





# Factors Influencing Access to Sexual and Reproductive Health Information among Adolescents Aged 12-19 Years in Mukono Municipality Schools: A Cross-Sectional Study

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## ABSTRACT

**Background:** Adolescent sexual and reproductive health is one of the essential health care services that promote a adolescent's health. Complications of unwanted pregnancies lead to school dropouts, disability and mortality. However, many adolescents 12-19 years face barriers to reproductive health information about their health and rights. And are unable to access services needed to protect their health. This study aimed to assess factors influencing access to Sexual and Reproductive Health Information among adolescents aged 12-19 years in Mukono municipality schools, Uganda.

**Methods:** Analytical cross-sectional survey and simple random sampling were used to select 384 participants between July and December 2022 in Mukono municipality. A Self-administered structured was used to collect data. Data was analyzed using descriptive statistics, chi-square test, and a modified Poisson regression model.

**Results:** Findings showed the mean age of participants was 16.1 (S.D + 2) years. The proportion of access to information was 80.27%. Significant factors strongly associated with access to sexual and reproductive health information were being Moslem (OR: 0.284 (0.089-0.912)), going to hospital [OR: 2.350 (1.143-4.828)], distance 3-5 Kms from home to nearest health facility [OR: 0.41 (0.176-0.912)].

**Conclusion:** Two of every ten participants had access to Sexual Reproductive Health and Rights information. Significant determinants were radio media and print newspapers. Stakeholders should advocate for adolescents' increased access to healthcare information to avert the upsurge in related diseases. Policy makers should review and monitor new guidelines for Adolescent and School health inclusive of sexuality and reproductive health. Thus, improve health equity for all.

**Keywords:** Unwanted pregnancies, adolescents, girls, schools

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### Introduction

Globally, the adolescent population aged 10 to 19 years is estimated at 1.3 billion, which constitutes about 16% of the world's total population (1) and 20% of Sub-Saharan Africa (2). Adolescence is a transitional stage of biological, social, and psychological changes (3) that require support of society. Despite the fears that sexual and reproductive health information may lead to an increase in adverse sexual and reproductive health outcomes among adolescents (4), numerous studies have adduced evidence of improved health and socio-economic outcomes due to investing in SRHI (5). During the adolescent stage, there is strong recognition of the disproportionate sexual and reproductive health harms placed on teenage girls in LMICs (6). Thus, adolescence is a key stage and an entry point for education (7). The Government of Uganda has implemented adolescent health policies to integrate adolescents into the development process. Also, Uganda has addressed the SRHI needs of adolescents through the National Sexuality Education Framework (8).

Aware that information-driven health systems play a critical role *in* attaining Universal Health coverage, there is a need *to* address Sexual and Reproductive Health (SRH) health information (9). Notably, health coverage cannot materialize if the SRH needs of the population are not met. Lack of access is still the key factor impeding SRHI and must not be overlooked in the contest to increase uptake. In the context of UHC access to health care is attained when the four aspects of perceived service availability, adequate service supply, opportunity to obtain service, and a population seeking care are in tandem (10). The extent to which access is gained depends on organizational, financial, and socio-cultural barriers that limit the uptake of the healthcare service.

Access to SRH information in Uganda has been constrained by the lack of a national health insurance scheme to achieve UHC and the limited resource envelope for Health. As a result, access to sexual and reproductive health information at the primary health care level is constrained and out-of-pocket spending on SRH services is high.

The limited access to SRHI has upset the realization of the desired SRHI outcomes for adolescents derailing them to achieve the Sustainable Development Goals (SDGs) and harness a formidable demographic dividend (5). Moreover, little attention has been paid to Universal Health Coverage and universal access to SRH-related information both at global and country levels (11). Uganda's emphasis on access to the SRH information profile is reflective of sub-Saharan Africa's SRH landscape. So, there is a need to harness the transformative power of innovations to foster sexual and reproductive health (SRH) information access (12). Uganda's vision of UHC for 2030 is for a "population empowered to enjoy their SRH rights for improved quality of life. Facilitated by strong political commitments to increase resources for healthcare delivery as well as national financial protection of the population. Nonetheless, global commitment to achieve SDG targets provides a renewed prospect to hearth new coalitions to advocate the SRH agenda. Uganda has an adolescent health policy that seeks to govern teenage health issues in the national development process to improve quality of life (13). Similar to other sub-Saharan African countries Uganda's SRH services for adolescents are insufficient. Despite the increased internet use by adolescents to access information they still experience limited access to sexual and reproductive health services (14). This limitation is responsible for the complications of unwanted adolescent pregnancies leading to disability and mortality. The highest prevalence reported for unwanted pregnancies is among adolescents aged 15-19 years with birthrates at 128 per 1000 girls than those aged 12-14 years (15) and teenage pregnancy is one of the highest in Africa at 24% among adolescents aged 15-19 years (16). This is compounded by a burden of increased poor maternal and child health outcomes such as systemic infections, unsafe abortions, fistulas and any other unsafe motherhood complications (17,18). This study specifically assessed the factors influencing access to SSRH information among

adolescents in secondary schools in Mukono municipality, Uganda.

## Methods

### *Study area and design*

This was an analytical cross-sectional study conducted among adolescent girls aged 12-19 years in secondary school in Mukono district, Uganda.

### *Sample size*

The prevalence of access to sexual and reproductive health information among adolescent girls in secondary school ( $p$ ) was not known. Therefore, was assumed 50 % to provide a maximum sample size during the research study for the unknown population. The sample size was obtained using the formula  $n = Z^2pq/d^2$ , where  $Z = 1.96$ ,  $p =$  the population proportion (50 %),  $q = 1-p$ , and  $d =$  acceptable sampling error, which was set at 5%. The sample size was 384, and after adjusting for a 5% non-response rate to avoid sample attrition, the total sample size ( $n$ ) was estimated to be 403. The number of respondents “ $n$ ” per school of the total four schools was computed using the following formulae.  $n =$  Total number of girls in a school  $\times$  sample size / Total number of girls in the four secondary schools to allocate proportionally participants. The total number of girls in the four secondary schools was 2832. The total number of girls in each of the schools was 1,025 for Our Lady of Africa Namiryango, 287 Romasa Girls College, 551 St Charles Lwanga Secondary School, and 969 Mukono High School respectively.

### *Sampling technique and procedure*

Multi-stage sampling was used to select the respondents. Stratified sampling was used to stratify the two divisions of Mukono municipality composed of Mukono town council and Goma division. And each division was treated as a stratum. Then the stratum was categorized according to private and government school's stratum, out of which, in each stratum one school was chosen from the basket using a raffle method of picking one school labeled with its name. The 51 secondary schools were listed on paper given

code numbers, where each school had the number that represented it according to the list of schools provided. The papers were then folded and put in a box according to each cluster. Then one school was picked at random, one paper represented a school, and the selection was done. Finally, all the eligible respondents were selected using a convenient sampling technique.

### *Data collection*

A self-administered structured questionnaire was used to collect data from participants. The questionnaire comprised of 23 questionnaires. The dependent variable was assessed by the question “Do you have any access to Sexual Reproductive Health information? The participants responded with a “Yes” or “No”. The data collection tool was prepared by the researcher after a thorough review of the relevant literature and by experts. Validity was attained through consultations done with 2 SRHR and 1 Health Management Information system (HMIS) experts and used the Content Valid Index (CVI), value was 0.7 above the recommended 0.821 (19). The questionnaire was in English, and pre-tested before being used to collect data. A pre-test of the questionnaire was done in one of the secondary schools from Buikwe Municipality East of Mukono municipality. This was done to ensure clarity of questions and consistency in methods of questioning and data collection. Four research assistants were trained for 3 days before the survey to warrant their understanding of SRHR and command of administering the tools. The data collection procedures were prudently prearranged to guarantee the quality of the study. This study was conducted between July to December 2022. The authors visited the selected schools and acquired permission from the appropriate authorities before beginning the research. Ethical approval was taken from the Research Ethical Committee (REC) of the Uganda Christian University, Mukono. Permission was sought from the district and school authorities. Informed consent was sought from the adults and ascent for the minors (adolescents). The school

administrators consented on behalf of the participants. The purpose of the study was explained to the participants. The study population was adolescents aged 12-19 years. The participants were interviewed voluntarily. Those who were sick or without the mental capacity to take part in the study were excluded. The participants were treated with respect, and dignity, and protected from possible harm or problems due to the study activities. Data collected was treated with confidentiality and anonymity and used for only the study.

**Data analysis**

All the analyses were carried out using SPSS 20, and the data were entered using in Excel 2019

software. The data obtained was collated, coded, and analyzed using descriptive statistics, chi-square, and Poisson regression analyses.

**Results**

**A proportion of adolescent girls accessed SRH information**

The response rate among participants was 97.7 percent. From a total of 375 adolescent girls, 80.27% have access to SRH information while 19.73% do not have access. The average respondent's age is 16.17 years (SD + 2 years). The demographic data (Table 1) of the respondents revealed that the majority 193 (51.5%) of the adolescent girls with Government schools, most 374 (99.7%) attending school in mixed schools.

**Table 1.** Demographic Characteristics of the Adolescent Girls in Mukono Municipality Schools

Variables	Category	Frequency	Percent
Religion	Catholic	144	38.4
	Protestant	142	37.9
	Moslem	35	9.3
	SDA	2	0.5
	Pentecostal	45	12.0
	Others	7	1.9
Stay with at-home	Both parents	201	53.6
	Mother	81	21.6
	Father	21	5.6
	Sister/brother	26	6.9
	Other Relatives	39	10.4
	others	7	1.9
Nature of school	Mixed	374	99.7
	Girls (only)	1	0.3
School status	Border	281	74.9
	Day	94	25.1
Institution Ownership	Government	193	51.5
	Private	182	48.5
Distance from home to nearest Health Facility	Less than 1 km	164	43.7
	1-2 Kms	105	28.0
	3-5 Kms	64	17.1
	More than 5 Km	42	11.2

**Factors associated with access to SRHI among adolescent girls**

Bivariate analysis was modeled to include factors associated with SRH Information access among adolescent girls: demographic factors of the respondents seeking care; service availability

factors; and service supply factors at the health facility, school, and communities. The results in (Table 2) show that, out of 375 adolescent girls; the Majority 126 (41.9%) of those who access SRH Information are Catholics with most 134 (44.5%) belonging to the Baganda tribe and most

161 (53.6%) staying with both parents while most 24(32.4%) of those who do not access SRH information are Protestants. In this study, the perceived availability of adequate information on

issues relating to sexual and reproductive health by adolescents was used as a measure of the level of uptake of the SRH information services.

**Table 2.** Demographic factors association with SRH Information access among Adolescent Girls in Mukono Municipality Schools

Variable (n = 375)	Access to SRH Information		Pearson Chi-square (P-value)
	Access	No access	
<b>Religion</b>			
Catholic	126 (41.9%)	18 (24.3%)	0.001*
Protestant	118 (39.2%)	24 (32.4%)	
Moslem	22 (7.3%)	13 (17.6%)	
SDA	1 (0.3%)	1 (1.4%)	
Pentecostal	29 (9.6%)	16 (21.6%)	
Others	5 (1.7%)	2 (2.7%)	
<b>Stay with</b>			
Both parents	161 (53.6%)	40 (54.1%)	0.306
Mother	64 (21.3%)	17 (23.0%)	
Father	20 (6.6%)	1 (1.4%)	
Sister/brother	22 (7.3%)	4 (5.4%)	
Other Relatives	30 (10.0%)	9 (12.2%)	
Others	4 (1.3%)	3 (4.1%)	
<b>Nature of school</b>			
Mixed	300 (99.7%)	74 (100.0%)	0.620
Girls (only)	1 (0.3%)	0 (0)	
<b>School status (Boarder or Day)</b>			
Border	228 (75.7%)	53 (71.6%)	0.463
Day	73 (24.3%)	21 (28.4%)	
<b>School ownership</b>			
Government	145 (48.2%)	48 (64.9%)	0.010*
Private	156 (51.8%)	26 (35.1%)	
<b>Distance from Home to nearest Health Facility</b>			
Less than 1 km	139 (46.2%)	25 (33.8%)	0.001*
1-2 Kms	91 (30.2%)	15 (18.9%)	
3-5 Kms	44 (14.6%)	20 (27.0%)	
More than 5 Km	27 (9.0%)	15 (20.3%)	

From (Table 3), the adolescents who have access to SRH information majorly receive it through Radio 158 (52.5%) on Media, 153 (50.8%) from Friends at School, 172 (57.1%) from their fathers at home, and 155 (51.5%) from Counsellor at the hospital. Furthermore, most

170 (56.5%) always go to the hospital to access it, and this was significant ( $\chi^2 = 0.000$ ). Among 344 adolescent girls who access SRH information at the Hospital, the majority 127(44.4%) managed to get it after an hour. However, it was not significant at  $p < 0.05$ .

**Table 3.** Association of SRH Information access on its availability to Adolescent Girls in Mukono Municipality Schools

Variable (n = 375)	Access to SRH Information		Pearson Chi-square (P-value)
	Access	No access	
<b>Informed about Menstruation Period handling before it started</b>			
Yes	271 (90.0%)	50 (67.6%)	0.000*
No	30 (10.0%)	24 (32.4%)	
<b>SRH information access in Media</b>			
Internet	141 (46.8%)	18 (24.3%)	0.000*
Radio	158 (52.5%)	44 (59.5%)	
Do not Access	2 (0.7%)	12 (16.2%)	
<b>SRH information access at the School</b>			
Friend	153 (50.8%)	20 (27.0%)	0.000*
Teacher	148 (49.2%)	44 (59.5%)	
Do not Access	0 (0)	10 (13.5%)	
<b>SRH information access at home</b>			
Mother	129 (42.9%)	16 (21.6%)	0.000*
Father	172 (57.1%)	48 (64.9%)	
Do not Access	0 (0)	10 (13.5%)	
<b>SRH information access at the Hospital</b>			
Counsellor	155 (51.5%)	24 (32.4%)	0.000*
Nurse	128 (42.5%)	34 (45.9%)	
Doctor	3 (1.0%)	0 (0)	
Do not Access	15 (5.0%)	16 (21.6%)	

Table 4 indicates the adolescent girls who access SRHI at school, the majority 213 (70.8%) indicated that SRHI lessons are included in the

school syllabus with most 189 (62.8%) reporting that they openly discuss SRHI at school majorly through school drama groups 172 (57.1%).

**Table 4.** Factors Influencing Access to SRHI among Adolescent Girls at Schools and Communities in Mukono Municipality

Variable (n = 375)	Access to SRH Information		Pearson Chi-square (P-value)
	Access	No access	
<b>Availability SRHI School clubs</b>			
Yes	127 (42.2%)	30 (40.5%)	0.796
No	174 (57.8%)	44 (59.5%)	
<b>Informed about SRHI through school drama groups</b>			
Yes	172 (57.1%)	40 (54.1%)	0.631
No	129 (42.9%)	34 (45.9%)	
<b>SRHI is included in the school syllabus</b>			
Yes	213 (70.8%)	57 (77.0%)	0.282
No	88 (29.2%)	17 (23.0%)	
<b>Teachers provision of adequate SRHI</b>			
Yes	106 (35.2%)	18 (24.3%)	0.074
No	195 (64.8%)	56 (75.7%)	
<b>SRHI an open dialogue at school</b>			
Yes	189 (62.8%)	36 (48.6%)	0.026*
No	112 (37.2%)	38 (51.4%)	
<b>Informed about SRHI at a community gathering</b>			
Yes	162 (53.8%)	35 (47.3%)	0.314
No	139 (46.2%)	39 (52.7%)	

\*Significant at p < 0.05



In bivariate modeling all the variables that indicated a significant association ( $P < 0.05$ ) with Access to SRHI among girls were included in the multivariate logistic regression obtaining results as shown in the table above. The Moslem adolescent girls are 0.284 times less likely to access SRHI. The odds ratio (2.350 (1.143, 4.828)) of adolescent girls who go to the hospital for SRHI indicates that they are 2.35 times more likely to access SRHI.

Participants who traveled a distance from Home to the nearest Health Facility of 3-5 Km were 0.41 times less likely to access SRHI. On the other hand, the girls who received education about contraceptive use are less likely to access SRHI by 62.6%, and girls who are informed about health relationships are almost 4 times more likely to access SRHI (Table 5).

**Table 5.** Multivariate Logical Regression Analysis of Adolescent Girls in Mukono Municipality Schools

Access to SRHI among adolescent girls	Odds Ratio (AOR)	P >  z	95% Confidence Interval	
			Lower	Upper
<b>Religion</b>				
Catholic	1			
Protestant	0.739	0.456	0.333	1.638
Moslem	0.284	0.034*	0.089	0.912
SDA	0.187	0.374	0.005	7.544
Pentecostal	0.359	0.054	0.127	1.016
Others	1.838	0.657	0.125	26.919
<b>School ownership</b>				
Government				
Private	1.825	0.127	0.843	3.952
<b>Distance from Home to nearest Health Facility</b>				
Less than 1 km	1			
1-2 Kms	1.004	0.993	0.416	2.421
3-5 Kms	0.412	0.040*	0.176	0.961
More than 5 Km	0.654	0.454	0.215	1.989
<b>Informed about Menstruation Period handling before it started</b>				
No	1			
Yes	2.329	0.079	0.908	5.972
<b>SRH information access in Media</b>				
Internet	1			
Radio	0.508	0.106	0.223	1.154
Do not Access	0.213	0.240	0.016	2.815
<b>SRH information access at the School</b>				
Friend	1			
Teacher	0.706	0.422	0.302	1.651
Do not Access	1.000			
<b>SRH information access at home</b>				
Mother	1			
Father	0.562	0.173	0.245	1.288
Do not Access	1.000			
<b>SRH information access at the Hospital</b>				
Counsellor	1			
Nurse	2.023	0.128	0.816	5.013
Doctor	1.000			
Do not Access	0.760	0.699	0.189	3.057
<b>Gone to the Hospital for SRHI</b>				
No	1			
Yes	2.350	0.02*	1.143	4.828
<b>SRHI an open dialogue at school</b>				
No	1			
Yes	1.669	0.136	0.852	3.271

Access to SRHI among adolescent girls	Odds Ratio (AOR)	P >  z	95% Confidence Interval	
			Lower	Upper
<b>Adequately Informed about STIs safety and prevention</b>				
No	1			
Yes	1.203	0.627	0.570	2.540
<b>Adequately informed about contraceptive use</b>				
No	1			
Yes	0.374	0.010*	0.177	0.789
<b>Informed about Puberty and menstrual Hygiene practices</b>				
No	1			
Yes	1.225	0.778	0.300	5.006
<b>Informed about Health relationships for adolescents</b>				
No	1			
Yes	3.866	0.002*	1.653	9.041
<b>Helps reduce adolescent pregnancy</b>				
No	1			
Yes	1.669	0.136	0.852	3.271

### Discussion

This study explored the sexual and reproductive health information of adolescent girls in secondary schools in Mukono Municipality by measuring the prevalence of SRHI and associated factors. The prevalence of access to SRH information among adolescent girls was 80.27% percent. The prevalence of access to SRH information among adolescent girls with inadequate information to make correct decisions about contraceptive use was 62.6% and those with inadequate knowledge on non-infectious conditions of fistula and reproductive organ cancers were 63.9% as opposed to 80.27% with access to SRH information. This could be explained by the fact that students who got access to SRH information obtained insufficient knowledge of contraceptive use. Other studies have strongly linked contraceptive use to access to SRH information (20,21). Much as access to information is 80.27%, it does not guarantee enough information to correctly decide about contraceptive use. In addition, no SRH information regarding reducing early-age pregnancies was associated with access to SRH information.

Few comparative studies exist in Sub-Saharan Africa; those that do exist show that the observed prevalence of access to SRH information is higher than what is reported in most adolescent studies in Sub-Saharan Africa at 37.3% (22). This difference could be attributed to the fact that our study

focused on girls alone, who are often keen on their health compared to other studies done among mixed genders. Also, the study was carried out in a semi-urban area of Mukono with more of the mixed secondary schools in the setting. It stands to reason that probably, in such a setting where boys and girls existed, the teachers found it necessary to engage the adolescents and inform them on SRH issues, compared to the single-girl schools. This study shows that in multivariate modeling only three factors i.e. being informed about health relationships for adolescents, seeking information from the Hospital, traveling a distance from Home to the nearest Health facility of 3-5 Km, and being informed about contraceptive use, were strongly associated with SRHI.

It's uncommon to assume adolescents find it easy to access SRH services including information. No, it's not. However, this outcome is in line with other study findings (23, 24). Furthermore, this finding tends to propose the existence of satisfied behaviors among adolescents who feel they can always access SRHI and that they have lackluster positive attitudes toward seeking information. In this regard, adolescent girls in the refugee settlements find it imperative to get pregnant and tap into the special care offered leading to unplanned pregnancies which come at times with a burden of complications. Uganda is the largest refugee-hosting country in Africa and the third largest in the World with 1,512,684 refugees and



48,953 Asylum Seekers of which 48% live in poverty. About 51 percent of the refugees are women, 56 percent are children under 18 years while the youth account for 24 percent. To that end, the overwhelmingly adolescent girls are exceedingly vulnerable not only to shocks, and dependency on humanitarian aid but to lack or contest of access to SRH information services (25). This occurrence is a clarion call for implementors and policymakers to know the barriers and enablers to yield good outcomes among adolescents seeking SRHI. Consequently, this indication is likely to delay reducing the global maternal mortality ratio to less than 70 per 100,000 live births and attaining the first 95 of the UNAIDS targets aimed at ending the AIDS epidemic as a public health threat by 2030 (26, 27).

There was also a significant relationship between the sought information from the hospital and the inexistence of SRH information access. This is similar to a study done among adolescents in Secondary schools in Ethiopia (28). This helps design hospitals as targeted providing facilities for the promotion of SRH information resource centers and other SRH services. The SRH services are imperative to decrease adolescent sexual and reproductive health risks and complications. Thus, improving the health concerns of adolescents in the national development process and quality of life. Moreover, SRH information might be used as a scorecard for both lower and higher training education institutions to address the challenges as well as serve as a tool for apt decision-making among adolescents. Contrarily, for those who were informed about health relationships for adolescents but did not have access to SRH information the challenges might have been a lack of facilities, sources of information, and learning or friendly SRH services at the health facilities. This could be due to the lack of access among adolescents who were near the facilities but did not access SRHI. These findings seem to align reasonably with the findings of a similar study done in Rwanda among adolescents (29). Uganda a unitary country has 353 municipalities and the extent of SRHR burden differs from one municipality to the other.

However, Uganda and other Low-middle-income countries must not only fast-track to addressing the challenges that continue to exist but also establish public health interventions that increase equity. The study had limitations. The study was done from the selected schools in urban and only from the central region. So, it cannot be generalized to adolescents from other regions. However, it can be used in similar settings in Uganda and other Low-middle-income countries. The implications of this study's findings are for policymakers to integrate SRHR into the curriculum, train the teachers, and establish resource centers in all institutions of learning. Further research is recommended to investigate the perceptions of adolescents using a qualitative approach.

### Conclusion

Out of every 10 participants, 2 of them reported not having access to SRHR information. The significant determinants of access were radio media and print newspapers. Also, most of them received more information from their fathers than their mothers. However, most adolescents do not have information on sexual and reproductive non-communicable diseases i.e. Fistula and cancer. The findings reveal that SRH clubs and resource centers should be created at secondary schools, and adolescent girls encouraged to participate in these arrangements. The study findings indicate the need to establish youth-friendly corners in health facilities for SRHI services with proper evaluation scorecards. Also, support media to transmit accurate and easily understood information on SRH, and develop sexuality and reproductive health curricula tailored for both the lower and higher institutions of learning. Finally, recommend harmonization and mainstream donations and programmes for refugees so that their outlook seem not to be an encouragement or reward for unplanned pregnancies or not accessing SRH in that perspective. A new guidelines for Adolescent and School health inclusive of sexuality and reproductive health should be designed and monitored for the new road map toward effective policy direction.

### Limitations

The findings may not be generalizable because the study was limited to the four secondary schools, and cannot be generalized in other schools in the country.

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### Conflict of interest

The authors declared no conflict of interest.

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None

### Ethical considerations

The study followed all the ethical principles of research and followed voluntary participation, confidentiality, informed consent, anonymity, potential for harm, and results communication.

### Code of ethics

The study was approved by the Review Ethics Committee and has followed the highest possible standards of the code of ethics.

### Authors' contributions

J.N and E.O, participated in the writing and designing of the study, performed the statistical analysis, and drafted the manuscript; D.S, A.P.N, J.K; contributed to the design of the study, data collection, literature search, and revision of the manuscript. All authors contributed to the preparation of the final manuscript and jointly approved the final version for submission.

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