

# PATH ANALYSIS ON THE ROLES OF KNOWLEDGE, PARENTS, PEERS, AND SOCIAL MEDIA, IN AFFECTING THE ATTITUDE OF REPRODUCTIVE HEALTH AMONG FEMALE ADOLESCENTS IN MANOKWARI, WEST PAPUA

Priscilla Jessica Pihahay, Merlin Soripet

School of Health Polytechnics Ministry of Health Sorong

## ABSTRACT

**Background:** Adolescence is an important phase in life where patterns of growth, development, and behavior form the basis for health in later life and for the next generation. This study aimed to determine the influences of knowledge, parents, peers, and social media, in the attitude of reproductive health among female adolescents in Manokwari, West Papua.

**Subjects and Method:** This was a cross-sectional study conducted at several junior high schools in Manokwari Regency, West Papua, from April to July 2022. A sample of 130 female adolescents was selected for this study. The dependent variable was attitude of reproductive health. The independent variables were knowledge, parents, peers, and social media. The data were collected by questionnaire and analyzed by path analysis.

**Results:** Positive attitude of reproductive health was directly influenced by good knowledge ( $b = 2.00$ ; 95% CI = 0.62 to 3.39;  $p = 0.005$ ), supportive parents ( $b = 2.12$ ; 95% CI = 0.81 to 3.43;  $p = 0.001$ ), positive peers ( $b = 1.75$ ; 95% CI = 0.38 to 3.10;  $p = 0.012$ ), and positive social media ( $b = 1.37$ ; 95% CI = 0.12 to 2.67;  $p = 0.040$ ). The positive attitude was also influenced indirectly by knowledge and social media.

**Conclusion:** Positive attitude of reproductive health is directly influenced by good knowledge, supportive parents, positive peers, and positive social media

**Keywords:** attitude, reproductive health, knowledge, parents, peers, social media, female adolescents.

## Correspondence:

Priscilla Jessica Pihahay. School of Health Polytechnics Ministry of Health Sorong. Jl. Basuki Rahmat, Klawalu, East Sorong District, Sorong 98416, West Papua. Email: pihahaypriscilla@gmail.com. Mobile: 08114852336.

---

## BACKGROUND

Physical and psychological changes occur very quickly in adolescence, during this time there is a high desire to know everything about sexuality, adventure, and challenging activities without understanding the risks that will occur. Adolescents who lack reproductive health information tend to get caught up in risky behavior. Problems faced by adolescents related to reproductive health are risky, deviant, and unhealthy behavior such as smoking,

drinking alcohol, drug abuse, premarital sexual behavior, nutritional problems, sexual problems, teenage pregnancy and unwanted pregnancies (KTD), unsafe abortion, PMS and HIV/AIDS (Aulia et al., 2017; Ariska and Yuliana, 2021). Adolescence is an important phase in life where patterns of growth, development, and behavior form the basis for later health and the next generation.

The impact of ignorance and lack of reproductive health practices according to the Global Health Data Exchange (GHDx) reports that genital herpes is the most common STI and affects 4.3% of adolescents in 2017. The increase in the prevalence of genital herpes worldwide from 4.0% in 1994 to 4.3% in 2017 is associated with an increase of five million diagnosed adolescents aged 15 to 19 years (Liang et al., 2019). Worldwide 38.4 million people are living with HIV in 2021. Every week worldwide, an estimated 4,900 incidents of HIV infection occur in young women aged 15-24 years. In sub-Saharan Africa, women and girls account for 63% of all new HIV infections by 2021 (UNAIDS, 2022).

The 2017 Indonesia Demographic and Health Survey (IDHS) reports that dating behavior is the beginning of the practice of risky behavior that makes adolescents vulnerable to early pregnancy, pregnancy outside of marriage, unwanted pregnancies, and infection with sexually transmitted diseases to unsafe abortions. Young women have sex for the first time because they love each other 54%, for young men the reason is curiosity. Meanwhile, 16% of female adolescents have the excuse of being forced, and 15% of male adolescents admit that it just happened (BKKBN, BPS, and Ministry of Health RI, 2017). In Indonesia, the highest child marriage rate is in the province of West Sulawesi with the highest prevalence (19.43%) while West Java has the highest absolute number which is estimated at 273,300 child marriages. 1,220,900 girls were married before they were 18 years old and 0.56% of the prevalence

was women aged 20-24 who were married before they were 15 years old (UNICEF, 2020). For reproductive health problems in West Papua Province at least 15% of women aged 20–24 years were married or living together before the age of 18 in 2015. The rate of child marriage is higher among girls from the poorest households. The facts show that violence against women and girls occurs a lot. In a survey conducted in 2016, more than one in three women aged 14–64 reported experiencing physical and/or sexual violence by their intimate partner at least once in their lifetime.

In Indonesia attention to the need for adolescents for reproductive health services increased after the 1994 International Conference on Population and Development (ICPD) meeting in Cairo. The outcome of the meeting was that reproductive rights were agreed to be part of human rights (HAM). Thus, the government is obliged to guarantee the fulfillment and protection of human rights for women and adolescents to obtain quality and non-discriminatory reproductive health information and services (Situmorang, 2011). Research from Indraswari and Zahroh (2021) recommends that adolescent life skills are needed to improve self-confidence in preventing risky behavior as well as knowledge and attitudes by developing interventions according to adolescent personal characteristics, cognitive and socio-cultural factors of adolescents, especially before they start engaging in risky behavior.

Many factors influence the attitude of adolescents. Not all information can affect attitudes. Information that can influence attitudes depends on the content, sources, and media of the information. In terms of information content, that information that fosters and develops attitudes contains messages that are persuasive (Suharyat, 2009). Adolescent attitudes toward their reproductive health are influenced by the role of parents, social media, peers, and knowledge (Novanda and Supriyanto, 2020; Utii and Pihahy, 2021).

Parents play an important role in providing education to children, this includes reproductive health education. Information owned and provided by parents affects the attitudes and behavior of adolescents in everyday life (Aulia et al., 2017). Research by Moedia (2020) in (Gustina and Yuria, 2021) states that experts predict that the social media that is widely used today is Facebook, WhatsApp, Instagram, Telegram, and various other types of applications. The fact is that social media can change people's lifestyles, especially during the COVID-19 pandemic, teenagers will often use social media. The impact of social media can be positive and negative. It has a positive impact by eroding the social interaction boundaries of its users, while the negative impact is when social media users do not know the ethics and boundaries of interacting on social media. Besides that, it allows users to adopt the bad influence of media that is used especially on teenage users. Most social media users, namely teenagers, become trapped in the bad effects of

social media such as excessive lifestyles, spreading hoax news, criminal acts, and free sex (Novanda and Supriyanto, 2020).

On many social media, there is advertising content that leads to pornography, this can make teenagers think that free sexual behavior in teenagers is normal and can access sites related to sexuality (Gustina and Yuria, 2021). Knowledge is important in shaping the attitude of adolescents. Adolescents will also be more responsible for their behavior and attitudes if they have good knowledge about adolescent reproductive health. Azwar (2000) in (Juliana et al., 2018) argues that one of the aspects that can support the formation of attitudes is the cognitive aspect which is an argument about something that is believed. The results of the interviews with the schools stated that the research was the first research in both schools on the reproductive health attitudes of young women in terms of the roles of parents, peers, social media, and knowledge. This study aims to measure the size of the relationship of each variable that plays a role in increasing/decreasing the attitude of adolescents toward their reproductive health. In behavioral theory, a person's attitude is formed after experiencing a process of prior knowledge (For et al., 2021).

---

## **SUBJECTS AND METHOD**

---

### **1. Study Design**

This study used an observational analytic research study, with a cross-sectional approach which was conducted at SMP Negeri 1 and Negeri 2 Manokwari Regency, West Papua, from April to July 2022.

## 2. Population and Sample

The target population in this study were all students who attended SMP Negeri 1 and Negeri 2 Manokwari Regency. The sampling technique used was a stratified random sample with a total of 130 respondents.

## 3. Study Variables

The dependent variable is attitude and the independent variable is the role of parents, social media, peers, and knowledge.

## 4. Operational Definition of Variable

**An attitude** is an act of adolescent belief after obtaining various information

**The role of parents** was measured by a questionnaire in the form of a question about how parents provide education about female adolescent reproductive health.

**Social media** is defined as the ownership of social media accounts and the active use of social media (such as Facebook, Instagram, TikTok, Twitter, and WhatsApp) which affect young women's knowledge of reproductive health.

**Peers** are defined as an interaction with people who are similar in age and status. Peers are influential in providing or sharing information about the reproductive health of female adolescents.

**Knowledge** is the knowledge of adolescents about their reproductive health.

## 5. Data analysis

The data was collected from the questionnaire. Furthermore, univariate, bivariate, and multivariate data analysis was carried out with the path analysis model using the Stata 17 program.

## 6. Research Ethics

The research code of ethics is carried out with care in its management including consent, anonymity, and confidentiality, during the research process. A research ethics permit approval letter was obtained from the Research Ethics Committee at the Sorong Ministry of Health Polytechnic, Number: DM.03.05/6/022/2022 on 22 February 2022.

---

## RESULTS

---

### 1. Sample Characteristics

Table 1 shows the characteristics of the respondents from 130 young women who have good knowledge about reproductive health, 56.1% (84 respondents). Of adolescents who receive information about reproductive health from their parents 56.2% (73 respondents). Of young women who have accounts on social media and actively use social media 98.5% (128 respondents). Useful information received from social media about reproductive health is 62.0% (81 respondents). The influence of peers as a source of reproductive health information is 51.5% (67 respondents). 62.3% (81 respondents) of young women have a positive attitude toward their reproductive health.

**Table 1. Sample characteristics (categorical data)**

Characteristics	Category	n	%
<b>Knowledge</b>	Good	84	64.4%
	Average	46	35.6%
<b>The role of parents</b>	Yes	73	56.2%
	No	57	43.6%
<b>Social media</b>	Negative Information	49	38.0%
	Positive Information	81	62.0%
<b>Have an account social media</b>	Yes	128	98.5%
	No	2	1.5%
<b>Peers</b>	Yes	67	51.5%
	No	63	48.5%
<b>Attitude</b>	Positive	81	63.3%
	Negative	49	37.7%

**2. Analysis Bivariate**

Table 2 the result of bivariate analysis with chi-square for the dependent variable attitude and the independent role of parents, social media, peers, and knowledge. Young women who received education from their parents with a positive attitude were 90.4% (66 respondents) and were statistically significant. The effect of positive information from social media on young women with a positive attitude toward

adolescents is 81.5% (66 respondents) and is statistically significant. Obtaining information from peers about reproductive health with a positive attitude of young women as much as 90.5% (57 respondents) and statistically significant. Good knowledge of reproductive health with a positive attitude of adolescents is 89.3% (75 respondents) and is statistically significant.

**Table 2. Factors influencing reproductive health attitudes of young women (an analysis by Chi Square)**

Variable	Attitude				OR	P
	Positive		Negative			
	N	%	N	%		
<b>The role of parents</b>						
Yes	66	90.4	7	9.6	26.4	<0.001
No	42	73.7	15	31.4		
<b>Social Media</b>						
Positive Information	66	81.5	15	18.5	9.97	<0.001
Negative Information	15	30.6	34	69.4		
<b>Peers</b>						
Yes	57	90.5	6	35.8	17.0	<0.001
No	24	20.0	43	64.2		
<b>Knowledge</b>						
Average	6	13	40	87.0	55.5	<0.001
Good	75	89.3	9	10.7		

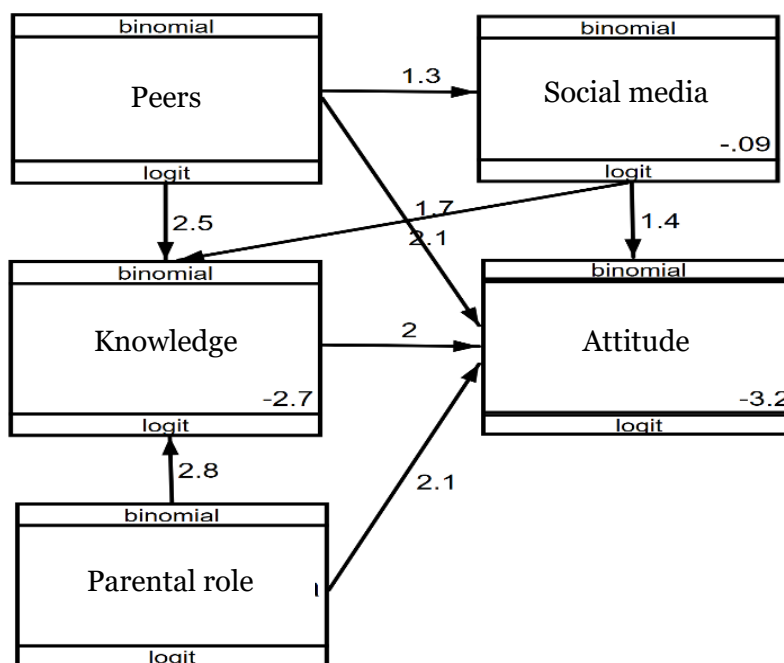
**3. Multivariate analysis**

Figure 1 and Table 3 show the results of the path analysis, there is an

influence of the role of parents on attitudes ( $b = 2.12$ ; 95% CI = 0.81 to 3.43;  $p < 0.001$ ). There is peer influence

on attitude ( $b = 1.75$ ; CI 95% = 0.38 to 3.10;  $p = 0.012$ ). There is the influence of social media on attitudes ( $b = 1.37$ ; CI 95% = 0.12 to 2.67;  $p = 0.040$ ). There is an effect of knowledge on attitude ( $b = 2.00$ ; CI 95% = 0.62 to 3.39;  $p = 0.005$ ). There is a peer influence on knowledge ( $b = 2.47$ ; CI 95% = 1.17 to

3.79;  $p < 0.001$ ). There is an influence of parents' role on knowledge ( $b = 2.28$ ; CI 95% = 1.59 to 4.04;  $p < 0.001$ ). There is an effect of social media on knowledge ( $b = 2.09$ ; CI 95% = 0.90 to 3.29;  $p < 0.001$ ). There is peer influence on social media ( $b = 1.34$ ; CI 95% = 0.75 to 2.11;  $p < 0.001$ ).



**Figure 1. Path Diagram of Relationships of Parental Role, Social Media, Peers, and Knowledge on Attitude toward Reproductive Health**

**Table 3. The results of path analysis**

Dependent Variables	Independent Variables	b	CI 95%		p
			Lower Limit	Upper Limit	
<b>Direct effect</b>					
Attitude	← Parental role	2.12	0.81	3.43	0.001
	← Peers	1.75	0.38	3.10	0.012
	← Social Media	1.37	0.06	2.67	0.040
	← Knowledge	2.00	0.62	3.39	0.005
<b>Indirect effect</b>					
Knowledge	← Peers	2.47	1.17	3.79	<0.001
	← The role of parents	2.82	1.59	4.04	<0.001
	← Social Media	2.09	0.90	3.29	0.001
Social Media	← Peers	1.34	0.57	2.11	0.001
N observation = 130					
df	= 11				
AIC	= 326.9984				
BIC	= 618.3827				

---

## DISCUSSION

---

From the questions about whether parents provide information and find ways to deal with their reproductive health problems, 96.9% of respondents said they got help from their parents. Teenagers also stated that their parents also provided information about maintaining cleanliness during menstruation, the dangers of sexually transmitted diseases, and early marriage.

The results of this study indicate that there is a direct influence on the role of parents in providing adolescent reproductive health education to their children. The role of parents in providing reproductive health education has a log chance (log odds) for young women to have a positive attitude as much as 2.12 units higher than no role of parents, statistically significant ( $b = 2.12$ ;  $CI\ 95\% = 0.81\ to\ 3.43$ ;  $p < 0.001$ ). Parents play an important role in providing education to children, this includes reproductive health education. Information owned and provided by parents affects the attitudes and behavior of adolescents in everyday life (Aulia et al., 2017).

### **1. The Influence of Peers on Young Women's Attitudes**

Friends have an important role for adolescents, wrong information from friends can have an impact on adolescent deviant behavior (Utii and Pihahey, 2021). The results of this study show that 59.2% of adolescents get information about reproductive health from their peers. Of the 130 respondents, only 8.5% of their peers invited them to watch pornography and 34.5% of their peers shared information

about dating, and even asked teenagers to date.

The results of the path analysis show that there is a direct influence from peers on the attitudes of young women. Peers who shared information about reproductive health had a log chance (log odds) for girls to have a positive attitude as much as 1.75 units higher than peers who did not share information about reproductive health, statistically significant ( $b = 1.75$ ;  $CI\ 95\% = 0.38\ to\ 3.10$ ;  $p = 0.012$ ). A positive attitude means that when adolescents associate with peers, there is an exchange of information on reproductive health which will result in good reproductive health decisions and practices.

Reproductive health education is more effective by using peer educators compared to parents, the chance for youth to follow advice from peers is 5.6 times Hoerster et al., 2007 (Wulandari and Saparwati, 2020). Empowering adolescents by forming cadres of reproductive health peers, through the provision of appropriate reproductive health materials can generate knowledge, attitudes, and positive behavior so that they become the basic capital for adolescents to provide education to their peers (Tarsikah and Aristina, 2022).

### **2. The Effect of Social Media on Attitudes**

The fact is that social media can change people's lifestyles, especially during the COVID-19 pandemic, teenagers will often use social media. The impact of social media can be positive and negative. It has a positive impact by eroding the social interaction boundaries of its users, while the negative

impact is when social media users do not know the ethics and boundaries of interacting on social media. Besides that, it allows users to adopt the bad influence of media that is used especially on teenage users. Most social media users were teenagers, which become trapped in the bad effects of social media such as excessive lifestyles, spreading hoax news, criminal acts, and free sex (Novanda and Supriyanto, 2020).

The results of this study found that as many as 128 respondents actively used social media. Approximately 82.6% of adolescents stated that they received information about reproductive health. Young women also feel that there is information from social media that is not useful, such as inappropriate messages or advertisements, as many as 41.5% of teenagers. The results of the path analysis show that there is a direct influence of social media on the attitudes of young women. Adolescents who received useful information from social media about reproductive health had a log chance (log odds) for female adolescents to have a positive attitude of 1.37 units compared to those who received information that was not beneficial to reproductive health from social media and was statistically significant ( $b = 1.37$ ; CI 95 % = 0.12 to 2.67;  $p = 0.040$ ).

Research conducted on Instagram @tabu.id social media content regarding reproductive health information has a significant effect on the positive attitude of followers (cognitive, affective, and conative) to maintain reproductive health (Fitri, 2020). According to a 2006 report published

by Pew Internet and the American Life Project, approximately 80% of American adults who use the Internet go online to access health information. Healthcare providers are concerned about the adverse effects on patient health because people rely more on the Internet than healthcare providers for health information (Jayasundara, 2021). Teenagers spend more time viewing content or information from social media, therefore it is necessary to do digital literacy teenagers so that teenagers can use social media properly and be able to reject false information (hoaxes).

### **3. The Effect of Knowledge on Attitudes**

Knowledge is important in shaping the attitude of adolescents. Adolescents will also be more responsible for their behavior and attitudes if they have good knowledge about adolescent reproductive health. Azwar (2000) in Juliana, Rahmayanti, and Astika (2018) argues that one of the aspects that can support the formation of attitudes is the cognitive aspect which is an argument about something that is believed. Adolescents' knowledge of reproductive health comes from schools, mass media (books/magazines/newspapers/radio/ television), health workers, parents, peers, and social media (Iswarati, 2011; Maharani et al., 2020).

The results of the path analysis showed that there was a direct influence on the knowledge of adolescents with attitudes, 89.3% of respondents with good knowledge had a positive attitude compared to teenagers who had sufficient knowledge, and only 13.0% of respondents had a positive



attitude. Adolescents who had good knowledge of reproductive health had a log odds of being positive by 2.00 units compared to those with sufficient or insufficient knowledge of adolescent reproductive health, and it was statistically significant ( $b= 2.00$ ; CI 95%= 0.62 to 3.39;  $p= 0.005$ ).

Incorrect knowledge about sexuality has an impact on risky sexual behavior. Obtaining wrong information about reproductive health has an impact on wrong knowledge and perceptions (Putri, 2021). Knowledge is the result of knowing, and this occurs after people sense a certain object. Sensing occurs through the human senses, namely, the five senses, namely sight, hearing, smell, taste, and touch. Most human knowledge is obtained through the eyes and ears (Notoajmojo 2014 in Ratnaningsih, 2022). Knowledge does not just happen but goes through various processes with various information media.

#### **4. Peer Influence On Knowledge**

There is the influence of peers on the knowledge of young women. The results showed that 92.1% of adolescents who had sufficient knowledge received support from their peers regarding reproductive health information. Peers who shared reproductive health information had the possibility (log odds) to increase girls' knowledge by 1.34 units compared to peers who did not share information, statistically significant ( $b= 1.34$ ; CI 95% = 0.75 to 2.11;  $p<0.001$ ).

Usually, opinions and solutions as well as suggestions from peers are more easily accepted by adolescents than suggestions or suggestions from

parents even though the truth of these solutions is unknown, especially regarding sexuality. Peers will be a factor that influences sexual behavior because peers are more open in providing information about sex than parents or family (Passe et al., 2021).

#### **5. The Effect of Parental Role on Knowledge**

There is an influence of the role of parents on knowledge of adolescent reproductive health. The role of parents in adolescent reproductive health education has the possibility (logodd) to increase adolescent knowledge by 2.00 units compared to parents who do not provide reproductive health education, statistically significant ( $b= 2.28$ ; CI 95% = 1.59 to 4.04;  $p<0.001$ ). Parents need to enrich information about their reproductive health before providing information to their children. Research (Nurjayanti, 2018) concluded that there is a relationship between parental support and adolescent knowledge and attitudes about reproductive health.

#### **6. The Effect of Media on Knowledge**

There is an influence of the mass media on the knowledge of young women. The results of this study show that 84% of respondents with good knowledge get useful information from social media. The positive influence of social media has the possibility (log odds) to increase adolescents' knowledge by 2.09 units compared to the negative influence of social media and is statistically significant ( $b= 2.09$ ; 95% CI= 0.90 to 3.29;  $p<0.001$ ). Adolescent knowledge can be obtained through information conveyed by

various methods. For example counseling in various forms and media adapted to needs and conditions including the use of social media today for health promotion (Sulistyoningsih and Fitriani, 2022).

### **7. Influence of Peers Against Social Media**

There is peer influence on information on social media. Peers who provide positive information to adolescents about adolescent reproductive health are likely to increase positive information on social media by 1.34 units compared to peers who do not share positive information with adolescents, and are statistically significant ( $b=1.34$ ;  $CI\ 95\% = 0.75\ to\ 2.11$ ;  $p<0.001$ ).

Adolescents usually feel uncomfortable or taboo to discussing sexuality and reproductive health issues (Nurhidayah, 2011). The existence of social media can provide useful information but also become a door of access related to inappropriate information such as pornography. Social media is an extensive online friendship network that is not limited by place and time. This social network can provide more friends in cyberspace by sharing types of content including reproductive health content. Using social media, teenagers find it easier to access information from friends, parents, close family, teachers, peers, and friends of friends. Wisely using social media can eliminate cultural taboos on reproductive health and contribute positive information to social media.

Social media in health communication has roles such as gathering information about a disease, management of health info, info of the nearest treatment or vaccines, emergency

services, and others. Social media for health communication is carried out consistently and in a systematic and planned manner, it cannot be sporadic. Because everything needs to be planned such as photos, designs, infographics, and so on (Arif, 2021).

### **AUTHOR CONTRIBUTION**

Priscilla Jessica Pihahay as the main researcher in data collection, data processing, formulating articles. Merlin Soripet takes care of licensing, compiling questionnaires and collecting data in the field.

### **FUNDING AND SPONSORSHIP**

This research was funded by the Ministry of Health of the Republic of Indonesia and School of Health Polytechnic, Ministry of Health Sorong.

### **CONFLICT OF INTEREST**

There is no conflict of interest in this study.

### **ACKNOWLEDGMENT**

Researchers express their gratitude and appreciation to School of Health Polytechnic, Ministry of Health Sorong, the Council of Teachers and Young Female subjects from Junior High School 1 and Junior High School 2 Manokwari, West Papua.

---

### **REFERENCES**

Arif AR (2021). Manfaat media sosial untuk komunikasi kesehatan FK-KMK UGM. Indonesia. Available at: <https://fkkmk.ugm.ac.id/manfaat-media-sosial-untuk-komunikasi-kesehatan> (accessed: 1 september 2022).

- Ariska A, Yuliana N (2021). Hubungan tingkat pengetahuan remaja tentang kesehatan reproduksi dengan sikap terhadap perilaku seksual pranikah di smp n 2 jati-puro. 1(2): 138–144.
- Aulia Q, Indah N, Azizah (2017). Hubungan sikap keluarga dengan pembinaan kesehatan reproduksi pada remaja di kabupaten balangan. *j. kes mas.* 39–42. available at: <https://ojs.uniska-bjm.ac.id/index.php/ann/article/view/1163>.
- BKKBN, BPS and Kemenkes RI (2017) Survei demografi dan kesehatan : kesehatan reproduksi remaja 2017, badan kependudukan dan keluarga berencana nasional. available at: <http://www.dhsprogram.com>.
- Fitri VM (2020). Pengaruh konten media sosial instagram @tabu.id terhadap sikap fillowers dalam menjaga kesehatan reproduksi, repository upnvj. upn veteran jakarta. available at: <https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e-1b6bf>
- Fora CY, Riwu YR, Sir AB (2021). Faktor risiko yang berhubungan dengan praktik kesehatan reproduksi remaja pada pelajar smp negeri 16 kupang. *media kesehatan masyarakat.* 3(1): 12–18. Doi: 10.35508/mkm.
- Gustina I, Yuria M (2021). Dampak media sosial dimasa pandemi covid 19 terhadap prilaku seksual remaja, in Sembadha 2021. 2.
- Indraswari R, Zahroh S (2021). Analisis karakteristik remaja terhadap perilaku-perilaku berisiko kesehatan, *higeia journal of public health research and development,* 6(2): 144–151.
- Iswarati (2011). Pengetahuan dan sumber informasi kesehatan reproduksi remaja di indonesia. *manajerial,* 9(18): 1–16.
- Juliana MI, Rahmayanti MD, Astika ME (2018). Tingkat pengetahuan dan sikap siswa SMP tentang kesehatan reproduksi remaja berdasarkan keikutsertaan pada program pusat informasi dan konseling-remaja (pik-r). 6(2): 97–106. Doi: 10.20527/dk.v6i2.-5556.
- Jayasundara CC (2021). Sexual health information seeking behaviour of adolescents and their satisfaction with the information outcome: an application of the theory of motivated information management. *j.acalib,* 47(5). Doi:10.1016/-j.acalib.2021.102383.
- Liang M (2019). The state of adolescent sexual and reproductive health. *j.ado.health.* 65(6): s3–s15. Doi:10.1016/j.jadohealth.-2019.09.015.
- Maharani LN (2020). Faktor-faktor yang berhubungan dengan perilaku kesehatan reproduksi pada remaja di sman 110 jakarta. *jurnal kesehatan.* 2(1): 1689–1699. Doi: 10.30597/mkmi.v14i-1.3699
- Murti B (2013). Desain dan ukuran sampel untuk penelitian kuantitatif dan kualitatif di bidang

- kesehatan. 3rd edn. Yogyakarta Gadjah Mada University Press.
- Naully Y (2022). Papua barat berisiko tinggi dilanda klb campak, difteri dan polio. suarakarya.id. 22 april. available at: <https://www.suarakarya.id/nasional/pr-260-3255799/papua-barat-berisiko-tinggi-dilanda-klb-campak-dif-teridan-polio> (accessed: 21 april 2022).
- Novanda G, Supriyanto A (2020). Pengaruh media sosial terhadap penyimpangan perilaku pada mahasiswa. in arah manajemen pada masa dan pasca pandemi Covid-19. 75–81.
- Nurjayanti A (2018). Hubungan dukungan orang tua dengan pengetahuan dan sikap remaja tentang kesehatan reproduksi di SMPN 3 prambanan sleman yogyakarta, tesis.
- Passe R (2021). Peran media informasi pada perilaku seksual remaja. pengabdian kepada masyarakat, 6(4): 1142–1149. Doi:10.30653/002.202164.840.
- Puri YE (2014). Pengaruh persepsi ibu tentang imunisasi ditinjau dengan health belief model terhadap kelengkapan status imunisasi', universitas sebelas maret, 22-(43): 1–15.
- Putri MR (2021). Pengaruh media sosial dan peran keluarga terhadap perilaku seksual remaja di wilayah kerja puskesmas kabil', zahra: J Health Sci Med Res. 1(1): 25–32.
- Ratnaningsih D (2022). Tingkat pengetahuan remaja putri kelas viii tentang dampak pernikahan dini pada kesehatan reproduksi di smp negeri 2 pakis kabupaten magelang: tingkat pengetahuan remaja putri kelas viii tentang dampak pernikahan dini pada kesehatan reproduksi di smp nege. Jurnal Permata Indonesia, 13(1).
- Sulistyoningsih H, Fitriani S (2022). Pemanfaatan media sosial instagram untuk meningkatkan pengetahuan remaja tentang pubertas. 6(1).
- Situmorang A (2011). Pelayanan kesehatan reproduksi remaja di puskesmas: isu dan tantangan. JKI. 6(2): 21–32.
- Suharyat Y (2009). Hubungan antara sikap minat latihan dan kepemimpinan, academia.
- Syaufi M (2022). Zona merah imunisasi rendah, dinkes papua barat siap menyukseskan bian 2022. matapapua.com. available at: <https://matapapua.com/2022/04/20/zona-merah-imunisasi-rendah-dinkes-papua-barat-siap-menyukseskan-bian-2022/>(accessed: 21 april 2022).
- Tarsikah T, Aristina NE (2022). Pelatihan kader sebaya sebagai upaya pemberdayaan remaja di bidang kesehatan reproduksi', jurnal pengabdian masyarakat sasambo.3(2): 5. Doi:10.32807/jpms.v3i2.820.
- Trianto AA, Dasman H, Lestari Y (2021). Analisis pencapaian program imunisasi dasar lengkap pada masa pandemi covid-19 di kabupaten pesisir selatan 2021. Jurnal Kesehatan Andalas. 10(3): 150–158
- Unaid (2022). Global HIV and AIDS Statistics Fact Sheet Unaid.

- available at: <https://www.unaids.org/en/resource/fact-sheet> (accessed: 3 november 2022).
- UNICEF (2020). perkawinan anak di Indonesia. available at: <https://www.unicef.org/indonesia/id/laporan/perkawinan-anak-di-indonesia> (accessed: 25 august 2022).
- Utii A, Pihahay PJ (2021). Peran orang terdekat remaja putra terhadap perilaku seksual pranikah analisis data SDKI 2017). *cendekia utama jurnal keperawatan dan kesehatan masyarakat stikes cendekia utama kodus*. 10(2): 101–107. Doi:10.31596/jcu.v10i-2.755.
- Wulandari PS, Saparwati M (2020). Hubungan dukungan teman sebaya dengan praktik menstrual hygiene pada remaja. 92–98.