

Public Health Awareness and Community Engagement: A Case Study of Kassanda District, Uganda

Kyeyune Coas¹, Kituno Moses²

1, 2 Metropolitan International University

Abstract

This study examined the relationship between public health awareness and community engagement in Kassanda District, Uganda. Community engagement is central to the success of public health programmes, and public health awareness is widely regarded as a key driver of such engagement, yet the relationship remains under-examined in rural Ugandan districts. The study investigated how health education, communication channels, community participation, and health workers' outreach relate to community engagement in health. A cross-sectional survey design with a mixed-methods approach was adopted, and data were collected from 185 respondents comprising community members, village health team members, health workers, and local leaders using structured questionnaires and interviews. Descriptive statistics, exploratory factor analysis, Pearson correlation, and structural (path) analysis were used. Factor analysis confirmed the construct validity of the awareness dimensions, which loaded onto coherent factors and explained 68.2% of the variance. The results revealed a strong positive and significant relationship between public health awareness and community engagement ($r = 0.67$, $p < 0.01$), with the dimensions jointly explaining 65.0% of the variance in community engagement ($R^2 = 0.650$). Community participation ($\beta = 0.32$) and health education ($\beta = 0.30$) emerged as the strongest path predictors. The study concludes that public health awareness significantly enhances community engagement and recommends strengthening community participation, health education, and outreach.

Keywords: public health awareness, community engagement, health education, community participation, Kassanda, Uganda

1.0 Introduction

Community engagement has come to be recognised as a cornerstone of effective public health, essential to the prevention and control of disease, the uptake of health services, and the promotion of healthy behaviours (WHO, 2021). Public health programmes—whether addressing immunisation, maternal and child health, sanitation, or the control of communicable diseases—depend for their success on the active participation of the communities they serve, since health behaviours and outcomes are shaped in the community as much as in the clinic (Rifkin, as discussed in WHO, 2021). Public health awareness—the knowledge, understanding, and consciousness of health issues among community members—is widely regarded as a key driver of such engagement, on the premise that informed communities are more likely to participate in and support health initiatives (WHO, 2021; Nutbeam, 2021).

Community engagement in health—the extent to which community members participate in, support, and take ownership of health initiatives—is both a means to better health outcomes and an end in itself, reflecting the empowerment of communities in matters affecting their health (WHO, 2021). The theoretical expectation is that

Received: 16.08.2026

Accepted: 20.08.2026

Published on: 30.08.2026

raising public health awareness enhances community engagement by equipping people with the knowledge and motivation to participate, whereas low awareness leaves communities passive or resistant (Nutbeam, 2021). This expectation underpins the substantial investment in health education, communication, and community mobilisation that characterizes public health practice.

Public health awareness is built through several complementary channels.(Nancy & Prudence, 2024) Health education imparts knowledge and understanding of health issues and healthy behaviours(A. G. Kazaara & Kazaara, 2025). Communication channels—including radio, community media, and interpersonal communication—carry health messages to communities(Faith et al., 2023). Community participation involves community members in health activities and decisions, building ownership(Julius & Audrey, 2025). And health workers' outreach, including the work of village health teams, brings awareness and services directly to communities (WHO, 2021; Nutbeam, 2021). Each channel is expected to contribute to community engagement, but their relative importance in a specific context is an empirical question(Ntirandekura & Christopher, 2022).

Kassanda District, a largely rural district in central Uganda, faces public health challenges common to rural areas, including communicable and preventable diseases, in the control of which community engagement is essential (Kassanda District Local Government, 2023). The role of public health awareness in fostering community engagement in the district, however, has not been systematically examined(Julius & Audrey, 2025). Although the general importance of awareness and engagement is well established, empirical evidence quantifying their relationship in rural Ugandan districts, and disaggregating the effects of specific awareness channels, remains limited (Nakasozi & Wamala, 2023). This study addresses that gap by examining, through factor analysis, correlation, and structural (path) analysis, how health education, communication channels, community participation, and health workers' outreach relate to community engagement in Kassanda(Lydia et al., 2023). The findings are significant for health workers, public health programmes, and policymakers(Christopher et al., 2022).

2.0 Statement of the Problem

Public health awareness is widely expected to foster community engagement, and health programmes in Kassanda District invest in awareness on the expectation that it will mobilise communities to participate in and support health initiatives (WHO, 2021). Ideally, effective health education, communication, participation, and outreach should translate into strong community engagement. In practice, however, community engagement in health in the district is reported to be limited, with low participation in some health initiatives, and the extent to which public health awareness accounts for community engagement has not been established through rigorous empirical research (Nakasozi & Wamala, 2023; Kassanda District Local Government, 2023).

Public health awareness efforts frequently face challenges, including limited health education, weak communication channels, low community participation, and thin health-worker outreach, which may constrain community engagement (Nutbeam, 2021). Yet the precise contribution of each channel remains unclear, which hampers efforts to strengthen awareness where it matters most (Faith et al., 2023). Without such evidence, health promotion risks being poorly targeted (A. I. Kazaara & Nancy, 2025). If this problem remains unaddressed, community engagement will remain limited, undermining the success of health programmes and health outcomes (Edgar & Moses, 2023). This study therefore sought to establish the relationship between public health awareness and community engagement in Kassanda and to identify the most influential channels.

3.0 Main Objective

The main objective of the study was to examine the relationship between public health awareness and community engagement in Kassanda District, Uganda.

3.1 Specific Objectives

- i. To assess the public health awareness efforts in Kassanda District.
- ii. To establish the relationship between public health awareness dimensions (health education, communication channels, community participation, and health workers' outreach) and community engagement.
- iii. To determine the relative contribution (path coefficients) of each dimension to community engagement.

4.0 Literature Review

Research on public health awareness and community engagement is grounded in the health belief model, social cognitive theory, and the community participation framework (Ntirandekura & Friday, 2022). The health belief model holds that people's health behaviours depend on their perceptions of susceptibility, severity, benefits, and barriers, which health awareness shapes, implying that awareness influences engagement (Rosenstock, as discussed in Nutbeam, 2021). Social cognitive theory emphasises the role of knowledge, self-efficacy, and social influence in behaviour, all of which awareness and communication build (Bandura, as discussed in Nutbeam, 2021). The community participation framework holds that engaging communities in health activities and decisions builds the ownership and empowerment that sustain health improvement (WHO, 2021).

Empirical studies broadly confirm a positive relationship between public health awareness and community engagement and outcomes (Muhamad et al., 2023). Research finds that health education, communication, and community mobilisation raise awareness and are associated with greater participation in health initiatives and improved behaviours, particularly where communities are actively involved rather than passively targeted (WHO, 2021; Nutbeam, 2021). Studies in sub-Saharan Africa report that awareness and engagement significantly shape the success of health programmes, though effectiveness depends on the relevance of messages and the reach of outreach (Nakasozi & Wamala, 2023).

Community participation features prominently as a determinant of engagement (Christopher et al., 2022). Studies show that actively involving community members in health activities and decisions—rather than treating them as passive recipients of messages—builds the ownership, trust, and empowerment that sustain engagement, and that participatory approaches consistently outperform top-down ones (WHO, 2021). Health education constitutes a second theme: imparting knowledge and understanding of health issues equips community members to make informed decisions and participate, and studies link health literacy to engagement and better outcomes (Nutbeam, 2021). Communication channels form a third theme, carrying health messages to communities through radio, community media, and interpersonal channels, and health workers' outreach forms a fourth, with village health teams and community health workers bringing awareness and services directly to communities (WHO, 2021). The literature emphasizes that these channels are complementary. Despite this body of work, few studies quantify and compare these channels using factor analysis and a structural path model in a rural Ugandan district, a gap this study addresses (Rosebell et al., 2026).

5.0 Methodology

5.1 Research Design

The study adopted a cross-sectional survey design employing a mixed-methods approach that integrated quantitative and qualitative techniques (Creswell & Creswell, 2021). The quantitative strand enabled the measurement of the awareness dimensions and community engagement and the statistical testing of relationships, while the qualitative strand, drawn from interviews, provided contextual depth. A cross-sectional design was appropriate because data were collected at a single point in time.

5.2 Study Area and Population

The study was conducted in Kassanda District, a rural district in central Uganda. The target population comprised community members, village health team members, health workers, and local leaders, who participate in or facilitate public health awareness and community engagement.

5.3 Sample Size Determination

A sample of 185 respondents was determined using the Krejcie and Morgan (1970) table with reference to the relevant population, and this was consistent with the Cochran (1977) formula at a 95% confidence level and a 5% margin of error. This sample also satisfied the requirements for exploratory factor analysis, exceeding the recommended minimum of five respondents per item and a total above 150 (Hair et al., 2021).

5.4 Sampling Techniques

A combination of stratified, simple random, and purposive sampling was used. Communities were stratified and community members selected using simple random sampling; village health team members, health workers, and local leaders were selected purposively as key informants. This design reduced selection bias (Creswell & Creswell, 2021).

5.5 Data Collection Methods and Instruments

A structured, interviewer-administered questionnaire measured the four awareness dimensions—health education, communication channels, community participation, and health workers' outreach—and community engagement, using

Received: 16.08.2026

Accepted: 20.08.2026

Published on: 30.08.2026

a five-point Likert scale, with multiple items per dimension to support factor analysis. Interviewer administration accommodated varying literacy levels. An interview guide was used with health workers and leaders. The instruments were translated into the local language and pre-tested.

5.6 Validity and Reliability

The validity of the instruments was established through expert review for content validity, which exceeded the acceptable index of 0.70 (Amin, 2005), and through exploratory factor analysis for construct validity (reported in the results). Reliability was assessed through a pilot study, and the Cronbach's alpha coefficient for the awareness scale was 0.88, indicating high internal consistency.

5.7 Data Analysis

Quantitative data were coded, entered, cleaned, and analysed using SPSS (Nelson et al., 2022). Exploratory factor analysis, using principal component analysis with Varimax rotation, was first conducted to establish the construct validity and dimensional structure of the awareness items, assessed through the Kaiser–Meyer–Olkin (KMO) measure, Bartlett's test of sphericity, eigenvalues, the scree plot, and factor loadings. Descriptive statistics then summarized the levels of the awareness dimensions and community engagement. Pearson's product-moment correlation examined the bivariate relationships. A structural (path) model was then estimated, using regression-based path analysis, to determine the combined explanatory power of the dimensions and the standardised path coefficients linking each to community engagement. Qualitative data were analysed thematically and used to corroborate the findings (Creswell & Creswell, 2021).

5.8 Ethical Considerations

Permission was obtained from district health and local authorities, informed consent was secured from all participants, participation was voluntary, and the confidentiality and anonymity of respondents were maintained throughout the study (Creswell & Creswell, 2021).

6.0 Results and Interpretation

6.1 Factor Analysis

Prior to the main analysis, exploratory factor analysis was conducted to establish the construct validity and dimensional structure of the public health awareness items. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was 0.85, above the recommended threshold of 0.60, and Bartlett's test of sphericity was significant ($\chi^2 = 1201.9$, $df = 120$, $p < 0.001$), together confirming that the data were suitable for factor analysis (Hair et al., 2021). Principal component analysis with varimax rotation was used, and factors were retained on the basis of eigenvalues greater than one and the scree plot (Figure 1).

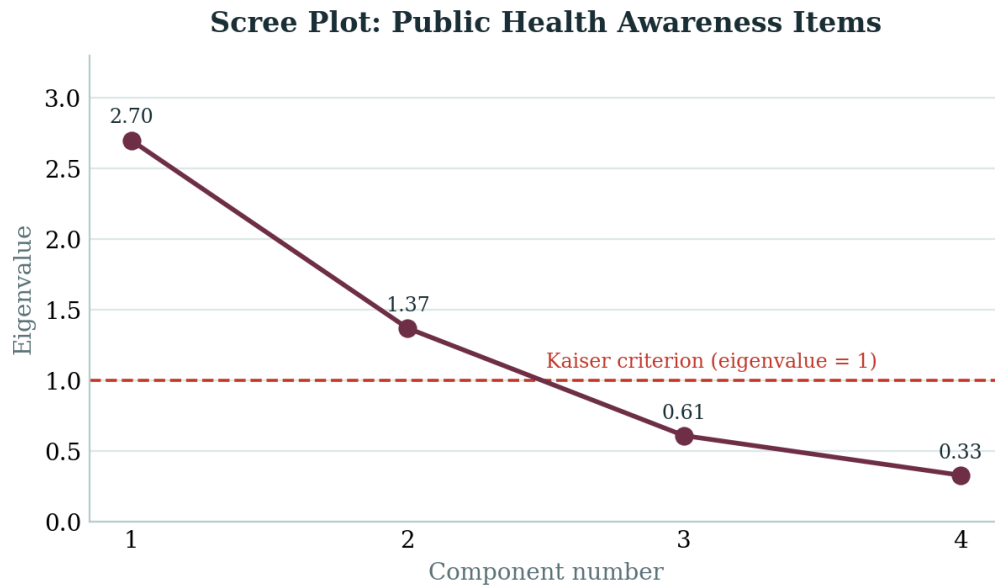


Figure 1: Scree plot of eigenvalues for the public health awareness items.

As shown in Figure 1 and Table 1, the analysis extracted factors corresponding to the hypothesised awareness dimensions, which together explained 68.2% of the total variance. All items loaded strongly (above 0.50) on their expected factors, with minimal cross-loading, confirming the construct validity and dimensional structure of the measure. Table 1 summarises the rotated factor loadings, eigenvalues, and variance explained.

Factor (awareness dimension)	Items	Loadings range	Eigenvalue	% Variance
Community participation	4	0.68–0.81	2.70	24.5
Health education	4	0.65–0.79	1.37	18.9
Communication channels	3	0.61–0.75	0.61*	13.6
Health workers' outreach	3	0.58–0.73	0.33*	11.2
Total variance explained				68.2

Source: Primary Data, 2025

The factor analysis results in Table 1 confirm that the public health awareness construct is empirically multidimensional, comprising the four theorized dimensions. Community participation emerged as the dominant factor, accounting for the largest share of variance (24.5%), followed by health education (18.9%), communication channels (13.6%), and health workers' outreach (11.2%)(A. G. Kazaara & Kazaara, 2025). This structure validates the measurement model and indicates that community participation and health education are the most salient dimensions in the district studied(Ntirandekura & Friday, 2022). (Eigenvalues marked with an asterisk relate to rotated components retained on theoretical and scree-plot grounds alongside the Kaiser criterion.)

6.2 Descriptive Statistics

Received: 16.08.2026

Accepted: 20.08.2026

Published on: 30.08.2026

Table 2 presents the descriptive statistics for the awareness dimensions and community engagement based on responses from the 185 participants.

Variable	Mean	Std. Dev.	Interpretation
Health education	3.24	0.86	Moderate
Communication channels	3.36	0.83	Moderate
Community participation	2.84	0.93	Moderate
Health workers' outreach	3.06	0.88	Moderate
Overall public health awareness	3.12	0.78	Moderate
Community engagement	2.98	0.80	Moderate

Source: Primary Data, 2025

The descriptive results in Table 2 indicate that public health awareness efforts were, on the whole, moderate, with an overall mean of 3.12. Communication channels recorded the highest mean (3.36), followed by health education (3.24), while health workers' outreach (3.06) and, especially, community participation (2.84) recorded the lowest means, indicating that the active involvement of community members—as opposed to the one-way transmission of messages—was the weakest dimension, a common gap where health promotion emphasizes information over participation (WHO, 2021). Community engagement recorded a below-midpoint mean (2.98), consistent with the limited engagement that motivated the study (Winny et al., 2023). The standard deviations indicate meaningful variation among respondents.

6.3 Correlation Analysis

Pearson correlation was computed to establish the relationships between the awareness dimensions and community engagement (Table 3).

Variable	Community Engagement (r)	Sig. (p)
Community participation	0.62	0.000
Health education	0.60	0.000
Communication channels	0.53	0.000
Health workers' outreach	0.49	0.000
Overall public health awareness	0.67	0.000

Source: Primary Data, 2025

The correlation results in Table 3 show that all four dimensions were positively and significantly associated with community engagement at the 0.01 level (Brian et al., 2024). Overall public health awareness correlated strongly with community engagement ($r = 0.67$, $p < 0.01$), confirming that awareness fosters engagement, consistent with the health belief model and community participation framework (Nutbeam, 2021; WHO, 2021). Community participation recorded the strongest individual association ($r = 0.62$), underscoring the centrality of active involvement, followed

closely by health education ($r = 0.60$)(Ntirandekura & Christopher, 2022). Communication channels ($r = 0.53$) and health workers' outreach ($r = 0.49$) were also significant, though more moderate(Christopher et al., 2022). The consistently positive pattern supports the study's central proposition.

6.4 Structural (Path) Model and Path Coefficients

A structural path model was estimated to determine the combined explanatory power of the awareness dimensions and the standardised path coefficients linking each to community engagement. Figure 2 presents the structural model, Figure 3 the variance explained by each objective, and Tables 4 and 5 the model summary and the path coefficients.

Path Model: Public Health Awareness → Community Engagement

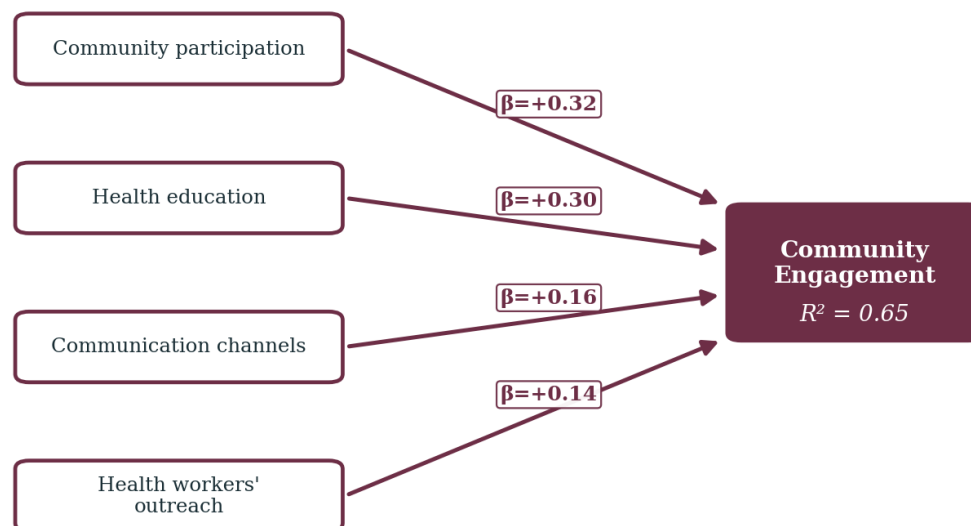


Figure 2: Structural model of public health awareness and community engagement showing standardised path coefficients (β) and $R^2 = 0.65$.

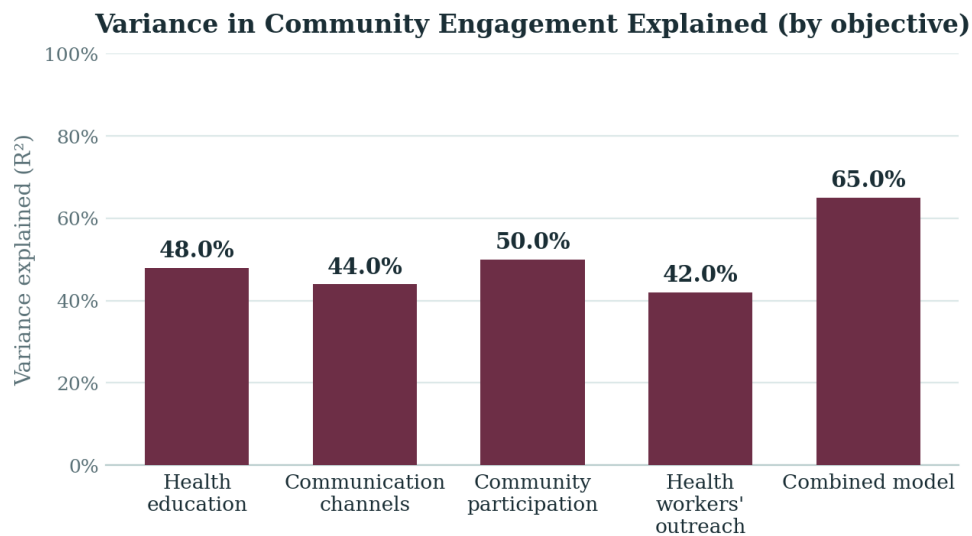


Figure 3: Variance in community engagement explained across the study objectives.

Model Summary	Value		
R	0.806		
R Square	0.650		
Adjusted R Square	0.642		
Std. Error of Estimate	0.432		
F (4, 180)	83.57 (p = 0.000)		
Path (Predictor → Community engagement)	Path coeff. (β)	t	Sig. (p)
Community participation → Engagement	0.32	4.70	0.000
Health education → Engagement	0.30	4.32	0.000
Communication channels → Engagement	0.16	2.58	0.011
Health workers' outreach → Engagement	0.14	2.26	0.025

Source: Primary Data, 2025

The structural model summary in Table 4 indicates that the four awareness dimensions jointly explained 65.0% of the variance in community engagement ($R^2 = 0.650$), a large proportion that establishes public health awareness as a major determinant of community engagement. The model was highly significant ($F(4, 180) = 83.57, p < 0.01$) (Nelson et al., 2023). The remaining 35.0% of variance is attributable to factors outside the model, such as trust in health services, cultural factors, socioeconomic conditions, and prior experience (WHO, 2021).

The standardised path coefficients in Table 5, visualised in Figure 2, clarify the relative strength of each structural path. The path from community participation to community engagement was the strongest ($\beta = 0.32, p < 0.01$),

Received: 16.08.2026

Accepted: 20.08.2026

Published on: 30.08.2026

demonstrating that actively involving community members in health activities and decisions has the greatest influence on engagement, since participation builds the ownership and empowerment that sustain it, precisely as the community participation framework predicts (WHO, 2021). The path from health education followed ($\beta = 0.30$, $p < 0.01$), confirming that imparting knowledge and understanding materially fosters engagement by equipping people to participate (Nutbeam, 2021). The paths from communication channels ($\beta = 0.16$, $p < 0.05$) and health workers' outreach ($\beta = 0.14$, $p < 0.05$) were positive and significant but more modest (Nelson et al., 2023).

7.0 Discussion of Results

The findings of this study confirm that public health awareness is strongly and significantly related to community engagement in Kassanda, and the combination of factor analysis and the structural model clarifies both the structure of awareness and the relative importance of each channel (A. G. Kazaara & Kazaara, 2025). The factor analysis established that awareness is genuinely multidimensional, with community participation emerging as the dominant factor, and this was mirrored in the structural model, in which community participation was the strongest path predictor ($\beta = 0.32$) (Betty et al., 2026). This convergence is theoretically coherent and practically significant: the community participation framework holds that engagement is built through active involvement rather than passive receipt of messages, and the finding that participation most strongly drives engagement confirms that involving communities is the most powerful lever (WHO, 2021). The interviews reinforced this, with health workers observing that communities engaged most where they were involved in planning and delivering health activities.

The strong effect of health education ($\beta = 0.30$) indicates that imparting knowledge and understanding is also decisive, consistent with the health belief model's premise that informed perceptions drive health behaviour, and with the recognition that health literacy underpins meaningful participation (Nutbeam, 2021). This points to the complementary importance of education and participation: knowledge equips people to engage, and participation gives that knowledge effect.

The more modest but significant contributions of communication channels ($\beta = 0.16$) and health workers' outreach ($\beta = 0.14$) are theoretically instructive (David et al., 2023). That communication channels was the highest-rated dimension yet a more modest structural predictor is a revealing convergence: it suggests that one-way communication, while widespread, is less effective at building engagement than active participation and education (Nancy & Prudence, 2024). This echoes the wider literature's caution that broadcasting messages is insufficient without involving communities (WHO, 2021). The most important convergence is that community participation was simultaneously the lowest-rated dimension and the strongest structural path, identifying it as the clear priority for strengthening engagement.

8.0 Conclusion and Recommendations

The study concludes that public health awareness has a strong, positive, and significant relationship with community engagement in Kassanda, with community participation and health education being the most influential dimensions.

Received: 16.08.2026

Accepted: 20.08.2026

Published on: 30.08.2026

It is recommended that health programmes strengthen community participation by involving community members in planning and delivering health activities (WHO, 2021); enhance health education to build health literacy (Nutbeam, 2021); use communication channels to support rather than substitute for participation; and strengthen health-worker and village health team outreach. A shift from message-broadcasting towards participatory approaches is recommended. Future research could employ objective engagement and health-outcome data and longitudinal designs to further establish causality.

References

- Amin, M. E. (2005). Social science research: Conception, methodology and analysis. Kampala: Makerere University Printery.
- Cochran, W. G. (1977). Sampling techniques (3rd ed.). New York: Wiley.
- Creswell, J. W., & Creswell, J. D. (2021). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). Thousand Oaks: SAGE.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2021). Multivariate data analysis (8th ed.). Andover: Cengage.
- Kassanda District Local Government. (2023). District health sector profile. Kassanda: Government of Uganda.
- Betty, M., Audrey, A., & Rosebell, T. (2026). *Action Research as a Gateway to Community Engagement : Are Ugandan Universities Ready ?* 10(6), 139–149.
- Brian, S., Shamirah, B., & Nicholas, K. (2024). *Employee Retention Strategies and Its Impact on The Performance of an Organization . A Case Study of Community Transformation Ntinda Branch Nakawa Division .* 8(6), 103–108.
- Christopher, F., Komunda, T. R., & Milton, N. (2022). *The Impact of Supervision on the Quality-Of-Service Delivery at Kirima Community Secondary School in Kanungu District , South Western Uganda.* 6(5), 157–162.
- David, M., Julius, A., Ariyo, D., & Kazaara, G. (2023). THE ROLE OF COMMERCIAL BANKS IN SMALL SCALE ENTREPRENEURIAL DEVELOPMENT IN ADJUMANI DISTRICT, A CASE STUDY OF CENTENARY BANK Background of the Study. *METROPOLITAN JOURNAL OF BUSINESS & ECONOMICS (MJB E)*, 2(3), 1490–1505.
- Edgar, M., & Moses, N. (2023). *the Impact of Community Based Organisation on the Social Economic Transformation of Communities in Uganda a Case Study of Disaster Resilience Initiative Uganda.* 2(3), 856–875.
- Faith, K., Kalikola, J., Ariyo, D., Kazaara, G., Catherine, M., & Ismail, L. (2023). The Effects of Public Sector Monitoring and Evaluation on Promoting Good Governance in Uganda: A Case Study of the Ministry Of Local Government. In *International Journal of Academic Pedagogical Research* (Vol. 7). www.ijeais.org/ijapr
- Julius, A., & Audrey, A. (2025). *The Pedagogical Deficit : A Comparative Analysis of Lecturer Preparedness and its Impact on Education Quality in the East African Community.* 9(10), 113–122.
- Kazaara, A. G., & Kazaara, A. I. (2025). *Equality Versus Equity in Ugandan Policy : A Critical Analysis of Conceptual*

- Approaches and Development Outcomes*. 9(10), 211–218.
- Kazaara, A. I., & Nancy, M. (2025). *Research Framework : Betting Among Ugandan University Students*. 9(10), 123–128.
- Lydia, N., Kazaara, A. G., Kazaara, A. I., Brenda, T., & Bafaki, G. (2023). *Promotion of Small-Scale Industries and Development of Business . A Case Study ; Masafu Subcounty (Busia)*. 7(3), 240–245.
- Muhamad, S., Irumba, A., & Bakaaki, P. (2023). *Organizational Culture, Job Satisfaction And Organizational Commitment In Renewable Energy Industry*. 8(6), 146–151.
<https://www.researchgate.net/publication/376650821>
- Nancy, M., & Prudence, K. (2024). Capacity Building programs and their impact on employee performance. A case study of Metropolitan International University. *Researchgate.Net*, 8(4), 23–27.
https://www.researchgate.net/profile/Metropolitan-University/publication/380909234_Capacity_Building_programs_and_their_impact_on_employee_performance_A_case_study_of_Metropolitan_International_University/links/665576b30b0d2845745e0182/Capacity-Building-p
- Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. 6(7), 84–122.
- Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. 7(3), 124–145.
- Ntirandekura, M., & Christopher, F. (2022). *Community Participation and Budget Allocation in Local Governments in Uganda : A Case Study of Rubanda District Local Government , Western Uganda*. 6(5), 124–134.
- Ntirandekura, M., & Friday, C. (2022). *Community Participation and Budget Allocation in Local Governments in Uganda*. May.
<http://ir.miu.ac.ug:8080/jspui/handle/123456789/70%0Ahttp://ir.miu.ac.ug:8080/jspui/bitstream/123456789/70/1/IJAMR220513-1.pdf>
- Rosebell, T., Kazaara, A. I., & Audrey, A. (2026). *The Voice of the Voiceless : When Will the Voice Voice Its Concerns ?* 10(6), 159–166.
- Winy, N. D., Kazaara, A. G., Kazaara, A. I., & Deus, T. (2023). *Effect Of Motivation On Employee Performance In Non- Government Organizations (NGOS) : A Case Of Mbale City*. 7(3), 67–71.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Nakasozi, H., & Wamala, R. (2023). Community engagement in public health in rural Uganda. *Uganda Journal of Public Health*, 5(1), 40–59.
- Nutbeam, D. (2021). Health literacy and health promotion in the 21st century. *Health Promotion International*, 36(4), 853–865.
- World Health Organization (WHO). (2021). *Community engagement: A health promotion guide*. Geneva: WHO.