Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

THE MODERATING EFFECTS OF PERSONAL FACTORS ON HEALTH-SEEKING BEHAVIOURS AND UTILISATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES AMONG ADOLESCENTS IN BUSOGA REGION, UGANDA: A CROSS-SECTIONAL STUDY.

Noah Robert Nyende[a]*, Dr. Frank Pio Kiyingi, Professor Miph Musoke
[a]PhD Candidate ,Nkumba University, Entebbe Road, P.O. Box 237, Entebbe, Uganda.

ABSTRACT

Background

Adolescents in Uganda face substantial barriers to sexual and reproductive health (SRH) service utilization, influenced by both individual and structural factors. This study assessed how personal characteristics, specifically age, employment status, and travel time, moderate the relationship between health-seeking behaviors and SRH service use in the Busoga region.

Methods

A cross-sectional study was conducted in 2024 among 408 adolescents aged 13–19 years using structured questionnaires. Structural Equation Modelling (SEM) was applied to examine associations and moderation effects.

Results

Positive health-seeking attitudes predicted adolescents' intentions to use SRH services ($\beta = 2.310$, $p < 0.001$), while age ($\beta = -0.090$, $p = 0.002$) and employment ($\beta = -0.453$, $p = 0.002$) negatively moderated this relationship. Travel time reduced service use ($\beta = -0.272$, $p < 0.001$), but service preferences helped offset this effect ($\beta = 0.093$, $p < 0.001$). Media exposure, particularly through radio, positively moderated the relationship between attitudes and current SRH utilization ($\beta = 0.072$, $p < 0.001$).

Conclusions

Positive health-seeking attitudes significantly predicted adolescents' intentions to use SRH services. However, this effect was weakened by older age and employment. While longer travel time reduced service utilization, strong service preferences helped offset this barrier.

Recommendations

To improve SRH service utilization among adolescents in Uganda's Busoga region, programs should be more adolescent-responsive. Key actions include: training providers in adolescent-friendly care, expanding mobile and community outreach, utilizing trusted media such as radio to promote positive attitudes, and tailoring interventions to meet the specific needs of subgroups, including working, rural, and older adolescents.

Keywords: Adolescents, Uganda, Sexual and Reproductive Health, Health-Seeking Behaviour, Moderation.
Submitted: *2025-04-30* ***Accepted:*** *2025-05-22* ***Published:*** *2025-06-03*

Corresponding Author:*Noah Robert Nyende*
Email: rnnyende2002@yahoo.com
Tel: +256 701 441 206
Nkumba University, Entebbe Road, P.O. Box 237, Entebbe, Uganda.

INTRODUCTION

Adolescents form a significant proportion of Uganda's population, accounting for nearly a quarter of the total demographic (UBOS, 2024). This age group represents a vital segment of the country's human capital, yet their sexual and reproductive health (SRH) needs remain under-addressed. Despite progressive policies and the expansion of SRH services in Uganda, adolescents continue to face substantial challenges in accessing and utilizing these services. These challenges arise from a complex interplay of socio-cultural norms, structural barriers such as cost and distance, and individual-level factors including stigma, limited knowledge, and lack of autonomy (WHO, 2018).

Health-seeking behaviors, encompassing attitudes, perceptions, and service preferences, have been widely

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

recognized as critical determinants of SRH service utilization among adolescents (Jacobs *et al*., 2023; Okyere *et al*., 2024; Ninsiima *et al*., 2021). Positive attitudes toward healthcare, accurate perceptions of risk, and clear preferences for youth-friendly services are often linked to higher utilization levels. However, these behaviors are not static or universal. They are shaped, constrained, or facilitated by personal factors such as age, employment status, and geographical accessibility (Otwombe *et al*., 2015; Athumani & Mboineki, 2025). For example, older adolescents may face increased stigma or competing life priorities, while working adolescents may lack the time or flexibility to seek services. Similarly, long travel distances to health facilities can undermine even the most positive intentions to access care.

Although previous studies have examined general trends in SRH service utilization among adolescents, few have explored how personal characteristics moderate the relationship between health-seeking behaviors and actual service use. This gap in empirical evidence limits the ability of policymakers and program designers to tailor interventions that account for the diversity of adolescent experiences and needs across different contexts. To address this gap, this study employed Structural Equation Modelling (SEM) to examine the moderating effects of personal factors on the relationship between health-seeking behaviors and SRH service utilization among adolescents in the Busoga region of Uganda.

METHODS

Study Design and Setting

This was a cross-sectional quantitative study conducted during November and December 2024 in Busoga region of Eastern Uganda, specifically in the Iganga and Bugweri districts. These districts were selected to capture both urban and rural perspectives and reflect the region's socio-economic diversity. Iganga, one of the region's original districts, and Bugweri, the most recently established, each encompassed a blend of rural and urban areas, providing a comprehensive understanding of adolescents' access to and utilization of sexual and reproductive health services.

Study Population and Sampling

A total of 408 adolescents aged 13–19 years participated in the study, selected through a multi-stage cluster sampling approach. Four sub-counties, one rural and one urban from each district, were selected and stratified accordingly. In Iganga District, Iganga Central Division was selected as the urban stratum, from which three wards (Kasokoso Central II, Kasokoso Central III, and Nakavule Main) were randomly selected. Nakigo sub-county was selected as the rural stratum, with three randomly selected villages: Namilari, Kiwerere, and Bulubandi Central A. In Bugweri District, the Busesa/Bugweri sub-county was selected as the urban stratum, and three wards (Busesa, Butende, and Kagamba) were randomly chosen. Makuutu sub-county was selected as the rural stratum, from which three villages (Makandwa, Bunalweni C, and Naitandhu B) were randomly selected. This sampling approach resulted in a total of 12 clusters. In each village (cluster), 34 households were randomly sampled using a random number generator (MS Excel RNG), and one eligible adolescent per household was randomly selected. This design ensured a representative sample across diverse settings in the Busoga region.

Eligibility

Inclusion Criteria

The study included adolescents aged 13 to 19 years who were permanent residents of the selected study areas and who provided written informed consent to participate.

Exclusion Criteria

Adolescents were excluded from the study if they were unable or unwilling to provide written consent, could not understand or speak any of the languages used in the study, or were non-residents or visitors in the household at the time of data collection.

Data Collection

Data were collected using a structured questionnaire adapted from the Health Belief Model (Andersen, 1995) and the Behavioural Model of Health Services Use (Rosenstock, 1974), tailored to the Ugandan adolescent context. The data collection instrument was pre-programmed in the Kobo Toolbox. The instrument was pre-tested with a similar adolescent population to ensure clarity, cultural relevance, and reliability. Revisions were made based on feedback, and the final tool was validated by a panel of public health experts for use in this setting. Content validity was assessed through expert evaluation, yielding a Content Validity Index

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

(CVI) ranging from 0.7500 to 0.8666, indicating good agreement on the relevance and clarity of the items. Internal consistency of the instrument was confirmed using Cronbach's alpha, with values ranging from 0.8149 to 0.8686, demonstrating strong reliability across the different subscales. Questionnaire items were assessed using five-point Likert scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Efforts to Minimise Bias

The study employed stratified cluster sampling to ensure a balanced representation of both rural and urban areas. Clear inclusion criteria and a 12-month recall period minimized bias. Data collection tools were pre-tested, research assistants trained, and validity and reliability tests were conducted to ensure data quality.

Measures

Health-seeking behaviors were assessed using three key constructs:

- *Attitudes:* Assessed adolescents' willingness and confidence to access SRH services, including their comfort and motivation to seek care.
- *Perceptions:* Captured beliefs about the necessity, safety, confidentiality, and effectiveness of SRH services.
- *Preferences:* Focused on adolescents' preferred SRH service features, including confidentiality, provider friendliness, accessibility, care quality, affordability, clear communication, and gender-specific services.

The study examined several moderating variables to assess their influence on adolescents' health-seeking behaviors and service utilization for SRH. These included age (continuous), gender (male/female), working status (employed vs. unemployed), and romantic partner status (ever had a partner vs. never). Contextual factors such as travel time to the nearest SRH facility (under 15 minutes to over 2 hours) and exposure to SRH information via radio were also considered. These variables were analyzed for their potential to shape or alter the effects of behavioral factors such as attitudes, perceptions, and preferences on both current and intended SRH service use.

Data Analysis

Descriptive statistics were used to profile the characteristics of the sample using Stata version 18. To explore more complex interrelationships among variables, Structural Equation Modelling (SEM) was employed to assess both direct and moderating effects. SEM was chosen for its ability to simultaneously evaluate relationships between observed and latent constructs, allowing the estimation of multiple pathways within a single model (Stein *et al*., 2011). Direct effects were examined to assess the influence of health-seeking attitudes, perceptions, and preferences on SRH service utilization. Moderating effects of personal factors, including age, working status, travel time, and media exposure, were analyzed to determine their influence on the strength and direction of these primary relationships.

RESULTS

Participant Flow and Study Sample

A total of 458 households were initially sampled for the study. Of these, 11 households could not be screened due to the absence of an informant, and 23 were found to have no eligible adolescent respondents. Among the remaining households, 9 had eligible adolescents who were not available at the time of the visit, while 7 either declined participation or were only partially interviewed. Ultimately, 408 adolescents aged 13–19 years completed the full interview process and were included in the final analysis.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

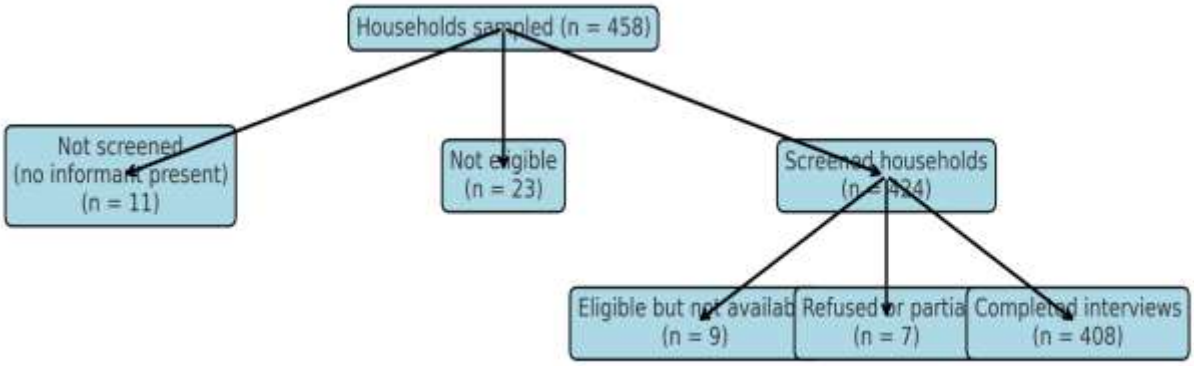

Figure 1. Flowchart of Household Sampling and Adolescent Interview Completion

Socio-demographic characteristics of respondents

Table 1 presents the demographic characteristics of the respondents. The sample was almost evenly split by gender (49.0% male, 51.0% female). Most adolescents were aged 16–19 years (57.9%). The predominant ethnic group was Basoga (76.7%). About 68% of participants were currently attending school, and 61.2% had completed primary education. Additionally, 33.1% of respondents reported working to earn income. In terms of religion, 47.1% were Muslim and 28.9% Protestant. Half (50.5%) reported having had a romantic partner, and 26.1% were married or cohabiting. Most had access to radio at home (64.13%), and while the majority reached a health facility within an hour (74.02%), about 26% faced travel times of one hour or more.

Table 1. Socio-Demographic Characteristics of Respondents (n = 408)

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	200	49.0
	Female	208	51.0
Age Group	13–15 years	172	42.1
	16–19 years	236	57.9
Tribe	Musoga	313	76.7
	Muganda	38	9.3
	Other	55	13.5
Highest Education Attained	Never Attended	8	2.0
	Primary	249	61.2
	Secondary O-Level	136	33.4
	Secondary A-Level	9	2.2
	Other	5	1.0
School Attendance (Current)	Yes	272	68.0
	No	128	32.0
Working Status	Yes	135	33.1
	No	273	66.9
Religion	Muslim	192	47.1
	Protestant	118	28.9
	Catholic	45	11.0
	Pentecostal	45	11.0

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

	Other	8	2.0
Romantic Partner (Ever)	Yes	201	50.5
	No	197	49.5
Marital Status	Married/Living with Partner	51	26.1
	Not Married	143	73.3
Household Radio Ownership	Yes	261	64.1
	No	146	35.9
Travel Time to Health Facility	Less than 15 minutes	61	14.95
	15–29 minutes	126	30.88
	30–59 minutes	115	28.19
	1–2 hours	100	24.51
	More than 2 hours	6	1.47
	Total	**408**	**100.0**

Source: Primary Data.

Structural Equation Modelling

Beginning with the hypothetical model informed by the Health Belief Model and Andersen's Behavioural Model, the study proposed that adolescents' health-seeking attitudes, perceptions, and preferences influence their utilisation of sexual and reproductive health (SRH) services. Personal factors such as age, sex, working status, travel time, and radio exposure were theorised to moderate these relationships. Structural Equation Modelling (SEM) was employed to test both direct and moderating effects among these constructs. The final structural model, which includes these validated paths and interaction effects, is presented in Figure 2.

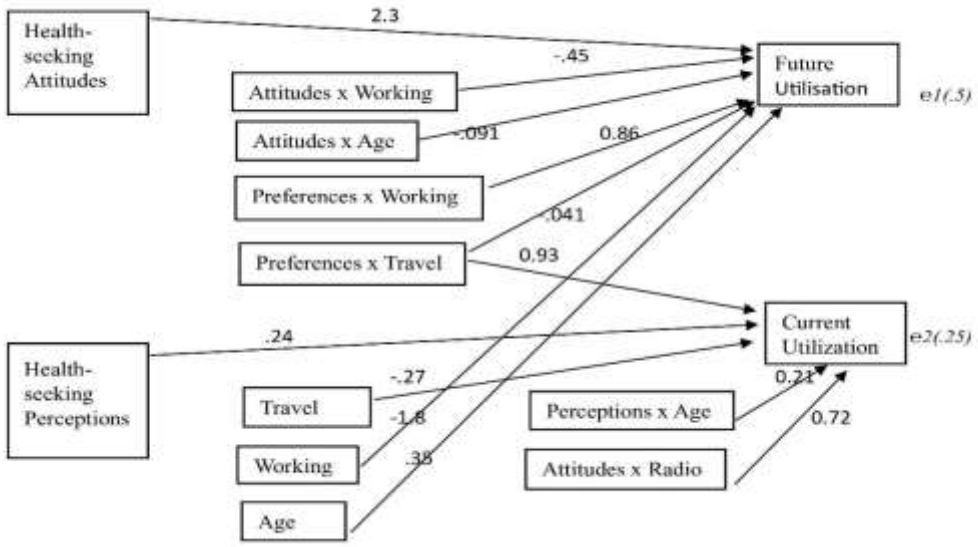

Figure 2. Structural Equation Model illustrating the direct and moderating effects of personal factors on adolescent SRH service utilisation.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

Table 2: **Direct Influences on current SRH utilisation and future intentions to use services**

Variable	Outcome	Coefficient	Std. Error	P>|z|	95% CI
Health_Seeking_Perceptions	Current Utilisation	-0.239	.082	0.004	[-0.399, -0.078]
Travel_Time	Current Utilisation	-0.271	.083	0.001	[-0.448, -0.094]
Health_Seeking_Attitudes	Future Utilisation	2.310	.453	0.000	[1.422, 3.198]
Age	Future Utilisation	0.348	.106	0.001	[0.141, 0.555]
Working	Future Utilisation	-1.822	.626	0.004	[-3.049, -0.596]

Direct Influences

The direct influences of health-seeking behaviours and personal factors on SRH service utilisation are presented in Table 2.

The analysis identified distinct influences on current SRH utilisation and future intentions to use services among adolescents in the Busoga region. Negative health-seeking perceptions (β = -0.239, p = 0.004) and longer travel time to services (β = -0.271, p = 0.001) were significantly associated with reduced current SRH utilisation. Strong positive health-seeking attitudes (β = 2.310, p < 0.001) and older age (β = 0.348, p = 0.001) were significantly associated with increased future intentions to use SRH services, while being employed (β = -1.822, p = 0.004) was significantly associated with decreased future intentions.

Interaction Effects

Table 3: **Interaction Effects on current SRH utilisation and future utilisation intentions**

Interaction Term	Outcome	Coefficient	Std. Error	P>|z|	95% CI
Perceptions × Age	Current Utilisation	0.208	.037	0.000	[0.136, 0.280]
Preferences × Travel_Time	Current Utilisation	0.930	.224	0.000	[0.137, 1.374]
Health_Seeking_Attitudes× Radio	Current Utilisation	0.072	.015	0.000	[0.043, 0.100]
Health_Seeking_Attitudes × Age	Future Utilisation	-0.091	.029	0.002	[-0.147, -0.034]
Health_Seeking_Attitudes × Working	Future Utilisation	-0.453	.147	0.002	[-0.746, -0.165]
Preferences × Working	Future Utilisation	0.858	.155	0.000	[0.552, 1.161]
Preferences × Travel_Time	Future Utilisation	-0.402	.087	0.000	[-0.586, -0.224]

Table 3 outlines the interaction effects. The negative impact of poor perceptions was significantly less pronounced among older adolescents (Perceptions × Age, β = 0.208, p < 0.001), suggesting that age moderated the association with current SRH utilisation. Adolescents with strong preferences for SRH services could better overcome the barrier posed by travel time (Preferences × Travel_Time, β = 0.930, p < 0.001), which was significantly associated with increased current utilisation. In addition, having favourable health-seeking attitudes coupled with exposure to SRH information via radio (Attitudes × Radio, β = 0.072, p < 0.001) was significantly associated with higher current SRH utilisation.

The positive effect of health-seeking attitudes on future SRH service utilisation intentions was significantly diminished among older adolescents (Attitudes × Age, β = -0.091, p = 0.002) and those who were employed (Attitudes × Working, β = -0.453, p = 0.002), suggesting reduced intention to seek services in these groups. In contrast, strong preferences were more influential among employed adolescents (Preferences × Working, β = 0.858, p < 0.001), while their impact was notably weaker for adolescents facing longer travel times (Preferences × Travel_Time, β = -0.402, p < 0.001). These results highlight the complex interaction between personal characteristics and structural barriers in shaping adolescents' decisions to utilise SRH services.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

Model Fit

The model fit indices are presented in Table 4.

Table 4: **Selected Model Fit Indices for the Structural Equation Model**

Fit Index	Preferred Threshold	Actual Value	Interpretation
RMSEA	≤ 0.06–0.08	0.082	Moderate fit[1]
CFI	≥ 0.90	0.923	Acceptable fit[2]
SRMR	≤ 0.08	0.023	Good fit[3]

Footnotes:

[1] Root Mean Square Error of Approximation (RMSEA) values ≤ 0.08 indicate a reasonable error of approximation; values close to 0.06 or lower are considered good (Hu & Bentler, 1999).
[2] Comparative Fit Index (CFI) values ≥ 0.90 are acceptable, while those ≥ 0.95 are considered indicative of a good fit (Byrne, 2013).
[3] Standardized Root Mean Square Residual (SRMR) values ≤ 0.08 suggest a good fit between the hypothesised model and observed data (Kline, 2016).

The model fit was evaluated using several indices, including RMSEA, CFI, and SRMR, with values indicating a reasonable to good fit according to established guidelines (Hu & Bentler, 1999; Byrne, 2013; Kline, 2016). Together, these indices support the adequacy of the model in capturing the relationships among key study constructs.

DISCUSSION

This study offers important insights into the complex interplay between personal and structural factors influencing both current utilisation of sexual and reproductive health (SRH) services and future intentions to seek such services among adolescents in Uganda's Busoga region. The findings reveal that both individual attitudes and contextual barriers contribute uniquely and interactively to shaping adolescent sexual and reproductive health (SRH) behaviours.

Current SRH service utilisation was significantly influenced by negative health-seeking perceptions (β = -0.239, p = 0.004) and longer travel times to facilities (β = -0.271, p = 0.001), indicating that adolescents who perceive services negatively or must travel long distances are less likely to access them. These findings are consistent with prior research from sub-Saharan Africa, where stigma, misconceptions, limited access to adolescent-friendly services, and geographic constraints have been identified as persistent deterrents to health-seeking behaviour (Jacobs *et al.*, 2023; Ninsiima *et al.*, 2021; Klu *et al.*, 2023; Bukenya *et al.*, 2020). However, strong preferences for SRH services mitigated the negative impact of travel distance (Preferences × Travel_Time, β = 0.930, p < 0.001), suggesting that when services are perceived as responsive and valuable, adolescents may be more willing to overcome logistical challenges to access them (Okyere *et al.*, 2024; Asiimwe *et al.*, 2020).

Media exposure, particularly through radio, moderated the relationship between attitudes and current SRH utilisation (Attitudes × Radio, β = 0.072, p < 0.001). This aligns with literature highlighting the potential of mass media to disseminate SRH information and foster positive attitudes toward service utilisation among youth, especially in rural or underserved regions (Sidamo *et al.*, 2023; McGranahan *et al.*, 2021). Radio campaigns have been particularly effective in challenging myths and normalising SRH discourse, thereby facilitating informed decision-making.
When examining future intentions to utilise SRH services, several factors emerged as significant. Positive health-seeking attitudes (β = 2.310, p < 0.001) and increasing age (β = 0.348, p = 0.001) were associated with greater intent to use services, suggesting that health education and cognitive maturity positively influence forward-looking health behaviour (Otwombe *et al.*, 2015; Athumani & Mboineki, 2025). However, this relationship was moderated by both age and employment status. The analysis revealed that the positive effect of health-seeking attitudes on future SRH service intentions was significantly weaker among older adolescents (Attitudes × Age, β = -0.091, p = 0.002) and those engaged in employment (Attitudes × Working, β = -0.453, p = 0.002). This indicates that, although adolescents may hold favourable attitudes toward SRH services, increasing age and employment responsibilities may reduce

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

their likelihood or capacity to act on these intentions, potentially due to competing demands, increased social stigma, or diminished service engagement. In contrast to much of the existing literature, this study found that older and working adolescents in the Busoga region were, in fact, less likely to utilise SRH services.

This finding deviates from established patterns, which typically associate increasing age and employment with greater autonomy and proactive health-seeking (Shaikh & Hatcher, 2005; Denno *et al.*, 2015). For instance, research from East Africa shows that older adolescents and employed youth are more likely to participate in healthcare decision-making and utilise SRH services due to increased independence and economic empowerment (Denno *et al.*, 20151). Similarly, Wado (2018) found that women's employment was positively associated with reproductive health care use in Ethiopia (Shaikh & Hatcher, 2005). However, in the Busoga context, employment status independently predicted lower intentions to use SRH services (β = -1.822, p = 0.004). This suggests that employment, rather than acting as a facilitator, may serve as a barrier. Working adolescents may face time constraints, inflexible work schedules, or heightened financial and social responsibilities, which deprioritise health-seeking behaviour. These findings challenge assumptions that employment universally enhances service utilisation and underscore the importance of contextualising health behaviour research (Wado, 2018).

Furthermore, the interaction effects reveal important contextual barriers to SRH service utilisation. While strong preferences for SRH services were generally associated with greater intention to utilise them, this relationship was significantly stronger among adolescents who were employed (Preferences × Working, $\beta = 0.858$, $p < 0.001$), suggesting that working adolescents may actively prioritise preferred services when they are accessible. However, preferences were significantly less predictive of future utilisation among those who faced longer travel times (Preferences × Travel_Time, $\beta = -0.402$, $p < 0.001$).

These findings reflect the complex and sometimes contradictory role of structural factors in shaping health behaviours. On one hand, employment may provide adolescents with greater financial autonomy to act on their preferences, reinforcing the importance of tailoring SRH services to meet expressed needs. On the other hand, geographic barriers such as long travel distances can impede access regardless of an adolescent's motivation or preference, consistent with existing evidence that physical accessibility remains a critical determinant of SRH service use in sub-Saharan Africa (Okyere *et al*., 2024; Ninsiima *et al.*, 2021; Sidamo *et al*., 2023).

Overall, these results highlight that improving adolescents' knowledge and shaping positive attitudes toward SRH services, while necessary, are not sufficient on their own. Effective interventions must also address structural constraints, such as transportation and flexible service delivery for working youth, to fully support adolescents in translating intentions into action.

Interestingly, the negative influence of poor perceptions on current utilisation was moderated by age (Perceptions × Age, $\beta = 0.208$, $p < 0.001$), suggesting that older adolescents may possess coping strategies or more confidence in navigating negative social beliefs and accessing services. This highlights the importance of tailoring SRH programs to reflect adolescents' developmental stages and the evolving nature of their decision-making capacities (McGranahan *et al*., 2021; Aragaw *et al*., 2023; Chandra-Mouli *et al*., 2015).

Altogether, these findings make a novel contribution by revealing that in certain sociocultural settings, commonly enabling factors such as age and employment may deter adolescents from engaging with SRH services. This reinforces the need for age- and context-sensitive SRH programming that addresses not only individual attitudes but also structural constraints and competing life demands.

Generalisability of the Study Findings

While this study provides valuable insights into the personal and structural factors shaping adolescent SRH service utilisation in Uganda's Busoga region, its generalisability may be limited. The findings are context-specific and reflect the unique sociocultural, economic, and infrastructural realities of the Busoga region, such as high radio access, prevalent negative service perceptions, and considerable travel burdens.

Thus, while some patterns, like the influence of attitudes and accessibility, align with broader sub-Saharan African research, caution should be exercised in applying these results to other settings without considering local variations. Future studies across diverse regions and populations are

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

needed to validate and extend these findings for broader policy application.

CONCLUSIONS

This study underscores the significant moderating role of personal factors, such as age, employment status, and geographic accessibility, in shaping adolescents' utilisation of sexual and reproductive health (SRH) services. As adolescents grow older or take on work responsibilities, their likelihood of accessing SRH services diminishes, often due to time constraints or competing priorities. Furthermore, distance to health facilities remains a critical deterrent, though targeted media exposure, especially via radio, can help mitigate these challenges.

LIMITATIONS OF THE STUDY

This cross-sectional study could not establish causality, and reliance on self-reported data may have introduced recall and social desirability bias. Obtaining parental consent for minors caused some delays. School-going adolescents were harder to reach, and local tensions in a few villages initially limited participation. However, these issues were addressed through community sensitisation and support from local authorities.

RECOMMENDATIONS

To improve SRH service utilisation among adolescents in Uganda's Busoga region, interventions must be adolescent-responsive and context-specific. The Ministry of Health should scale up adolescent-friendly services through provider training, mobile clinics, and confidential sexual and reproductive health (SRH) centres. Community awareness campaigns and school-based SRH education should target attitudes and stigma, using trusted media like radio for outreach. Programmes must address the unique needs of rural, working, and older adolescents, supported by policy reforms that remove access barriers. A coordinated approach linking policy, practice, and research is essential to ensure sustainable, inclusive, and evidence-based SRH services.

ACKNOWLEDGMENT

I thank the Sovereign Lord for His strength and guidance. I am deeply grateful to my wife and children for their unwavering support. I also appreciate my supervisors for their invaluable mentorship, the District Health Offices of Iganga and Bugweri, and the adolescents who participated in this study.

LIST OF ABBREVIATIONS

CFI:	Comparative Fit Index
CI:	Confidence Interval
CVI:	Content Validity Index
RMSEA:	Root Mean Square Error of Approximation
SEM:	Structural Equation Modelling
SRH:	Sexual and Reproductive Health
SRMR:	Standardised Root Mean Square Residual
UBOS:	Uganda Bureau of Statistics
WHO:	World Health Organisation

COMPLIANCE WITH ETHICAL STANDARDS

Conflict of interest statement

The authors declare no conflicts of interest that could have influenced the study.

Source of funding

The study was self-funded.

Statement of ethical approval

Ethical approval was obtained from the Mildmay Uganda Research Ethics Committee - MUREC-2024-451; 26th September, 2024, and the Uganda National Council for Science and Technology -SS3374ES; 18th November, 2024. District Health Officers and local leaders granted administrative clearance.

Statement of informed consent

Informed consent, and where applicable, parental permission and child assent, were obtained. Participation was voluntary, and confidentiality was strictly maintained.

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

Author Contributions

Noah Robert Nyende led the study design, data collection, analysis, and manuscript writing. Dr. Frank Pio Kiyingi and Professor Miph Musoke provided academic supervision, critical review, and guidance throughout the research and manuscript development.

Author biographies

Noah Robert Nyende (MSc) is a PhD candidate in Public Health at Nkumba University, School of Post-Graduate Studies and Research
Dr. Frank Pio Kiyingi (PhD) is a senior Lecturer and Academic Registrar, Nkumba University
Professor Miph Musoke (PhD) is a senior Lecturer at Nkumba University, School of Sciences.

DATA AVAILABILITY

The datasets generated and analysed during this study are available from the corresponding author upon reasonable request. Access to certain data may be limited to safeguard participant confidentiality and comply with ethical and privacy requirements.

REFERENCES

1. Andersen, R. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior*, *36*(1), 1–10.
2. Aragaw, F. M., Teklu, R. E., Belay, D. G., Negash, W. D., Fetene, S. M., Alemu, T. G., Eshetu, H. B., Fentie, E. A., Shewarega, E. S., & Asmamaw, D. B. (2023). Individual and community level predictors of women's autonomy in health care decision-making among youth in East African countries: A multilevel analysis. *BMJ Open*, *13*(6), e066975.
3. Asiimwe, J. B., Kibira, S. P. S., Matsubara, C., Otai, J., Katusiime, B., & Nansubuga, E. (2020). Barriers to adolescent sexual and reproductive health services in Uganda: A qualitative study. *BMC Public Health*, *20*, 110. https://doi.org/10.1186/s12889-020-8259-3
4. Athumani, K. F., & Mboineki, J. F. (2025). Healthcare facility factors associated with health-seeking behavior among secondary school students in the Dodoma region: An analytical cross-sectional study. *Frontiers in Public Health*, *13*, 1457318.
5. Bukenya, J. N., Ssekamatte, T., Komuhendo, R., & Stillman, M. (2020). Young people's access to sexual and reproductive health services in Uganda: Understanding barriers and facilitators. *Reproductive Health*, *17*, Article 166. https://doi.org/10.1186/s12978-020-01008-8
6. Byrne, B. M. (2013). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Routledge.
7. Chandra-Mouli, V., Lane, C., & Wong, S. (2015). What does not work in adolescent sexual and reproductive health: A review of evidence on interventions commonly accepted as best practices. *Global Health: Science and Practice*, *3*(3), 333–340. https://doi.org/10.9745/GHSP-D-15-00126
8. Denno, D. M., Hoopes, A. J., & Chandra-Mouli, V. (2015). Effective strategies to provide adolescent sexual and reproductive health services and to increase demand and community support. *Journal of Adolescent Health*, *56*(1), S22–S41. https://doi.org/10.1016/j.jadohealth.2014.09.012
9. Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118
10. Jacobs, C., Mwale, F., Mubanga, M., Kasonde, M., Saili, A., Mukonka, R., Mumbi Mwilu, L., & Munakampe, M. N. (2023). Perceptions of youth-friendly sexual and reproductive health services in selected higher and tertiary education institutions of Zambia: A qualitative study on the perspectives of young people and healthcare providers. *PLOS Global Public Health*, *3*(11), e0002650. https://doi.org/10.1371/journal.pgph.0002650
11. Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). The Guilford Press.
12. Klu, D., Gyapong, M., Agordoh, P. D., Azagba, C., Acquah, E., Doegah, P., Ofosu, A., & Ansah, E. K. (2023). Adolescent perception of sexual and reproductive health rights and access to

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

reproductive health information and services in Adaklu district of the Volta Region, Ghana. *BMC Health Services Research, 23*(1), 1456. https://doi.org/10.1186/s12913-023-10360-4

13. McGranahan, M., Bruno-McClung, E., Nakyeyune, J., Nsibirwa, D. A., Baguma, C., Ogwang, C., Serunjogi, F., Nakalembe, J., Kayaga, M., Sekalala, S., & Oyebode, O. (2021). Realising sexual and reproductive health and rights of adolescent girls and young women living in slums in Uganda: A qualitative study. *Reproductive Health, 18*(1), 125. https://doi.org/10.1186/s12978-021-01192-w
14. Ninsiima, L. R., Chiumia, I. K., & Ndejjo, R. (2021). Factors influencing access to and utilisation of youth-friendly sexual and reproductive health services in sub-Saharan Africa: A systematic review. *Reproductive Health, 18*(1), 135. https://doi.org/10.1186/s12978-021-01170-2
15. Okyere, J., Yeboa, N. K., Nikoi, C., Owusu-Amoako, M., Ferka, L., Nurzhynska, A., & Amo-Adjei, J. (2024). Adolescent sexual and reproductive health needs and utilisation of health services in the Bono East Region, Ghana. *Reproductive Health, 21*(1), 87. https://doi.org/10.1186/s12978-024-01648-0
16. Otwombe, K., Dietrich, J., Laher, F., Hornschuh, S., Nkala, B., Chimoyi, L., Kaida, A., Gray, G. E., & Miller, C. L. (2015). Health-seeking behaviours by gender among adolescents in Soweto, South Africa. *Global Health Action, 8*(1), 25670. https://doi.org/10.3402/gha.v8.25670
17. Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Education Monographs, 2*(4), 328–335. https://doi.org/10.1177/109019817400200403
18. Shaikh, B. T., & Hatcher, J. (2005). Health seeking behaviour and health service utilisation in Pakistan. *Journal of Public Health, 27*(1), 49–54. https://doi.org/10.1093/pubmed/fdh207
19. Sidamo, N. B., Kerbo, A. A., Gidebo, K. D., & Wado, Y. D. (2023). Socio-ecological analysis of barriers to access and utilisation of adolescent sexual and reproductive health services in sub-Saharan Africa: A qualitative systematic review. *Open Access Journal of Contraception, 14*, 103–118. https://doi.org/10.2147/OAJC.S430920
20. Stein, C. M., Morris, N. J., & Nock, N. L. (2011). Structural equation modeling. In D. J. Balding, M. Bishop, & C. Cannings (Eds.), *Statistical human genetics: Methods and protocols* (pp. 495–512). Humana Press. https://doi.org/10.1007/978-1-59745-583-1_20
21. Uganda Bureau of Statistics (UBOS). (2024). *National population and housing census 2024*. UBOS.
22. Wado, Y. D. (2018). Women's autonomy and reproductive health-care-seeking behavior in Ethiopia. *Women & Health, 58*(7), 729–743. https://doi.org/10.1080/03630242.2017.1353572
23. World Health Organization. (2018). *Global accelerated action for the health of adolescents (AA-HA!): Guidance to support country implementation*. World Health Organization. https://apps.who.int/iris/handle/10665/260231

Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 6 (2025): June 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i6.1751
Original Article

PUBLISHERS DETAILS

Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
(ISSN 3006-1059) Print
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256 775 434 261
Location: Scholar's Summit Nakigalala, P. O. Box 701432, Entebbe Uganda, East Africa