Vol. 37 / No. 2 / August 2025
Sinta 2 (Decree No: 200/M/KPT/2020)
Online ISSN : 2549-4082 ; Print ISSN : 1978-4279
Available online at https://e-journal.unair.ac.id/BIKK

Berkala Ilmu Kesehatan Kulit dan Kelamin

Original Article

Periodical of Dermatology and Venereology

# Exploring the Knowledge, Attitudes, and Behaviors Students in a Private High School Medan Students Regarding Sexually Transmitted Infections

**Prenata Maestro[1], Riyadh Ikhsan[2]**

[1]*Undergraduate Program of Medicine, Faculty of Medicine, Universitas Sumatera Utara, Medan, 20155 – Indonesia*

[2]*Department of Dermatology and Venerology, Faculty of Medicine, Universitas Sumatera Utara, Medan, 20155 – Indonesia*

**ABSTRACT**

**Background:** Sexually transmitted infections (STIs) remain a global public health issue, particularly among adolescents who face heightened risks due to biological, social, and behavioral factors. In Indonesia, STI cases continue to rise despite awareness efforts. A private religious school, offers a unique context for examining STI awareness, yet little research has focused on this population in Medan. **Purpose:** This study aims to assess STI knowledge, attitudes, and behaviors among private high school students, addressing a critical research gap. **Methods:** A cross-sectional study was conducted among 68 twelfth-grade students, selected via simple random sampling. Data were gathered through a validated 40-question survey on STI knowledge, attitudes, and behaviors. Data were analyzed using SPSS software, and result are presented in descriptive statistics. **Result:** Findings showed that 47% of students had moderate STI knowledge, 26.5% high, and 26.5% low. Regarding attitudes, 61.8% were moderate and 38.2% showed strong preventive attitudes. Preventive behaviors were strong in 57.4%, moderate in 33.8%, and poor in 8.8%. Female students displayed higher understanding and more positive attitudes toward STI prevention than males. **Conclusion:** The study concludes that students of a private high school in Medan possess a moderate understanding of STIs, a generally moderate level of attitude and a high level of preventive behavior.

**Keywords***:* Attitude, behavior, knowledge, sexually transmitted infections, student.

Correspondence*:* Prenata Maestro, Undergraduate Program of Medicine, Faculty of Medicine, Universitas Sumatera Utara, Medan, 20155,Indonesia, Phone : +6289601772689, Email : prenatamtro@gmail.com.

| Article info |
Submited: 22-01-2025, Accepted: 11-04-2025, Published: 31-07-2025


## BACKGROUND

Sexually transmitted infections (STIs) are still a major global public health problem, especially among the productive age population. According to the World Health Organization (WHO), an estimated 357 million curable STI cases occur annually among those aged 15 to 49 years. The four most common infections include *Trichomonas vaginalis* (142 million cases), *Chlamydia trachomatis* (131 million cases), *Neisseria gonorrhea* (78 million cases), and *Treponema pallidum* (6 million cases). These numbers underscore the global magnitude of challenges in controlling the spread of STIs.[1] In Indonesia, specific data on STIs remain limited and HIV infection is often used as an indicator due to its strong correlation with STIs. The Ministry of Health Republic of Indonesia reported 515,455 people living with HIV in 2023, a slight decrease from 526.841 in 2022. This decline is partly attributed to improved public awareness, including increased condom use as a STI prevention. Nevertheless, the figures remain far from the desired targets, which points out the importance of a more comprehensive approach to STI and HIV prevention.[2]

Adolescents, defined by the Indonesian Ministry of Health as individuals aged 10–18 years, are particularly vulnerable to STIs.[3] Biologically, their reproductive organs are not yet fully mature, making them more susceptible to infections.[4] Additionally, typical adolescent behaviors, such as heightened curiosity and risk-taking tendencies, contribute to


DOI : 10.20473/bikk.V37.2.2025.90-97

increased exposure to STIs.[5] Prior studies have identified factors such as young age, lack of education, inadequate knowledge of preventive measures, and frequency of sexual activity as significant contributors to STIs prevalence.[6]

In Medan, the Central Bureau of Statistics (CBS) recorded 378,404 adolescents in 2022, making this group a substantial and strategic target for STI prevention interventions.[7] While STI prevalence is typically higher among adults, primary prevention during adolescence is crucial to reducing risks as they transition into adulthood. Furthermore, the 2017 Indonesian Demographic and Health Survey revealed low levels of STI knowledge among adolescents, emphasizing the pressing need for improved education in this demographic.[8]

A private high school in Medan integrating general education with religious values, provides a unique context to examine how cultural and religious factors influence adolescents' knowledge, attitudes, and behaviors toward STI prevention. This study aims to address a gap in local research by exploring the levels of knowledge, attitudes, and behaviors of Students regarding STIs. The findings are expected to provide a solid basis for developing more effective and culturally appropriate educational strategies to meet the needs of Medan youth.

## METHODS

This study applied a descriptive methodology with a cross-sectional design to achieve its objectives of analyzing STI-related knowledge, attitudes, and behaviors among the target population. The research was conducted on September 7, 2024, in the auditorium of Private High School Medan, after obtaining ethical approval from Universitas Sumatera Utara's Ethics Committee with statement number 808/KEPK/USU/2024, and permission to conduct the research and to publish its findings has been formally granted by Private High School Medan and its relevant institution. These steps ensured adherence to ethical research standards and institutional protocols.

The population consisted of all 202 twelfth-grade students at Private High School Medan. The sample size was determined using the Slovin formula, yielding 68 participants with a 10% margin of error. A simple random sampling technique was used, initially selecting students with odd registration numbers. Additional samples were included as needed to address potential gaps and ensure representativeness. Data for the research were collected from both primary and secondary sources. Primary data were obtained using a validated questionnaire consisting of 40 items, divided into three sections: 20 questions assessed knowledge, 10 evaluated attitudes, and 10 focused on behaviors related to STIs. A total of 20 questions were used to evaluate knowledge, adapted from a previously validated questionnaire on sexually transmitted infections (STIs) among high school students. Scoring for knowledge was binary, with correct answers awarded 1 point and incorrect answers receiving 0. Following the criteria outlined by Arikunto (2006), knowledge levels were classified into three categories: good (≥76%, equivalent to 15–20 points), moderate (56–75%, equivalent to 11–14 points), and poor (<56%, equivalent to <11 points).[9]

We designed 10 questions for each domain of attitudes and behaviors, adapting them from the same prior study. Responses were evaluated using a Likert scale, where positive responses were scored 5 and negative responses 1. Positive responses were defined as answers that conformed to the predetermined scoring criteria established by the researcher, adapted from a previously validated questionnaire. Negative responses referred to answers that deviated from these criteria. A positive response indicated a favorable, supportive, or agreeable attitude or behavior toward the subject matter, while a negative response reflected an unfavorable, resistant, or opposing stance. Attitudes and behaviors were categorized as good (≥80% of the maximum score, equivalent to 40–50 points), moderate (60–79%, equivalent to 30–39 points), and poor (<60%, equivalent to <30 points). Secondary data, including the total number of students, were sourced from school administrative records.[9]

The data were analyzed using the Stastical Package for the Social Sciences (SPSS), and the result is presented in descriptive statistics by frequencies and percentages. This approach provided a clear and quantitative overview of the students' levels of STI-related knowledge, attitudes, and behaviors. The systematic design and analysis ensured the findings were thorough and aligned with the research objectives.

**RESULT**

The study sample consisted of 68 12th-grade students from Private High School Medan, comprising 27 males (39.7%) and 41 females (60.3%). According to Table 1, it can be interpreted that respondents predominantly had a moderate level of knowledge (47.0%) and attitude (61.8%) regarding sexually transmitted infections (STIs). However, 57.4% respondents exhibited a high level of behavior towards STI.

**Table 1.** Knowledge, attitude, and behavior levels among respondents (N= 68)

| Variable | Frequency (N) | Percentage |
|---|---|---|
| Knowledge | | |
| Low | 18 | 26.5 |
| Moderate | 32 | 47.0 |
| High | 18 | 26.5 |
| Attitude | | |
| Moderate | 42 | 61.8 |
| High | 26 | 38.2 |
| Behavior | | |
| Low | 6 | 8.8 |
| Moderate | 23 | 33.8 |
| High | 39 | 57.4 |
| Total | 68 | 100.0 |

**Table 2.** Knowledge, attitude, and behavior levels by gender

| Gender | Low | Moderate | High | Total |
|---|---|---|---|---|
| Knowledge | | | | |
| Male | 5 | 11 | 11 | 27 |
| Female | 13 | 21 | 7 | 41 |
| Total | 18 | 32 | 18 | 68 |
| Attitude | | | | |
| Male | 0 | 14 | 13 | 27 |
| Female | 0 | 28 | 13 | 41 |
| Total | 0 | 42 | 26 | 68 |
| Behavior | | | | |
| Male | 2 | 7 | 18 | 27 |
| Female | 4 | 16 | 21 | 41 |
| Total | 6 | 23 | 39 | 68 |

Table 2 shows the distribution of knowledge levels by gender. Among male students, 5 demonstrated low knowledge, 11 moderate knowledge, and 11 high knowledge. In contrast, among female students, 13 exhibited low knowledge, 21 moderate knowledge, and 7 high knowledge. This table also illustrates the distribution of attitude levels based on gender. Among male students, 14 exhibited a "fair" level of attitude, while 13 demonstrated a "good" level. For female students, 28 were categorized as having a "fair" attitude level, and 13 were classified as having a "good" attitude level. Finally, the report highlights the behavior levels categorized by gender. Among male students, 2 were identified as having a "poor" behavior level, 7 were categorized as "fair," and 18 as "good." For female students, 4 exhibited a "poor" behavior level, 16 were categorized as "fair," and 21 demonstrated a "good" behavior level.

**Table 3.** Frequency distribution of respondent's answer based on knowledge level

| No | Category | Correct | | Incorrect | | Total | |
|---|---|---|---|---|---|---|---|
| | | n | % | n | % | n | % |
| 1 | Definition of STI | 23 | 33.8 | 45 | 66.2 | 68 | 100 |
| 2 | | 65 | 95.6 | 3 | 4.4 | 68 | 100 |
| 3 | | 63 | 92.6 | 5 | 7.4 | 68 | 100 |
| 4 | Type of STI | 58 | 85.3 | 10 | 14.7 | 68 | 100 |
| 5 | | 22 | 32.4 | 46 | 67.6 | 68 | 100 |
| 6 | | 45 | 66.2 | 23 | 33.8 | 68 | 100 |
| 7 | | 43 | 63.2 | 25 | 36.8 | 68 | 100 |
| 8 | STI symptoms | 33 | 48.5 | 35 | 51.5 | 68 | 100 |
| 9 | | 47 | 69.1 | 21 | 30.9 | 68 | 100 |
| 10 | | 61 | 89.7 | 7 | 10.3 | 68 | 100 |
| 11 | | 55 | 80.9 | 13 | 19.1 | 68 | 100 |
| 12 | | 24 | 3.3 | 44 | 64.7 | 68 | 100 |
| 13 | Cause of STI | 36 | 52.9 | 32 | 47.1 | 68 | 100 |
| 14 | | 23 | 32.4 | 46 | 67.6 | 68 | 100 |
| 15 | Complication of STI | 65 | 42.6 | 39 | 57.4 | 68 | 100 |
| 16 | | 63 | 48.5 | 35 | 51.5 | 68 | 100 |
| 17 | | 58 | 80.9 | 13 | 19.1 | 68 | 100 |
| 18 | STI prevention | 22 | 83.8 | 11 | 16.2 | 68 | 100 |
| 19 | | 45 | 80.9 | 13 | 19.1 | 68 | 100 |
| 20 | | 43 | 57.4 | 29 | 42.6 | 68 | 100 |

STI = Sexually transmitted infection

Table 3 provides a summary of the questionnaire results on STI knowledge. Questions with the highest incorrect responses include question 1 (66.2%), while question 2 had the highest correct responses (95.6%).

**Table 4.** Frequency distribution of respondent's answer based on attitude level

| No | Question | Positive[a] | | Negative[b] | |
|---|---|---|---|---|---|
| | | n | % | n | % |
| 1 | I will stay away from those STI patients | 13 | 19.1 | 55 | 80.9 |
| 2 | I will adhere to the doctor's treatment recommendation if I get a STI | 66 | 97.1 | 2 | 2.9 |
| 3 | I will not engage in any kind of free sex | 66 | 97.1 | 2 | 2.9 |
| 4 | I will share the information to others about STI | 65 | 95.6 | 3 | 4.4 |
| 5 | Free sex habits was the way in transmitting the STI | 65 | 95.6 | 3 | 4.4 |
| 6 | STI knowledge isn't that important, in my perspective | 49 | 72.1 | 19 | 27.9 |
| 7 | To prevent the transmission of STI, it is crucial in paying attention to what others said especially family member | 64 | 94.1 | 4 | 5.9 |
| 8 | Discussing sexual health is known to be uncommon | 41 | 60.3 | 27 | 39.7 |
| 9 | Usage of condoms during sex can prevent the STI's transmission | 58 | 85.3 | 10 | 14.7 |
| 10 | Knowing the type of STI wasn't that important | 47 | 69.1 | 21 | 30.9 |

STI = Sexually transmitted infection

[a] Positive response: answer aligned with positive attitude scoring criteria from the adapted questionnaire
[b] Negative response: answer that deviates from the positive attitude criteria

Table 4 depicts the respondents' attitude levels towards STI. It was shown that the highest negative attitude is question number 1, and the most positive is number 2 and 3.

**Table 5.** Frequency distribution of respondent's answer based on behavior level

| No | Question | Positive | | Negative | |
|---|---|---|---|---|---|
| | | n | % | n | % |
| 1 | Have you ever had sexual intercourse before? | 62 | 91.2 | 6 | 8.8 |
| 2 | If yes, how old were you when you had your first sexual experience? | 57 | 83.8 | 11 | 16.2 |
| 3 | Have you ever experience any symptoms of STI? | 64 | 94.1 | 4 | 5.9 |
| 4 | If yes, would you consult a doctor regarding a sexually transmitted infection? | 8 | 11.8 | 60 | 88.2 |
| 5 | Have you ever looked for information about the type of STI? | 35 | 51.5 | 33 | 48.5 |
| 6 | Where do you get information about the type of STI? | 59 | 86.8 | 9 | 13.2 |
| 7 | Are you aware that most of the STI's cases caused by negative sexual behavior? | 57 | 83.8 | 11 | 16.2 |
| 8 | Do you know how STI was transmitted from an infected patient? | 44 | 64.7 | 24 | 35.3 |
| 9 | Where do you get the information about the transmission of STI? | 60 | 88.2 | 8 | 11.8 |
| 10 | What do you do to avoid the transmission of STI | 63 | 92.6 | 5 | 7.4 |

[a] Positive response: answer aligned with positive behavior scoring criteria from the adapted questionnaire
[b] Negative response: answer that deviates from the positive behavior criteria
[c] STI = Sexually transmitted infection

Table 5 presents the distribution of questionnaire results regarding the respondents' behavior levels toward STIs. The findings indicate that the question with the highest negative behavior response was question number 4, while the question with the highest positive behavior response was question number 3.

**DISCUSSION**

This study reveals important findings regarding the knowledge, attitudes, and behaviors of twelfth-grade students at Private High School Medan concerning sexually transmitted infections (STIs). The results highlight areas of strength and ongoing challenges in understanding and preventing STIs among adolescents, illustrating the importance of targeted interventions.

Table 1 highlights that most respondents demonstrated moderate knowledge levels, with 32 students (47%) in this category, while 18 students (26.5%) had good knowledge, and another 18 (26.5%) displayed poor knowledge. These results align with a 2023 study conducted on 276 students at SMA Negeri 1 Aek Natas, where the majority also fell into the moderate category (54%), with fewer showing good (4.3%) or poor knowledge (41.7%). This consistency reinforces the findings of the current study.

However, a contrasting study by Elisabeth at SMA Negeri 13 Medan reported higher knowledge levels, with most respondents categorized as good. The current study identified questions 1, 5, 12, 14, 15, and 16 as having the highest error rates, while Elisabeth's findings indicated errors were mostly limited to question 1 on STI definitions.[10] Discrepancies may stem from varying access to sexual health education, socioeconomic differences, or regional disparities in health information dissemination.[11]

The finding that female students demonstrated slightly higher levels of knowledge aligns with

previous studies,[12,13] which suggest that women are generally more receptive to sexual health education, possibly due to heightened interest or a cultural emphasis on their health responsibilities. Additionally, some male students perceived themselves as too young to receive sexual education.[12,13] These findings point out the need for tailored education programs that consider both age and gender to effectively address knowledge gaps.

The findings of this study indicate that respondents' attitudes were generally moderate, with 42 students (61.8%) categorized as moderate and 26 students (38.2%) as good. This conclusion contrasts with previous studies conducted at SMA Negeri 1 Aek Natas and SMA Negeri 13 Medan, where the majority of respondents exhibited good attitudes, with 63% and 93.7%, respectively, falling into this category.

Marmi and Margiyati (2014), reported a similar result, with 65.5% of respondents displaying moderate attitudes.[14] Differences in attitude levels between schools or regions may also reflect variations in personal experiences, access to information, cultural or institutional such in education and religion support for health education, and guidance for individual actions.[15]

Male respondents were more likely to exhibit less favorable attitudes, consistent with previous findings that associate this trend with societal norms and a perceived lack of relevance for sexual health education among young men.[16] This study further revealed that the most negative attitude was expressed in response to question 1, where respondents agreed with avoiding individuals diagnosed with STIs. In contrast, another study reported that participants did not perceive a risk of contracting STIs from merely sharing the same space.[17] Such differences may be attributed to variations in study settings and participant demographics.

The presence of stigmatizing attitudes, such as avoiding STI patients, has the potential to stem from the fact that these attitudes could hinder effective disease prevention and management, highlighting the need for targeted interventions to address misconceptions and reduce stigmas.[18]

Encouragingly, this study showed the majority of respondents reported positive behaviors toward STI prevention, yet some concerning trends remain, particularly among male students. The distribution showed 6 respondents (8.8%) with poor behavior, 23 respondents (33.8%) with moderate behavior, and 39 respondents (57.4%) with good behavior. Similarly, research conducted at SMA Negeri 1 Aek Natas reported most respondents in the good category, with 147 out of 276 participants. However, findings from SMA Negeri 13 Medan showed that the majority of respondents (46 out of 96, or 47.9%) demonstrated moderate behavior.[10] This discrepancy suggests the influence of other contributing factors, such as sources of information. Behavior is known to be influenced by three primary components: knowledge, attitudes, and access to information, although some studies have found that attitudes do not always have a direct effect on behavior.[19]

This study revealed that male respondents exhibited a higher tendency for negative behavior, with only 18 out of 39 male participants categorized as having good behavior. This is supported by previous research indicating that males are 4.41 times more likely to engage in risky sexual behavior compared to females.[20] Cultural factors, where parents typically impose stricter behavioral expectations on females, may influence such tendencies. In addition, other studies have reported that males are more likely to engage in dating behaviors associated with increased risk.[21] Furthermore, the role of comprehensive sexual education has been emphasized as a key factor in promoting safer sexual practices and reducing risky behaviors.[22]

This study identified question 4 as the most negatively answered, with respondents hesitant to seek medical attention despite experiencing potential STI symptoms. This reluctance may stem from societal stigma toward individuals with such conditions. This stigma often manifests as excessive fear and negative perceptions, particularly toward individuals with HIV/AIDS or STIs. Such stigma leads patients to hide their reactive status, as noted by Shaluhiyah et al. (2015), which in turn disrupts treatment and prevention efforts. Patients' reluctance to seek medical care exacerbates disease transmission rates, demonstrating the importance of stigma reduction initiatives in public health campaigns.This process is critical not only for early diagnosis and treatment but also for breaking the cycle of disease transmission.[23]

The study concludes that students of Private High School Medan possess a moderate understanding of STIs, a generally moderate level of attitude, and a high level of preventive behavior. The study emphasizes the interplay between knowledge, attitudes, and behaviors, reinforcing the notion that comprehensive sexual health education should address all three components holistically. The study offers numerous practical suggestions for future research and practice. Practically, schools, particularly those with faith-based educational frameworks, should incorporate

comprehensive sexual health education into their curricula, tailored to the cultural and religious contexts of their students. Public health programs should address stigma through community engagement and awareness campaigns to normalize discussions around STIs and encourage early health-seeking behaviors. Gender-specific interventions are also recommended to bridge disparities in knowledge, attitudes, and behaviors, ensuring targeted and effective outreach. We suggest conducting longitudinal studies for future research to assess the long-term effects of customized educational interventions on adolescent health behaviors. Comparative studies across different educational and cultural contexts would also provide a broader understanding of the factors influencing STI-related knowledge, attitudes, and behaviors, enabling the development of more universally applicable strategies.

**REFERENCES**


1. World Health Organization. WHO guidelines for the treatment of *Neisseria gonorrhoeae* , Geneva: World Health Organization; 2016 [cited 2025 Apr 11].
2. Kementerian Kesehatan Republik Indonesia. Laporan Kinerja Direktorat Pencegahan dan Pengendalian Penyakit Menular Tahun 2023. Jakarta: Direktorat Jenderal Pencegahan dan Pengendalian Penyakit; 2024.
3. Kementerian Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 25 Tahun 2014 tentang Upaya Kesehatan Anak. Jakarta: Kementerian Kesehatan Republik Indonesia; 2014.
4. Witri Y. Strategi Pencegahan Infeksi Menular Seksual Pada Remaja Putri Di Lembaga Kesejahteraan Sosial Anak Cabang Muhammadiyah Juwiring. BSN. 2023;2(1):8-12.
5. Mustar M, Hasnidar H, Abbas HH, Safitri NN. Efektifitas Video Sebagai Media Edukasi Kesehatan Terhadap Sikap Remaja Mengenai Infeksi Menular Seksual (IMS) ada Remaja. Window of Health: Jurnal Kesehatan. 2023;6(2):179–88.
6. Betan A, Pannyiwi R. Analisis Angka Kejadian Penyakit Infeksi Menular Seksual. J. Ilm. Kesehat. Sandi Husada. 2020;12(2):824–30.
7. Badan Pusat Statistik Kota Medan. Jumlah Penduduk Kota Medan Menurut Kelompok Umur dan Jenis Kelamin (Jiwa*), 2020–2022*. Medan: Badan Pusat Statistik Kota Medan; [cited 2025 Mei 10].
8. Simorangkir SJV. Penyuluhan Cara Mengenali Tanda Dan Gejala Penyakit Menular Seksual Serta Pencegahannya Kepada Para Pelajar di SMAN1 Silima Pungga Pungga. JIPAM. 2022;3(1):62–73.
9. Harahap AP. Gambaran Tingkat Pengetahuan, Sikap dan Perilaku Siswa-Siswi SMA Negeri 1 Aek Natas tentang Jenis-Jenis Infeksi Menular Seksual [skripsi]. Medan: Universitas Sumatera Utara; 2023; [cited 2025 Mei 10]
10. Elisabeth, Magdalena Simatupang M, Munir D, Rasiyanti Siregar O. Level of Knowledge, Attitude, and Behavior of Students at SMA Negeri 13 Medan on Prevention of Sexually Transmitted Infections. Sumat. Med. J. 2024;7(1):16–27.
11. Aulia AS, Utami ED. Determinan Tingkat Pengetahuan IMS pada Remaja Perempuan di Indonesia Tahun 2017. Pros. Semin. Nas. Off. Stat. 2022,2022(1):185–96.
12. Ezer P, Kerr L, Fisher CM, Heywood W, Lucke J. Australian students' experiences of sexuality education at school. Sex Educ. 2019;19(5):597–613.
13. Fonte VRF, Spindola T, Francisco MTR, Sodré CP, André NLN, Pinheiro CDP. Young university students and the knowledge about sexually transmitted infections. Esc. Anna Nery Rev. Enferm. 2018;22(2):3.
14. Marmi, Margiyati. Pengetahuan, sikap dengan perilaku siswi dalam upaya pengendalian infeksi menular seksual. Jurnal Ilmu Kebidanan. 2014;1(1):14-20.
15. Rachmawati WC. Promosi Kesehatan Dan Ilmu Perilaku. Malang: Wineka Media; 2019.
16. Nito PJB, Tjomiadi CEF, Manto OAD, Wulandari D. Hubungan Jenis Kelamin dengan Tingkat Pengetahuan Comprehensive Sexuality Education (CSE) pada Mahasiswa. Dinamika Kesehat. 2021;12(2):402.
17. Lanes EJ, Mongan SP, Wantania JJE. Perbedaan Pengetahuan dan Sikap Remaja tentang Infeksi Menular Seksual di SMA/SMK Perkotaan dan Pedesaan. e-CliniC. 2021;9(1):57.
18. S A. Effect of Stigma on Quality of Life of People with Sexually Transmitted Infections. JQHE. 2020;3(6):186.
19. Parida D, Indriani I, Kartika S. Analisis faktor yang berhubungan dengan perilaku pencegahan IMS pada kelompok usia produktif 15–24 tahun di wilayah kerja Puskesmas Menteng Palangka Raya. Dinamika Kesehatan. 2020;11(1):49–60.

20. Mahmudah, Yaunin Y, Lestari Y. Faktor-faktor yang berhubungan dengan perilaku seksual remaja di Kota Padang. Jurnal Kesehatan Andalas. 2016;5(2):448–455.
21. Ohee C, Purnomo W. Pengaruh status hubungan berpacaran terhadap perilaku pacaran berisiko pada mahasiswa perantau asal Papua di Kota Surabaya. Indones. J. Public Health. 2018;13(2):268–80.
22. Bodnar K, Tornello SL. Does sex education help everyone? Sex education exposure and timing as predictors of sexual health among lesbian, bisexual, and heterosexual young women. J Educ Psychol Consult. 2019;29(1):8–26.
23. Shaluhiyah Z, Musthofa SB, Widjanarko B. Stigma Masyarakat terhadap Orang dengan HIV/AIDS. Kesmas. 2015; 9(4):333.