness, minimal population immunity, infectiousness, and contagiousness. The pandemic-related crises have been associated with enormous negative impacts on the health, economy, society, and security of national and world communities. As well, which has caused significant political and social disruption. Concerning wide geographic extension, the recent review of the history of pandemic influenza categorizes it as trans-regional and global (Taubenberger & Morens, 2009). Concerning disease movement, however, the movement or spread of infectious diseases particularly widespread from person to person characterizes pandemics caused by respiratory viruses, such as influenza and SARS, or enteric organisms like Vibrio cholera, or by vectors, such as dengue.

In the advent of increased globalization, infectious disease outbreaks such as HIV, H1N1, H5N1, and SARS have easily moved across the borders that they have threatened the economy and national stability (Verikios, Sullivan, Stojanovski, Giesecke, & Woo, 2015). The fatal consequences for those directly affected, by the outbreak of the pandemic has a range of negative social, economic, and political consequences (Davies, 2013a). In summary, the pandemic event threatens the aspect of the economic and social fabric" (Drake, Chalabi, & Coker, 2012). This pandemic reduced the life quality of families and communities, and Ebola has disrupted essential services such as education, transport, and tourism, reduced the West African economies and isolated populations, which had impacts beyond Africa too due to the global effort of containing the outbreak (Nabarro & Wannous, 2016). There are, however, inconsistencies as some positives like improvements in air quality, improvement in digitalization, and reduction in environmental noise are reported to arise from pandemics (Ibn-Mohammed et al., 2021). This study however explores to clarify the effect of the pandemic on the Burundian Economy.

THE OBJECTIVE OF THE STUDY

The present study was aimed at examining how the pandemics have impacted various economic indicators in Burundi.

LITERATURE

The pandemic poses a significant dual threat to both global populations and economies. The economic repercussions include direct costs, enduring burdens, and indirect consequences (Smith, 2021). The direct costs of dealing with the disease outbreak can be very high. For example, the Ebola outbreak has seriously undermined

the economy throughout West Africa. The Ebola outbreak in Sierra Leone in 2015 cost USD 6 billion in direct costs (hospitals, staff, medication), and the direct costs alone amount to 3 years of funding for WHO and are well over 20 times the cost of WHO's emergency response cuts in its 2014–15 budget (Gostin & Friedman, 2015). It has been calculated that there was an economic loss of USD 1.6 billion for the three countries compared with the economic growth in the previous year 2014 (Kern, 2016). The Global Health Risk Framework for the Future (GHRF) Commission estimates that every year on average infectious disease outbreaks cost the world about USD 60 billion in direct costs (Maurice, 2016).

The long-term burden is also severe. One of the main burdens is the loss of earnings of those who have died. Prager, Wei, et al (2016) have estimated that economic losses from pandemic influenza in the USA would be USD 90 – 220 billion, and of that, 80% would come from the value of expected future lifetime earnings of those who would die (Prager et al., 2016). McKibben and Sidorenko (2006) estimated that the economic cost of an influenza pandemic range from USD 374 billion for a mild pandemic to USD 7.3 trillion for a severe pandemic (MacKellarSource: 2007). The mathematical models indicate that a future influenza pandemic could have total costs of USD 71-166 (Rebmann, 2010). "Recent years have seen at least six large-scale outbreaks—hantavirus pulmonary syndrome, severe acute respiratory syndrome, H5N1 influenza, H1N1 influenza, Middle East respiratory syndrome, and Ebola virus disease, which cost the world more than $2 billion, according to World Bank calculations" (Maurice, 2016).

Indirect costs are also very heavy. They include everything that contributes to a decline in GDP. The example of SARS, especially its impacts on the region affected the 2003 annual GDP of China decreased by 1% and the GDP of Southeast Asia also declined by 0.5% (MacKellar, 2007). Lee and McKibbin (2004) estimated income loss ranges from USD 12.3-28.4 billion for East and Southeast Asia during the SARS outbreak in 2003 (Fan, 2003). "In New Zealand, Treasury examined a pandemic with a 40 percent attack rate and a 2 percent case-fatality rate, concluding that GDP in the year of the event would be reduced by 5-10%" (MacKellarSource: 2007).

Some sectors of the economy may be more heavily affected than others. For instance, Prager Wei *et al* (2016) estimates that the air transport industry would suffer a loss of almost 20% or USD 7.9 billion if US residents cut down on travel. Thus, pandemics have both immediate and long-term effects that can damage the economic life of a nation for many years to come (Prager et al., 2016). The psychological and economic impacts of ineffective screening at airports substantially affecting directly airport business during the 2003 SARS outbreak (Chung, 2015).

RESEARCH METHODOLOGY

Design

This study employed a quantitative research approach to analyze the economic impacts of the pandemic on Burundi. The data utilized in this research was primarily sourced from the Central Bank of Burundi, with a focus on economic indicators spanning the years 2019 to 2021.

Data Collection

The primary data sources include the Central Bank of Burundi's reports for the specified years, providing information on GDP projections, sector-specific contributions, and annual economic growth rates. The data collected covers various economic aspects, such as GDP at market prices, imports and exports of goods and services, gross investments, public and private investments, variations of stock, and final consumption.

Data Analysis

The gathered data was subjected to comprehensive quantitative analysis to discern patterns, trends, and variations over the study period. The key economic indicators, including GDP by primary sector projections and annual economic growth rates, were examined to understand the impact of the pandemic on Burundi's economy.

RESULTS

As the global community grapples with the multifaceted challenges posed by the pandemic, it is crucial to scrutinize its far-reaching economic ramifications, especially in nations with distinct vulnerabilities. Burundi, characterized by a low degree of integration into the world economy, emerges as a poignant case study. This study delves into the economic impacts of the pandemic on Burundi, focusing on key indicators within the primary sector. Table 1 presents GDP projections by primary sector for the years 2019 to 2021, offering a comprehensive snapshot of the fluctuations in various sub-sectors. This table serves as a critical foundation for understanding the nuanced effects of the pandemic on Burundi's economic landscape.

Table 1: GDP by Primary Sector Projections (Billion in FBU)

Table 1: GDP by Primary Sector Projections (Billion in FBU)

Primary Sector	2019	2020	2021
- Subsistence Crops	1795	1969	2099
- Export agriculture	66.5	85.3	87.1
- Coffee	35.1	51.8	51.7
- Tea	27.1	29.3	30.7
- Other export crops	4.3	4.2	4.7
- Forest	63.9	82.7	89.4
- Breeding	137.8	155.0	172.5
- Peach	59.3	67.9	74.9
Total	2188.6	2445.1	2610

Source: Central Bank of Burundi (2021)

Table 1 elucidates the nuanced dynamics within Burundi's primary sector during the study period. Noteworthy is the total GDP by branch projections, indicating an overall increase from 2188.6 billion FBU in 2019 to 2610 billion FBU in 2021. While certain sub-sectors such as Subsistence Crops, Export Agriculture, and Forest exhibit consistent growth, the coffee sector experienced a decline in sales from 51.8 to 51.7 billion FBU in 2020-2021, signifying a specific impact of the pandemic. This decline underscores the vulnerability of export-oriented sectors in the face of global disruptions. Table 1 lays the foundation for further analysis, prompting considerations of the broader economic implications and necessitating strategic interventions to bolster resilience in key sectors.

Against the backdrop of the global pandemic, the complex interplay between public health and economic stability has become a central focus for nations worldwide. This is particularly pronounced in regions with unique economic structures, such as Burundi. This study delves into the annual economic growth rates, a pivotal metric in gauging the resilience and adaptability of Burundi's economy during the tumultuous years of 2019 to 2021. Table 2 provides a comprehensive overview, delineating the percentage variations across key economic indicators. This analysis aims to unravel the nuanced impact of the pandemic on Burundi's economic growth, shedding light on areas of vulnerability and resilience within various economic facets.

Table 2: Annual Economic Growth Rate in Percentage

Items	2019	2020	2021
GDP at market prices	4.5%	-0.5%	3.3%
Imports of goods and Services	0.3%	11.6%	2.8%
Exports of goods and Services	9.5%	54.5%	6.4%
Gross investments	0.1%	-2.1%	0.0%
Public Investment	1.1%	7.6%	7.2%
Private Investment	-1.2%	11.6%	-3.4%
Variation of stock	18.0%	-1.0%	-1.4%
Final consumption	3.3%	0.3%	3.5%
- Public Consumption	20.5%	1.1%	5.3%
- Household consumption	-4.7%	3.6%	2.5%
Total	**51.3%**	**86.8%**	**26.3%**

Source: Central Bank of Burundi (2021)

The result of the Annual Economic Growth rate in Percentage in respect of GDP at a Market price was 4.5% in 2019, -0.5% and 3.3% respectively. The imports of goods and services were 0.3% in 2019, 11.6% in 2020, and 2.8% in 2021 respectively. The exports of goods and services were 9.5% in 2019, 54.5% in 2020, and 6.4% in 2021 respectively, which shows a great increase in 2020 and a great decline in 2021 due to this said pandemic respectively. The Gross Investments were 0.1% in 2019, -2.1% in 2020, and 0.0% in 2021 respectively an indication of poor performance of gross investment during the study. The Public Investments were 1.1% in 2019, 7.6% in 2020, and 7.2% in 2021 respectively during the study period; an indication that the performance was so good with an increase despite the fall in the year 2021. The Private Investments were -1.2% in 2019, 11.6% in 2020, -3.4%, in 2021 respectively. Variations of Stock 18.0% in 2019, -1.0% in 2020, -1.4% in 2021 respectively which indicated a decline due to the pandemic. The Final Consumption was 3.3% in 2019, 0.3% in 2020, and 3.5% in 2021 respectively, which indicated a decline due to the pandemic during the study period. The Household Consumption -4.7% in 2019, 3.6% in 2020, and 2.5% respectively during the study period 2021 are shown in Table 2 above. In Table 1 above, it is noted that some variations in the Annual Economic Growth rate are not consistent. In the year 2019 – 51.3 percent, 2020 – 86.8 percent, and in 2021 – 26.3 percent respectively, indicating the increase from the year 2019 to the year 2020 of 51.3 percent to 86.8 percent, and in the year 2021, there is a huge decrease of 26.3 percent respectively. This explains the impact of the pandemic, which has left the country struggling economically.

DISCUSSION

There have been many significant pandemics recorded in human history, and the pandemic-related crises have caused enormous negative impacts on health, economies, and even national security in the world. However, the term "pandemic" has a long history. It is still not defined by many medical texts, and the conception is still changing. There are some key features of a pandemic, including wide geographic extension, disease movement, novelty, severity, high attack rates and explosiveness, minimal population immunity, infectiousness, and contagiousness, which help us to understand what pandemics are. The impact of economic loss can result in instability of the economy, which is through direct costs, long-term burdens, and indirect costs. An effective and efficient emergency response can reduce avoidable mortality and morbidity and reduce the types of economic and social impacts. How to have effective and efficient emergency management will be a critical task for the government to deal effectively with disease outbreaks and a pandemic now and future.

LIMITATION(S)

This study is subject to several notable limitations that warrant consideration. Firstly, the reliance solely on secondary data introduces potential constraints in the depth and specificity of the information available. This limitation is compounded by the second constraint, as the study exclusively concentrates on the Burundian Economy, possibly overlooking broader contextual factors that could influence the observed trends. Additionally, inherent limitations associated with the tools employed in the study further impact the robustness of the findings. Finally, the temporal scope of the research is confined to a relatively brief period of three years, potentially limiting the ability to capture longer-term trends and variations. These constraints collectively underscore the need for cautious interpretation of the study's outcomes and emphasize the importance of future research endeavors that address these limitations for a more comprehensive understanding of the economic landscape.

CONCLUSION AND RECOMMENDATION(S)

There have been various pandemic-related crises recorded in human history which has caused enormous negative impacts on the health and economy of various countries. Some key features of a pandemic, including wide geographic extension and disease movement, have helped to understand what the pandemic is. The negative impacts of the pandemic are serious. Pandemics have infected millions of people, causing widespread serious illness in a large population and thousands of deaths. It represents a serious threat not only to the population of the world but also to its economy. An effective and efficient response can reduce avoidable mortality and morbidity and reduce the types of economic and social impacts.

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THE INTERPLAY BETWEEN PEER GROUP INTERACTION AND THE WELL-BEING OF ACADEMIC STAFF AT MAKERERE UNIVERSITY

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ABSTRACT

Peer group interactions have been less scrutinized in terms of their contribution to the overall quality of teaching in universities. This mixed-methods study investigated the effect of peer group interaction on the well-being of academic staff at Makerere University. Quantitative data was collected using self-administered questionnaires from 382 academic staff proportionally drawn from three colleges and one school, while qualitative data was obtained from four heads of departments using a structured interview guide. Qualitative data was analyzed using thematic and content analysis inductively, and later both sets were converged to generate summaries of findings. Quantitatively, results show that peer group interaction stood at R2 = 0.281, which implies that it contributed 28.1% of the change in academic staff well-being at Makerere University. Peer group interaction (-0.061, p = 0.126) indicated that the relationship was not significant. With qualitative findings, participants provided mixed feedback, with some describing their interaction with peers as positive while others reported a negative experience. Such mixed feedback implied that the different voices had different implications and consequences from individual to individual. The conclusion is that peer group interaction is not a significant predictor of academic staff well-being. Therefore, the management of the university should strengthen interpersonal relationships through social support platforms and foster a culture of open communication and feedback to contribute to overall academic staff well-being. This can be streamlined by fostering strong interpersonal relationships within the academic community, promoting networking events, creating platforms for social support, and emphasizing the importance of building positive relationships with colleagues.

Keywords: *Well-Being: Workplace Well-Being:Peer Group Interaction*

INTRODUCTION

In higher education institutions, supporting academic staff's well-being is key to fostering a conducive learning environment. Work-related stress, coupled with poor interpersonal relationships with friends and family, is a crucial factor in the well-being of academic staff, especially those in institutions of higher learning. Frustrations and pressures to teach, research, and publish, are substantially mitigated by peer interaction from significant others, which consequently has a positive implication on the academic staff's well-being. This study delves into the relationship between peer group interaction and the well-being of academic staff at Makerere University, examining how factors like information sharing, social support, trust, and humor impact their well-being.

Historically, the problem of the ill well-being of employees in organizations is not a new phenomenon. In higher education, this problem is gaining ground in many countries. In the UK, 90 percent of academics report working while sick (Kinman & Wray, 2021). In Northern Ireland, mental health accounted for approximately 48.2% of the variance in academics (Shen and Slater, 2021). In Africa, job-specific and organizational stressors resulting from high job-related demands affect approximately 89.3 percent effect South African academic staff, 76.8 percent (administrators), and 96.8 percent, of researchers (du Plessis, 2019; Jasson, Du Plessis, and Simons, 2022). In Nigeria, there was a significant contribution of health-seeking behavior, and illness cognition factors among the psychological well-being of lecturers (Oluwole et al., 2022). In Uganda, results indicated that there is high stress at 74.4 percent the Makerere University academic staff reported (Atugonza et al., 2021). Results indicated that more than half (58 percent) of the academic staff had moderate levels of burnout while 38 percent of academic staff in public universities had high levels of burnout (Kabunga, 2020). Mugizi et al. (2021) revealed that compensation management predicted employee well-being in private universities. However, none of these studies focused on the impact of the workplace environment on the well-being of academic staff at Makerere University.

Theoretically, this study was guided by the organizational support theory (OST) propounded by Eisenberger, Huntington, Hutchinson, and Sowa (1986). OST postulates that employees will attempt to work for those organizations wherein a pleasant work environment is provided and employees' contributions are properly valued and care for well-being (Malve-Ahlroth, 2020). The theory assumes that employees perceive their organization as supportive when favorable rewards and job conditions are provided, and employees stimulate employee reciprocity in the form of organizational commitment and job satisfaction, communicating a positive valuation of employees' contributions to helping the organization achieve its goals (Eisenberger, Wang, Mesdaghinia, Wu, & Wickham, 2013). OST holds that interpersonal relationships, caring, approval, and respect connoted by supervisors fulfill

socio-emotional needs, leading employees to incorporate organizational membership and role status into their social identity leading to managerial effectiveness (Eisenberger et al., 2016).

In this study, three concepts were investigated, namely; employee well-being, workplace well-being, and workplace climate. According to Ruggeri, et al. (2020), employee well-being refers to a combination of feeling good and functioning well, experiencing positive emotions such as happiness and contentment, as well as developing one's potential, having some control over one's life, having a sense of purpose, and experiencing positive relationships. Meanwhile, Bennett et al. (2017) defined well-being at work as reflecting life satisfaction, the prevalence of positive emotions and moods of individuals on their job, and in particular the feelings that the work provides the opportunities to develop their potential for self-actualization. The second concept of workplace well-being was defined by Nielsen et al. (2017) as a state of an individual's mental, physical, and general health as well as experiences of satisfaction both at work and outside of work. It describes all aspects of an individual's working life including the quality and safety of the working physical environment, the climate at work, and work organization (Burke & Richardsen, 2019). Aryanti and Sari (2020) defined workplace well-being as a sense of accomplishment achieved from work that is associated with the feelings of workers in general and also the intrinsic and extrinsic work values. In this study, workplace well-being was looked at in terms of work satisfaction, organizational respect for employees, employer care, and intrusion of work into private life. The third concept was peer group interaction. Eisenberger, Malone, and Presson (2016) defined peer group interaction as workplace social networks that enhance interpersonal relationships that offer friendship and information about how employees are to become successful interdependent group members in organizations.

Contextually, this study took place at Makerere University. According to Uganda's Auditor General's Report of 2015, out of 2,774 established academic staff positions for Makerere University, only 1,333 (or 48 percent) were filled - leaving a gap of 1,441 (or 52 percent). This report collaborated with the Rwendaire Report 2017which indicated that between 2015 and 2016 over 69 left the University. Researchers like Ssali et al. (2019) indicated that between 2009 and 2013 the university lost 50 senior academic staff for other universities, and in 2015 and 2016, over 69 left. Ndyabahika (2019) noted that between 2013 and 2014, 477 lectures left. These statistics are not only perturbing but are pointers to yet bigger problems to come in the provision of quality higher education. They may prompt us to ask: why has Makerere University consistently been failing to retain qualified academic staff? In this study, the researcher attempted to examine whether there is a relationship between the workplace environment of university academic staff and well-being in the workplace.

PROBLEM STATEMENT

Academic staff well-being in higher education institutions like Makerere is critical for its realization of quality higher education (Mugizi et al., 2021). At Makerere University, strategies have been put in place to enhance the well-being opportunities for collaborative research, Ph.D. scholarships, skill building, scientific writing, and sources of research funding schemes (Nabatte, 2019; Semeere et al., 2021). Despite these improved strategies towards improving academic staff well-being, some academic staff sponsored had exhibited high intent to quit the university soon after graduating or even before serving the university within the University in recent (Mwesigwa et al. 2020; Ndyabahika, 2019; Ssali et al. 2019; Rwendaire, 2017). This high turnover gives an impression of ill-well-being among the academic staff Atugonza et al. 2021; Kabunga, 2020). Could it be that, the interventions are not addressing the root causes of ill-well-being? If so proper well-being analysis needs to be done, otherwise, Makerere University will continue using interventions that do not address the root causes of ill well-being. Therefore this paper presents the findings of a study that attempted to understand the how well-being of academic staff is affected by the workplace environment.

LITERATURE REVIEW

The higher education context constitutes an important social environment where academic staff are connected daily. In general, peer group interaction in the university context has a major influence on lecturers' well-being, academic achievement, mental and physical health, and even their lifestyle (Nurkka, 2019) Orientation to peers and friendships is one of the key features of academic staff, and through these interactions, lecturers absorb a wide range of attitudes, norms, and experiences and skills (Nareeba et al., 2019). Peer group interactions in educational institutions are complex and multidimensional and can take many forms (Wong & Chapman, 2023). Peer group interaction is an element that can help individual academic staff reduce the amount of stress experienced as well as help them cope better in dealing with stressful work situations (Wessels and Wood, 2019). Several scholars have already investigated the impact of peer group interaction in the workplace, risk behaviors, and academic performance. For instance, Berthelon et al. (2019) investigated the impact of the structure of the peer network on academic achievement and the results indicated that peer quality improves student performance and that the breadth and cohesion of students' networks positively affect student outcomes. Cornelissen (2016) explored why social interactions in the workplace lead to productivity spillover among co-workers in the UK and revealed that social interactions lead to productivity spillover through knowledge spillover or peer pressure. Gioia (2017) investigated the role of group identity in peer effects on risk behavior in the UK and the findings suggested that subjects are affected by their peers' choices and they change their decisions to assimilate their behavior to that of their peers when they have information on the choices made by the fellow members of their group.

Some scholars have investigated the impact of peer group interaction on the well-being of employees in different organizations. For instance Mastroianni and Storberg-Walker, 2014) explored how work interactions enhanced or detracted from the perceptions of well-being and health behaviors of 19 volunteers recruited from 4 companies in the USA, and the findings revealed that feelings of well-being were enhanced by workplace interactions, which were trusting, collaborative, and positive, as well as when participants felt valued and respected. Pauksztat, Salin and Kitada (2022) investigated the buffering effects of four forms of support (instrumental and emotional peer support, company support, and non-work support) on three aspects of employee well-being (depression, anxiety, and exhaustion) among seafarers in Finland. The findings indicated that Instrumental peer support buffered the negative impact of bullying on depression. Feng, Altinay and Olya (2019) investigated the influence of socially supportive services provided by commercial senior living services on older customers' social well-being and the findings indicated that Social connectedness moderates the relationship between interaction with peers and the social well-being of customers.

Different scholars investigated the impact of peer group interaction on the well-being of employees in educational institutions. For instance, Komp et al. (2022) examined relationships between health-promoting collaboration, well-being, and workability regarding presenteeism among academics in German Universities, and the finding indicated that health-promoting collaboration has a negative relationship with presenteeism. Saputra et al. (2017), explored the relationship between social support, peer relationships, and psychological well-being among students who were working on their thesis. The findings indicated that there is a relationship between social support and the psychological well-being of final-year students. The finding revealed that perceived social support predicted subjective well-being. Hamsan (2017) examined the relationship between academic environment, peer relationship, time management, and psychological well-being among final-year students at University Putra Malaysia and the results found that most of the majority of students have low peer relationships, extremely severe anxiety, and normal stress.

Wessels and Wood (2019) aimed at working collaboratively with teachers to assist them in perceiving ways to progress their experiences of well-being in the education environment in South Africa found that frequent, informal social contact with colleagues, coupled with explicit action to focus on positive emotions, could improve teachers' experiences of well-being. Mäkiniemi, Oksanen, and Mäkikangas (2021) investigated whether personal, social, and organizational level resources can buffer against the negative effects of perceived loneliness on the stress and exhaustion of Finnish university employees. Their findings revealed that perceived loneliness was directly and positively associated with stress and exhaustion. Ditton (2009) explored how social relationships influence the health of academics at Australian universities

and revealed that to remedy the burden of mental illness, employer-employee communication must be changed to integrate the social reality of the work context. Lah Lo-oh and Ayuk, (2018) analyzed the effect of social support on the psychological well-being of academically stressed students at the University of Buea, and their findings indicated that peer acceptance affected the psychological well-being of academically stressed students at the University of Buea. This literature reveals the fundamental role of peer group interaction and its relationship with well-being. However, from the contextual point of, little was studied from Makerere University but still even methodologically, none of the studies used the mixed approach as the current study. Still, these studies mainly looked at well-being and few linked it to peer group interaction using the job performance theory.

METHODOLOGY

Sample and Procedure

The researcher used 382 academic staff at Makerere University including professors, associate professors, senior lecturers, lecturers, and assistant lecturers on their perceptions of their supervisory relationships and their well-being using self-report questionnaires. The academic staff were from three colleges and one school. The questionnaire included items on the perceived quality of supervisory relationships and well-being (work satisfaction, organization respect for employees, care from employees, and intrusion of work into 6. private life). The data was analyzed using factor analysis, descriptive statistics, Pearson correlation coefficient, Analysis of variance, and regression analysis. The researcher personally conducted interviews with 4 academic staff and four heads of departments from the three colleges and one school.

Instrumentation

Since the researcher used a mixed method approach, a concurrent survey design was employed in particular the quantitative approach used a survey design, and the qualitative used a phenomenological design. Data were collected using self-administered questionnaires and interview guides. The questionnaires comprised two sections, sections A and B. The questions in section A were on the background characteristics of the respondents, section B on the well-being of academic staff with questions on work satisfaction, organization respect for employees, care from employer, and intrusion of work into private life. Section C covered workplace environment with questions on perceived climate, supervisory relationships, and peer group interaction. The self-administered questionnaires had close-ended items based nominal scale with appropriate alternatives given for section A and an ordinal scale based on the five-point Likert from a minimum of 1 through 5 for sections B and C. Closed-ended questions were selected because they are easy to administer, code analyses, and allow comparisons and quantification producing fully completed data while avoiding irrelevant responses. An interview guide, which is a face-to-face data collection instrument was used to collect qualitative data. The design of the interview

items was a standardized open-ended interview that allowed the participants to provide detailed information because of the probing questions as a means of follow-up.

Data management and control

The analysis of data was done at different levels, namely univariate, bivariate level, and multi-variate. At the univariate level, data analyses were based on descriptive statistics. At the bivariate level, the researcher correlated the dependent variable (DV) well-being with each of the dimensions of the workplace environment using the Pearson correlation coefficient. At multi-viate levels, the researcher used simple linear regression with each regressed against the DV (well-being) on the dimensions of workplace well-being.

RESULTS

Workplace well-being dimensions

The study aimed to explore the perceptions of supervisory relationships on the well-being of the academic staff at Makerere University. The variables were workplace well-being as the dependent variable and supervisory relations as the independent variable. Table 1 shows the descriptive statistics of workplace well-being.

Table 1. Descriptive Statistics for workplace well-being dimensions

Item	Mean	Standard deviation
Work satisfaction	3.26	.82003
Organizational respect for employee	2.89	.88327
Care from employer	2.67	.93122
Intrusion of work into private life	3.52	.84098

Results from Table 1 indicate that measures of well-being perform poorly. Work satisfaction stands at the mean value of 3.26 while intrusion of work into private life is at 3.56. Organizational respect for employees is just slightly below average at a mean value of 3.89. It is only care from the employer which is slightly good at a level of disagreement that it is not done. Accordingly, the result implies that care from employers and organization respect for employees were dissatisfying factors among academic staff unlike work satisfaction and intrusion of work into private life which the respondents took to be good.

Peer Group Interaction

Peer Group Interaction which was conceived as the third dimension of the workplace environment was studied using ten items. The question items were scaled on the Five Point Likert where5= Strongly Agree, 4 = Agree, 3 = Not Sure, 2 = Disagree, and 1= Strongly Disagree. The results of the supervisory relationship are presented in Table 2.

Table 2:   Descriptive Statistics for Peer Group Interaction

Peer Group Interaction	SA	A	NS	D	SD	Mean
Lectures of this department work closely together	10 (3.5%)	65 (22.7%)	32 (11.2%)	152 (53.1%)	27 (9.5%)	2.58
Lecturers in this department always have open communication about work.	14 (5.0%)	65 (22.7%)	24 (8.4%)	114 (39.9%)	69 (24.1%)	2.44
I prefer to work in teams than alone in this workplace	14 (5.0%)	65 (22.7%)	35 (12.2%)	111 (38.8%)	61 (21.3%)	2.51
Lecturers in this department always participate in departmental work decisions	17 (6.0%)	73 (25.5%)	19 (6.6%)	136 (47.6%)	41 (14.3%)	2.61
Lectures of this department always express empathy for one another.	15 (4.9%)	89 (31.2%)	28 (9.8%)	85 (29.8%)	69 (25.2%)	2.62
I always seek to understand my fellow staff's work needs	12 (3.9%)	82 (28.8%)	41 (14.4%)	89 (31.2%)	62 (21.7%)	2.61
Lectures in this department have a sense of teamwork	9 (3.2%)	58 (20.4%)	28 (9.8%)	112 (39.3%)	78 (27.3%)	2.32
One can share job-related issues with fellow lectures in this department	10 (3.5%)	57 (19.9%)	32 (11.2%)	110 (38.5%)	77 (26.9%)	2.34
Lectures in this department can collectively influence many important job-related issues.	12 (4.2%)	44 (15.4%)	25 (8.7%)	144 (50.3%)	61 (21.4%)	2.31
Lectures in this department easily express their views about work to their closest lectures	13 (4.5%)	38 (13.3%)	33 (11.5%)	137 (47.9%)	65 (22.8%)	2.29

Key: 1= Strongly Disagree, Disagree, 3= Not Sure, 4 = Agree, and 5= Strongly Agree. The findings in Table 2 on whether the lecturers of this department work closely together, cumulatively the majority of the respondents (62.6%) disagreed while 27.7% agreed and 11.2% were not sure. The mean = 2.58 close to code 3 which on the scale used meant that the respondents were not sure. This suggested that to a smaller extent, the lectures of this department work closely together. As to whether the lecturers in this department always have open communication about work, the majority (64.0%) of the respondents disagreed while 27.6% agreed peed 8.4% were not sure. The mean = 2.44 implied that the respondents disagreed on the item. This suggested that the lecturers in this department to a smaller extent have open communication about work. As regards
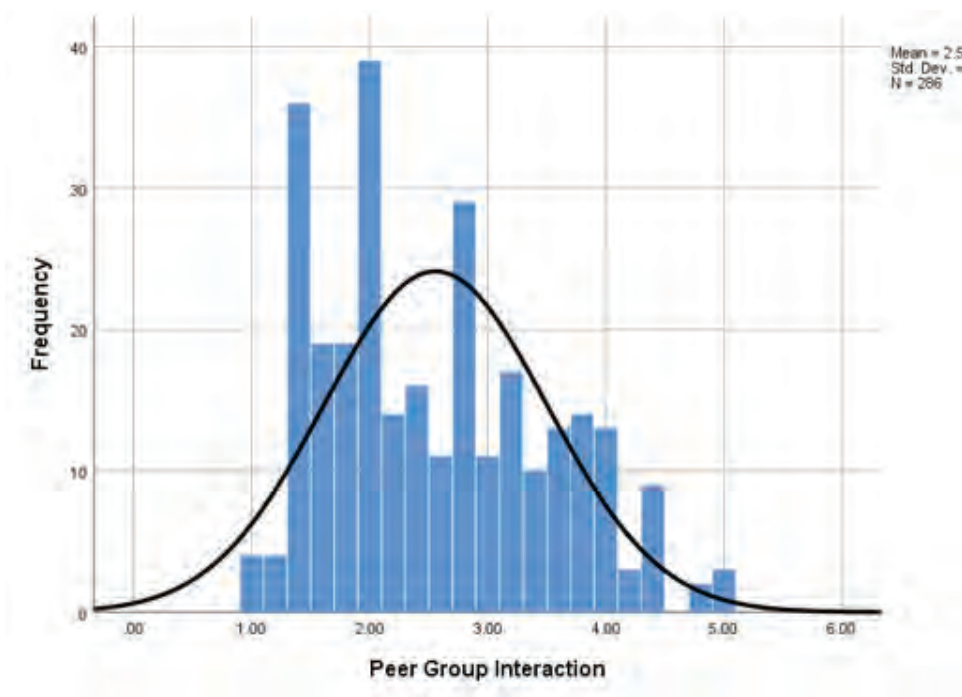
whether respondents prefer to work in teams than work alone at the workplace, a majority of respondents (60.1%) disagreed while 27.7% agreed and 12.2% were not sure. The mean = 2.51 close to code 3 which on the scale used corresponded to not sure suggested that, the respondents prefer to work in teams than work alone at the workplace. Concerning whether the lecturers in their department always participate in departmental work decisions, the majority percentage (61.9%) of respondents disagreed while 31.5% agreed and 6.6% were not sure. The mean = 2.61 close to code 3 which on the scale used corresponded to not sure suggested that to a smaller extent, the lecturers in their department always participate in departmental work decisions. As regards whether the Lectures in their department always express empathy for one another, a majority of respondents (55.0%) disagreed while 36.1% agreed and 9.8% were not sure. The mean = 2.62 close to code 3 which on the scale used corresponded to not sure suggested that, the lecturers in their departments fairly express empathy for one another.

The findings in Table 2 on whether the respondent always seeks to understand their fellow staff's work needs, cumulatively the majority of the respondents (52.9%) disagreed while 32.7% agreed and 14.4% were not sure. The mean = 2.61 close to code 3 which on the scale used meant that the respondents were not sure. This suggested that to a smaller extent, respondents always sought to understand their fellow staff's work needs. As to whether the Lectures in the department have a sense of teamwork, the majority (66.6%) of the respondents disagreed while 23.6% agreed and 9.8% were not sure. The mean = 2.32 implied that the respondents disagreed on the item. This suggested that the lecturers in the department did not have a sense of teamwork. As regards whether the respondents can share job-related issues with fellow lecturers in their departments, a majority of respondents (65.4%) disagreed while 23.4% agreed and 11.2% were not sure. The mean = 2.34 close to code 2 which on the scale used corresponded to disagree suggesting that, the respondents cannot share job-related issues with fellow lecturers in their departments. With respect to whether lectures in their departments can collectively influence many important job-related issues, the majority percentage (71.7%) of respondents disagreed while 19.6% agreed and 8.7% were not sure. The mean = 2.31 close to code 2 which on the scale used corresponded to disagree suggested that lectures in their departments did not collectively influence many important job-related issues. As regards whether the lecturers in their department easily expressed their views about work to their closest lectures, a majority of respondents (70.7%) disagreed while 17.8% agreed and 11.5% were not sure. The mean = 2.29 close to code 2 which on the scale used corresponded to disagree suggesting that, the lecturers in their department did not easily express their views about work to their closest lecturers.

To establish an overall picture of how respondents rated peer group interaction. An average index of five items measuring PGIS was computed. The summary of the

statistics on the same indicated a mean = 2. 56, median = 2.40, and standard deviation = 0.947. With the mean being greater than the median, it suggested a normal distribution in the results, with a positive skew. The curve in Figure 4.8 confirms the suggested normal distribution.

Figure 1

Histogram on Peer Group Interaction

Examining the Relationship between Peer Group Interaction and Academic Staff Well-being at Makerere University

The study went further looked at the relationship between peer group interaction and academic staff well-being. Deductively, the investigators hypothesized to conduct correlations. The hypothesis (H1) stated that Peer group Interaction positively significantly affects academic staff well-being at Makerere University while the null hypothesis (H0) stated that Peer group Interaction does not positively significantly affect the well-being of academic staff at Makerere University. A Pearson's correlation coefficient and simple linear regression were run to test the relationship and the effect respectively. The results from Pearson's correlation coefficient technique are presented in Table 3.

Table 3:

Regression analysis on WPC, SR, and PGI

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.537	0.288	0.281	.47879

The multiple linear regression analysis adjusted r2 0.281 reveals that PGI contributed 28.1% of the change in the well-being of academic staff at Makerere University. The remaining 71.9% were contributed by other factors that were other within this study. Therefore, the null hypothesis was accepted that peer group interaction does not positively significantly affects well-being of academic staff at Makerere University, and the research hypothesis rejected that peer group interaction positively significantly affects well-being of academic staff at Makerere University.

Table 4.

ANOVA on PGI and Well-being of academic staff at Makerere University

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.824	3	8.608	37.550	.000
	Residual	63.729	278	.229		
	Total	89.552	281			

The regression model was good Table 4 showed F = 37.550 and a significance P value = 0.000, less than 0.05. When the observed F statistic is significant or large enough the sigficance is small enough, that is less than 0.05 or α=5% in which I deduced that the computed F statistic is large enough. Hence I rejected the null hypotheses (H0) peer group interaction does not positively significantly affect academic staff well-being at Makerere University. I instead accepted the research hypotheses (H1) that PGI significantly affect Academic staff well-being at Makerere University.

Table 5: *Correlation coefficient PGI and over all Well-being*

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error			
3	(Constant)	2.104	.104	.507	20.159	.000
	Pee Group Interaction (PGR)	-.061	.040	.507	-1.534	.126

Table 5 reveals that peer group interaction had a Beta value of -0.61 with a sig of 0.126. When the sig value is big enough I deduced that the Beta value is small enough. I thus accepted the (HO) Peer group interaction does not positively significantly affect academic staff well-being, and instead rejected the (H1) Peer group interaction positively significantly affects academic staff well-being.

The above statistical analysis is in line with qualitative analysis which I did according to research questions that sought to investigate the extent to which peer group interaction effectively enhances the well-being of academic staff. In response to the question, participants provided positive feedback, describing their interaction with peers as positive. For instance, Participant emphasized that;

I strongly believe that peer group interaction is crucial for academic growth. Through peer collaboration, I can gain new perspectives and ideas that can help me to develop my research and teaching skills. (KI13)

In my opinion, peer group interaction can enhance career development by providing opportunities for mentorship and guidance. By learning from experienced colleagues, I can develop the skills and knowledge necessary to advance my career. (KII1)

In my opinion, peer group interaction can enhance academic growth by providing opportunities for constructive feedback and discussion. This can help me to identify areas where I need to improve and develop strategies for improvement. (KII7)

The statement suggests that peer group interaction can contribute significantly to academic growth by providing valuable opportunities for constructive feedback and discussion. Such interactions can help identify areas of strength and areas that require improvement. The statement also asserts that peer group interaction is a vital factor for academic growth. The author emphasizes that peer collaboration can provide new and diverse perspectives and ideas that can contribute to the development of research and teaching skills. This can lead to an improvement in the quality of research and teaching outcomes, which highlights the importance of these interactions in enhancing their well-being as academic staff members.

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The multiple linear regression analysis adjusted r^2 0.281 results in Table 3 reveal that PGI contributed 28.1% of the change in the well-being of academic staff at Makerere University. The remaining 71.9% were contributed by other factors that were other within this study. Table 5, indicates that Beta value of -0.61 with a sig of 0.126. This implied that peer group interaction does not positively, or significantly affect the well-being of academic staff at Makerere University. This is in agreement with Gioia (2017) who discovered that individuals are influenced by their peers' choices and may change their behavior to align with their group members. However, combining a less impersonal preference-based matching procedure with a group task did not significantly increase the magnitude of peer effects. In congruence with the findings, Mehari et al. (2015) who asserted that the relation between the reported frequency of victimization and well-being did not vary as a function of the interaction between adolescents' ethnicity and their schools' ethnic composition. The findings are in line with Komp et al. (2022) who indicated that health-promoting collaboration has a negative relationship with presenteeism. Hamsan (2017) found that most of the majority of final-year students at the University of Putra Malaysia had low peer relationships, extremely severe anxiety, and normal stress.

The results in Table 4 show a high F = 37.550 and a significant p-value (0.000), indicating that peer group positively significantly affects academic staff well-being. The findings concur with Wessels and Wood (2019) who found that frequent, informal social contact with colleagues, coupled with explicit action to focus on positive

emotions, could improve teachers' experiences of well-being. Mäkiniemi, Oksanen, and Mäkikangas (2021) revealed that perceived loneliness was directly and positively associated with stress and exhaustion. Ditton (2009) revealed that employer-employee communication when integrated the social reality buffers the burden of mental illness of academics at Australian universities. Lah Lo-oh and Ayuk, (2018) indicated that peer acceptance affected the psychological well-being of academically stressed students. This implies that where strong peer group interaction exists, there is an assurance that well-being is enhanced among workers. Mastroianni et al. (2014) are in congruence with the findings that revealed that feelings of well-being were enhanced by workplace interactions, which were trusting, collaborative, and positive, as well as when participants felt valued and respected. Saputra et al. (2017), in congruence with the findings, revealed that social support has a significant relationship with the psychological well-being of final-year students. Feng et al. (2019) also support the findings who indicated that Social connectedness moderates the relationship between interaction with peers and the social well-being of customers. These findings are also in line with the work of other scholars like Pauksztat et al. (2022) who found that Instrumental peer support buffered the negative impact of bullying on depression.

In conclusion, the study underscores the critical importance of peer group interaction in shaping the well-being of academic staff at Makerere University. Special attention to positive interactions, including collaboration on research projects and participation in department meetings. The findings reveal that academic staff's well-being is significantly influenced by the quality of peer group interactions, fostering professional development and interpersonal relationships to enhance the well-being of academic staff. However, all dimensions of the peer group need improvement since the level of disagreement with statements expressed in the affirmative was high (Table 2). These findings are vital for Makerere University and similar institutions seeking to enhance the overall well-being of their academic staff, as they illuminate the relationship between peer group interaction and the quality of academic work life. The implications of this research extend to the broader context of higher education institutions, as nurturing a positive and conducive workplace environment is essential for attracting and retaining high-quality academic talent, which, in turn, contributes to the institution's ability to fulfill its educational mission and meet the dynamic needs of society. Future directions for research could delve deeper into specific interventions and strategies that can optimize peer group interaction and consequently enhance academic staff well-being, ultimately benefiting the entire academic community and the pursuit of quality higher education.

The university management should strengthen interpersonal relationships through social support platforms and foster a culture of open communication and feedback. This can be done by fostering strong interpersonal relationships within the academic community, promoting networking events, creating platforms for social support, and

emphasizing the importance of building positive relationships with colleagues. The university should also facilitate staff interactions through interdisciplinary workshops, research symposiums, and networking events to provide opportunities for knowledge sharing, support, and a sense of belonging, which can contribute to their overall well-being.

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TEACHER COMPETENCE AND IMPLEMENTATION OF LOWER SECONDARY SCHOOL CURRICULUM IN CENTRAL DIVISION ARUA CITY: A CONCEPTUAL PAPER
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ABSTRACT

This study rigorously examined the influence of teacher competence, specifically in content, pedagogical, and technological domains, on the successful implementation of the Lower-Secondary School Curriculum in Central Division, Arua City. Employing a quantitative approach, data was systematically gathered through questionnaire surveys administered to teachers. The research data analysis incorporates uni-variate, bivariate, and multivariate analyses to provide a comprehensive exploration of the intricate relationships among the variables. The stringent measures of data validity and reliability employed in this study enhance the robustness and trustworthiness of its findings. By adopting a quantitative lens and ensuring methodological rigor, this research makes a significant contribution to the existing body of knowledge, offering significant insights for educational practitioners and policymakers in Central Division, Arua City. The outcomes of this study aim to foster improvements in curriculum implementation practices and contribute to the ongoing professional development of teachers in the region.

Key words: *Teacher competence: Curriculum implementation: Content competence: Pedagogical competence and Technological competence*

INTRODUCTION

Curriculum implementation stands as a pivotal element in the global education landscape, garnering considerable scholarly attention. It encapsulates a multifaceted process, involving the translation of planned curriculum objectives into tangible learning experiences for students (Domike & Odey, 2014). The efficacy of curriculum implementation is paramount for realizing the objectives established educational policies worldwide. Recent research, exemplified by Roble, Agusto, and Moriais (2019), underscores the influence of teaching standards and skills of higher education professionals on curriculum implementation in European higher education institutions. Teachers' competence and proficiency emerge as central factors shaping the effectiveness of curriculum delivery. UNESCO (2010) underscores curriculum

implementation as a deliberate process aimed at executing program tasks and achieving desired outcomes. Afangideh (2009) characterizes it as the active engagement of learners with planned learning opportunities. The repercussions of curriculum implementation quality extend to a society's political, economic, scientific, and technological well-being (Mpka and Izuagba, 2009). Against this backdrop, this study delves into the examination of the impact of teacher competence on the implementation of the lower-secondary school curriculum in Central Division, Arua City.

BACKGROUND OF THE STUDY

Etymologically, the genesis of curriculum implementation can be traced back to the historical foundations of the United States, particularly influenced by its predominantly Calvinist culture (Tröhler, 2019). The term "curriculum" itself originates from the Latin word "currere," meaning to run or traverse, reflecting the dynamic nature of education and the continuous evolution of instructional plans (Schubert, 1986). Throughout the global educational landscape, diverse nations have undergone comprehensive curriculum reforms, aligning their educational objectives with an emphasis on cultivating competencies within their school curricula. Notably, the Korean education system serves as a paradigmatic example of such transformation, transitioning from a traditional exam-oriented approach to a pedagogical model that prioritizes the enhancement of learners' competencies while concurrently upholding academic excellence (Lee, 2013).

In the educational landscape of Uganda, akin to numerous other Sub-Saharan African nations, the complexities surrounding curriculum implementation have become a focal point, triggering the development of new educational policies with commendable objectives. However, the pragmatic realization of these well-conceived policies into effective classroom practices has encountered substantial challenges, resulting in educational outcomes that often diverge from the envisioned standards (Rogan & Grayson, 2003). Despite earnest endeavors to enhance curriculum implementation, a critical gap persists, characterized by a scarcity of empirical evidence specifically addressing the nuanced aspects of the implementation of the new Lower-Secondary School Curriculum in Uganda.

Contextually, Uganda's education system has experienced various reforms to enhance curriculum delivery and improve learning outcomes. In January 2020, the country implemented a revised Lower-Secondary School Curriculum with the aim of enhancing the quality and relevance of education. The curriculum revision sought to address previous challenges and equip students with the necessary competencies to thrive in the modern world. It emphasizes not only academic knowledge but also the development of practical skills to prepare students for the workforce and global challenges (UNESCO, 2019).Continued academic performance decline among students in Central Division - Arua city raises concerns about their long-term

educational and career prospects. This decline may hinder their ability to compete globally due to a lack of essential skills like creativity, critical thinking, and collaboration. Inadequate teacher training and pedagogical expertise compound the issue (NCDC, 2020). In this study, the researcher aimed at investigating the relationship between teacher competence and the implementation of the new Lower-Secondary School Curriculum in Central Division, Arua City. By exploring the challenges and factors that affect successful curriculum implementation, we can provide valuable insights to improve the quality of education in the region. Policymakers and educators can utilize the findings to develop targeted strategies to enhance teacher competence and, subsequently, the successful implementation of the curriculum, ultimately benefiting the students and the entire education system.

STATEMENT OF THE PROBLEM

Despite the Government of Uganda's concerted efforts, through the Ministry of Education and Sports, to invest in secondary schools and improve the implementation of the Lower-Secondary School Curriculum, Central Division in Arua city continues to face significant challenges in achieving the desired level of curriculum implementation. According to Jerotich, Kurgat, and Kimutai (2017), the expected implementation rate is set at above 80%. However, evidence from Ward, Penny, and Read (2016) suggests that the current implementation rate falls below this target, with only approximately 60% of schools in Central Division effectively implementing the curriculum. A study conducted by Driwaru (2019) revealed alarming statistics, indicating that 40% of students in Central Division exhibited bad study habits, resulting in poor academic performance and disengagement from the learning process. Moreover, the study found that nearly 30% of students were frequently absent from school, leading to a significant loss of instructional time. Additionally, more than 25% of students demonstrated low levels of participation in classroom interactions, which negatively impacted their learning experiences and hindered curriculum delivery.

Continued academic performance decline among students in Central Division - Arua city raises concerns about their long-term educational and career prospects. This decline may hinder their ability to compete globally due to a lack of essential skills like creativity, critical thinking, and collaboration, inadequate teacher training and pedagogical expertise compound the issue. A survey by the National Curriculum Development Centre (NCDC, 2020) found that only 50% of Central Division teachers had received sufficient professional development to effectively implement the new curriculum. This deficiency in teacher competence directly affects Lower-Secondary School Curriculum implementation as addressed by this research

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GENERAL OBJECTIVE

The general objective of this study was to investigate the relationship between teacher competence on the implementation of lower-secondary school curriculum in Central -Arua City.

SPECIFIC OBJECTIVES

1.   To examine the relationship between teachers' content competence and the implementation of the Lower-Secondary School Curriculum in Central Division, Arua City.
2.   To examine the relationship between teachers' pedagogical competence and the implementation of the Lower-Secondary School Curriculum in Central Division, Arua City.
3.   To examine the relationship between teachers' technological competence and the implementation of the Lower-Secondary School Curriculum in Central Division, Arua City.

CONCEPTUAL FRAMEWORK

The conceptual framework in Figure 1 demonstrates how teacher competence, including content competence, pedagogical competence, and technological competence, fosters effective implementation of the Lower-Secondary School Curriculum. Teachers with a strong command of subject matter, effective teaching strategies, and proficiency in using technology are better equipped to translate curricular objectives into meaningful learning experiences for their students. This, in turn, positively impacts students' study habits, classroom interactions, and participation in assessment tasks. Ultimately, teacher competence plays a pivotal role in enhancing overall student outcomes.
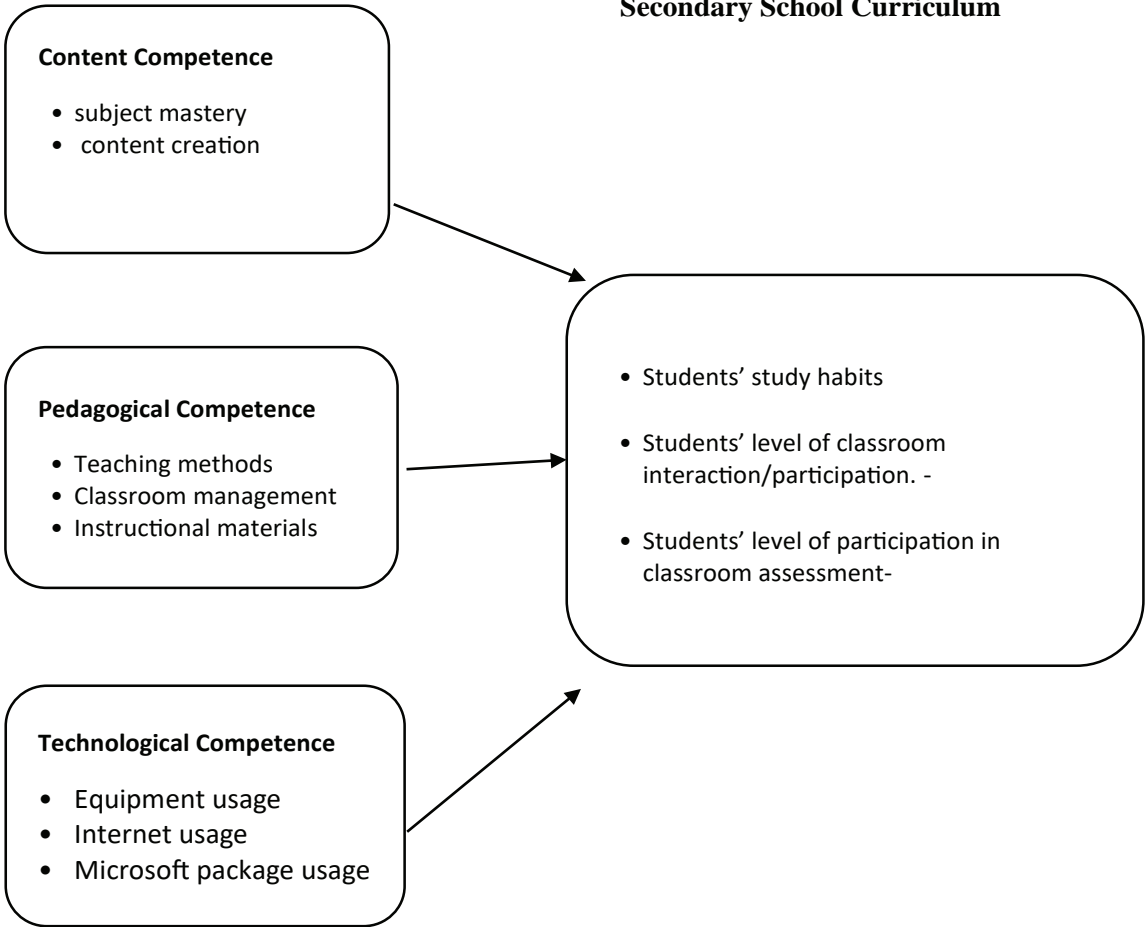
Figure 1: Conceptual Framework showing how the relationship between teacher competence and their implementation of lower-secondary school curriculum

Independent variable

Teacher Competence

Dependent variable

Implementation of Lower - Secondary School Curriculum

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┌─────────────────────────┐
│ Content Competence      │
│                         │
│  • subject mastery      │
│  • content creation     │
│                         │
└─────────────────────────┘
                              ┌──────────────────────────────┐
                              │                                │
┌─────────────────────────┐   │  • Students' study habits     │
│ Pedagogical Competence  │   │                                │
│                         │   │  • Students' level of classroom│
│  • Teaching methods     │   │    interaction/participation. -│
│  • Classroom management │   │                                │
│  • Instructional materials │ │  • Students' level of          │
│                         │   │    participation in            │
└─────────────────────────┘   │    classroom assessment-       │
                              │                                │
┌─────────────────────────┐   └──────────────────────────────┘
│ Technological Competence│
│                         │
│  • Equipment usage      │
│  • Internet usage       │
│  • Microsoft package usage │
└─────────────────────────┘
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Source: Adopted from; Muhwezi (2022) & Olga (2012) and modified by the Researcher

LITERATURE REVIEW

Teachers' Content competencies and implementation of lower level secondary school curriculum

Ituma (2022) studied the need for teacher training and support in implementing competency-based learning for integrated science in Kenyan junior secondary schools. The study results revealed that there is a shift from content-based learning to competency-based learning in Kenya's education system. However, it is important to consider that implementing competency-based learning may require significant resources and training for teachers, which could pose challenges in a country like Kenya with limited education funding and infrastructure. Nielsen and Nielsen (2021) investigated lower secondary school teachers' perceived practices of the rationale

behind and possibilities for working with momo in the context of the revised science curriculum. The study results revealed that there is a content-heavy curriculum and multiple-choice exams are counterproductive to teachers' efforts to implement a more competence–oriented approach to momo.

Bizimana, Mutangana, and Mwesigye (2020) analyzed the performance of students in biology among public lower secondary schools based on gender, type, and school location in Nyamagabe District, Rwanda, during the implementation of a biology competence-based curriculum. The study results revealed that despite the introduction of the biology competence-based curriculum, the student's performance in biology is still not encouraging. However, the study may not have accounted for other factors that could influence student performance in biology, such as teacher quality, resources available to schools, or individual student motivation.

In addition, Nyoni (2018) assessed the challenges facing teachers in the implementation of the paradigm shift towards a competence-based curriculum in public secondary schools in Iringa municipality. The study findings revealed that teachers were aware of the paradigm shift towards a competence-based curriculum. While teachers must be aware of the shift towards a competence-based curriculum, awareness alone does not guarantee successful implementation. Teachers may still face significant challenges in effectively adapting their teaching methods and assessments to align with the new curriculum.

Teachers' pedagogical competence and implementation of the Lower-Secondary School Curriculum

Mutua and Wameru (2023) studied teachers' competence and its influence on the effective implementation of the competency-based curriculum in public primary schools in Machakos County, Kenya. The study results indicated that teachers' competence, encompassing values, attitudes, knowledge, and skills, significantly influences the effective implementation of competency-based curricula in public primary schools in Machakos County, Kenya. While the study may have found a significant influence of teachers' competence on the implementation of competency-based curricula, other factors such as resources, support systems, and student readiness may also play a crucial role in determining effectiveness. Konovalov (2023) in his study determined the reasons for the emergence of teachers' professional deficits in organisations of the secondary vocational education system. The study highlighted the importance of continuous monitoring to address deficiencies. However, the study does not directly address the implementation of a competency-based curriculum.

Arifin et al. (2023) studied the implementation of a teacher professional competence development program at Darunnajah Cipining Vocational School. The study results

revealed that teacher professional competence development programs such as coaching are crucial for the effective implementation of the competency-based curriculum in educational institutions like SMK Darunnajah Cipining Vocational School. A study by Ndimbo and Kessey (2023) studied primary school teachers' instructional competencies in the implementation of a competence-based curriculum in the Mpwapwa district council. The study findings revealed that teachers in the Mpwapwa district council demonstrated an understanding of competence-based curriculum, prepared materials effectively, integrated them into teaching, and addressed challenges, showcasing pedagogical competence in implementing the curriculum. While the study may have shown positive results in the Mpwapwa district council, it is important to consider that these findings may not be generalizable to other districts or regions with different contexts and challenges.

Teachers' technological competence and implementation of the Lower-Secondary School Curriculum

Pupnil and Avsec (2020) in their study on the effects of a trans-disciplinary educational approach on students' technological literacy. The study findings revealed that a transdisciplinary educational approach by technology teachers positively impacts students' technological literacy in lower secondary schools, enhancing curriculum implementation and students' competitiveness in a technological society. While the study may have shown positive results, it is important to consider potential biases in the research methodology and the generalizability of the findings to different educational settings. Additionally, other factors, such as student motivation and teacher effectiveness, could also play a significant role in students' technological literacy. Stringer, Lee, Sturm and Glacaman (2022) explored teachers' experiences with digital technology in primary school curricula to understand how teachers can be supported to raise their implementation efforts. The study results revealed that there was a lack of consensus on an appropriate age and approach to introducing digital technology concepts within primary schools.

Fraile, Penalva-Velez and Lacambra (2018) in their study about the development of digital competence in secondary education teachers' training. The study findings revealed that teachers in initial training showed low digital competence, particularly in the content creation and problem-solving areas crucial for integrating ICTs effectively into teaching-learning processes in the lower-secondary school curricula. Lastly, Mariscal et al. (2023) investigated the pedagogical competence of elementary school teachers in integrating educational technology into the classroom. The study found that elementary school teachers had a positive attitude towards educational technology and most reported having high levels of competence in its use. While the study may have found positive attitudes and reported high levels of competence, self-reporting may not always accurately reflect actual pedagogical competence in integrating technology effectively in the classroom.

METHODOLOGY

Paradigm and Research Design

This study exclusively employs a quantitative approach within the positivist paradigm to examine the correlation between teacher competence and the successful implementation of the Lower-Secondary School Curriculum in Central Division, Arua City. Employing a cross-sectional survey design facilitates the systematic collection of numerical data through structured questionnaires, ensuring a focused and rigorous investigation (Jogulu & Pansiri, 2011).

Data Collection Methods and Instruments

The study's objectives, centered on measuring curriculum implementation, exploring the correlation between teacher competence and successful implementation, and understanding students' study habits and classroom interactions, are pursued through quantitative methods. The primary data collection instrument is a questionnaire survey administered among teachers in Central Division, Arua City. This survey instrument consists of closed-ended questions designed to quantitatively assess teacher competence and gather numerical data on curriculum implementation perceptions. The survey is structured to include items related to content knowledge, pedagogical skills, and technological competencies required for effective curriculum implementation, thereby aligning with the study's quantitative focus (Babbie, 2016).

Data Analysis: The data analysis unfolds in a systematic manner, embracing uni-variate, bivariate, and multivariate approaches. Uni-variate analysis involves percentages and descriptive statistics, providing quantitative insights into individual variables. Bivariate analysis delves into correlations between curriculum implementation and each dimension of teacher competencies study employs regression models to predict variations in curriculum implementation based on specific dimensions of the model. This rigorous quantitative approach aims to provide a comprehensive and statistically grounded understanding of the relationships within the dataset.

CONCLUSION

In conclusion, this conceptual paper lays the groundwork for a comprehensive investigation of teacher competence and curriculum implementation in Central Division, Arua City. It embodies the initial stages of a research journey that will ultimately lead to a better understanding of these critical educational components. The subsequent research will delve into the practical aspects of data collection, analysis, and interpretation. It aims to provide valuable insights for educational policymakers, administrators, and teachers to enhance the educational landscape in Central Division, Arua City, and beyond.

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12.	Post Graduate Diploma in Public Administration and Management;
13.	Post Graduate Diploma in Education
14.	Post Graduate Diploma in Information Technology
15.	Post Graduate Diploma in Public Health
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