

Knowledge about Pregnancy and Reproductive Health among Pregnant Women in Rural Coastal Areas of East Java, Indonesia

Hanifiya Samha Wardhani^a, Dyah Hariani^b, Nur Anindya Syamsudi^c,
Tusy Novita Dwi Wardani^d, Nadia Rifqi Cahyani^e

^ahanifiyadhani@gmail.com

^{a,e}Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia

^{b,c}Faculty of Mathematics and Natural Science, Universitas Negeri Surabaya, Surabaya, Indonesia

^dPuskesmas Japaran Mojowarno, Jombang, Indonesia

Abstract

Knowledge is the result of one's understanding of objects with human sensing. Pregnancy is the process of meeting spermatozoa with ovum and then implantation or attachment. Reproductive health is a state of complete physical, mental, and social well-being that is not only free of reproductive diseases or disabilities, but also of their functions and processes. The goal of this study was to see if there was a link between pregnant women's knowledge of pregnancy and reproductive health in Gisik Cemandi Village, Sidoarjo, East Java, one of the coastal areas in Indonesia. This research is a cross sectional research which is descriptive analytic in nature. The samples taken in this study were the entire population, namely a total of 15 pregnant women in Gisik Cemandi Village, so the total sampling technique was used in selecting the sample. This research was conducted in August 2022. The statistical analysis used was univariate and bivariate analysis. The findings of this study revealed a link between pregnant women's knowledge of pregnancy and reproductive health with a p-value <0.05, which is 0.000. This research is expected to provide policymakers with information for optimizing existing programs related to pregnancy and reproductive health in pregnant women.

Keywords: Knowledge, Pregnant, Reproductive Health

1. Introduction

Health development in Indonesia focuses on improving the health of mothers and children, especially pregnant women, laboring women and infants. These three groups are the most vulnerable groups in the health sector. This is due to the fact that maternal and newborn mortality are considered to be predictors of a prosperous society (Kemenkes RI, 2019). Pregnancy is a physiological process that occurs due to the meeting of sperm cells with ovum cells, then joins genetically and undergoes the process of implantation or attachment. Pregnancy is also one way for a person to continue their offspring (Creanga et al., 2017). The pregnancy period is calculated from the fertilization process until the birth of the baby. A normal pregnancy will last 280 days or 40 weeks or 10 months or 9 months according to the international calendar (Leftwich & Alves, 2017). Gestational age can be calculated through the first day of the last menstruation (Cunningham et al., 2009). Pregnancy is divided into 3 periods, namely the first trimester (0 - 12 weeks), second trimester (13 - 28 weeks) and third trimester (29 - 42 weeks) (Organization, 2016). The number of pregnant women in 2020 in East Java was 618,207 people. Meanwhile, In Sidoarjo Regency in 2021, there will be 38,009 pregnant women (Dinkes, 2021).

Knowledge is the result of a person's understanding of an object with his senses so that it is greatly influenced by the intensity of attention and perception of the object. Knowledge is divided into 6 levels, including knowing, understanding, applying, analysing, synthesizing, and evaluating (Khodijah, 2014). Knowledge is also the result of the process of discovering, of going from not knowing to knowing, of being unable to become capable (Collins & Olson, 2014). This learning process includes a variety of methods and concepts learned through education and experience. The greater a person's level of knowledge, the greater the individual's ability to evaluate a material or object. This assessment will be the basis for a person to act (Notoatmodjo, 2012).

Reproductive health is a condition of a person who is healthy from the reproductive system, including its processes and functions that are free from disease or disability, including mental, social, cultural, spiritual, and economic health (Manuaba, 2010). The World Health Organization (WHO) defines reproductive health as a state of complete physical, mental, and social well-being that includes not only the absence of disease or disability in the reproductive system, but also its functions and processes (Priyatni, 2016).

In 1994, the International Conference on Population and Development (ICPD) established the scope of reproductive health services, which included maternal and child health, family planning, prevention and treatment of sexually transmitted infections such as HIV/AIDS, adolescent reproductive health, prevention and treatment of abortion complications, prevention and treatment of infertility, elderly reproductive health, early detection of reproductive tract cancer, and other reproductive health services. (Supit et al., 2019). The scope of reproductive health, according to the National Population and Family Planning Agency (BKKBN), includes maternal and newborn health, adolescent reproductive health, the prevention and control of sexual deviations and drugs that can lead to HIV/AIDS, and reproductive health in old age (BKKBN, 2016).

Coastal communities are a group of people who live together in coastal areas forming and having a distinctive culture related to their dependence on the utilization of coastal resources. Of course, coastal communities are not only fishermen, but also fish farmers, fish processors and even fish traders (Poe et al., 2014). In general, most of the coastal communities earn a living in the marine resource utilization sector, such as fishermen, fish farmers, sand mining and sea transportation. The education level of coastal area residents is also relatively low. The environmental conditions of coastal community settlements, especially fishermen, are still not well organized and seem slum. With the socio-economic conditions of the people who are relatively in a low level of welfare, in the long run the pressure on coastal resources will be greater to fulfil the needs of the community (Barnett et al., 2014).

Indonesia is an archipelago with abundant marine resources, so many people utilize coastal areas as their main livelihood. However, with the condition of abundant marine resources in the coastal area has not been able to prosper the community, coastal areas are one of the areas that are synonymous with poverty. The low quality of human resources is a common feature of coastal communities in various regions in Indonesia. Economic difficulties do not provide opportunities for coastal children to actively participate in education. Many children are required to work as fishermen while they are still at school age, helping their parents to fulfil their daily needs. The way coastal communities view and perceive the world of education, matters relating to formal education in Indonesia's traditional coastal communities, which still have a low level of awareness of the importance of formal education for the future. Coastal communities also view formal education as not very important for life, this is exacerbated by the number of parents with various reasons either due to economic inability, or other reasons, so they are not willing to facilitate their children to study at a higher formal education level (Ferrol-Schulte et al., 2015).

This is one of the causes of low human resources in coastal areas and causes social problems that occur due to the low awareness of coastal community members of the importance of formal education, coupled with the assumption that expertise in fishing is not found in formal education

but through direct experience, this thinking seems to plunge coastal communities into poverty. Whereas education is a very valuable social capital to improve social status (Hajar et al., 2018).

This also applies to people of the female gender. Education is something that seems to be considered not mandatory for coastal communities, especially women. This assumption is because many people think that women do not need to go to high school if in the end it is men who become leaders and are in charge of earning a living. This assumption has led to the low level of women's education, even though women are the ones who play the most role in the sustainability of the next generation through pregnancy. Thus, coastal communities are faced with three problems that are quite crucial for them, namely the struggle to fulfil their daily lives, the stagnation of their children's educational needs, and their limited access to health (Alam & Rahman, 2014).

This research is located in one of the coastal areas in East Java Indonesia, namely Gisik Cemandi Village. Gisik Cemandi Village is an area located in the coastal area of Sidoarjo City, East Java, Indonesia, which is also located not far from the edge of the sea water. Geographically, the location of the Gisik Cemandi Village area is the lowest land bordering sea water and ponds so that many land conditions are still irregular and many roads are still damaged. In addition, the life of the population is still far from being like life in cities where development is very rapid. The existence of the community there is still far from the expectations they want, so the community forms a hope, namely working as a fisherman to make ends meet (Pemkab, 2021).

Gisik Cemandi, the majority of its people work as fishermen so that the number of residents who work as fishermen in the Hamlet is increasing and growing because of the many needs of the community's life. In addition to sailing, the community also works as farmers. In addition, for residents who do not have their own agricultural land, they work as farm laborers and odd jobs. But there are those who work as civil servants as well as private sector (Pemkab, 2021).

The people of Gisik Cemandi fall into the middle to lower social category based on the explanation above. Reproductive aspects, especially knowledge about abortion, contraception, and other things also play an important role in pregnancy. This can occur due to a lack of knowledge. People lack knowledge about pregnancy and reproduction (BKKBN et al., 2013).

In addition to the contraceptive aspect, maintaining reproductive health is also an important thing that correlates with each other. Some ways to maintain reproductive health include avoiding risky sex, using condoms during sexual intercourse properly and correctly, using sweat-absorbing underwear and changing them at least twice a day, drying the genital area after defecating, avoiding cigarettes and alcohol, and getting enough rest and managing stress well (Sully, 2019). For all this reason, it is very necessary to conduct a study, especially for pregnant women in coastal areas who will later give birth to the next generation regarding pregnancy knowledge and its relationship with reproductive health.

2. Methods

1.1. Participant characteristics and research design

This research is an analytic survey with a cross-sectional design. All pregnant women in Gisik Cemandi Village, Sidoarjo, East Java, Indonesia who are interested in taking part in this study's sample. This study describes the cause and effect of two variables carried out concurrently with the approach or data collection. This study's variables included two independent and two dependent variables. The independent variable is pregnant women's knowledge of pregnancy, while the dependent variable is reproductive health.

1.2. Sampling procedures

The study was carried out in Gisik Cemandi Village, Sidoarjo, East Java, Indonesia. Pregnant women make up the research population. Total sampling in the population was used as the sampling technique. A questionnaire was used in this study. Previously, the researcher

introduced herself to the respondent and explained her role in the activity. Furthermore, if the respondent agrees with the researcher's intent, she completes out all the consent form becoming a respondent. The respondents were then required to complete questionnaires.

1.3. Sample size, power, and precision

This study's sample includes the entire population of the research site, with a total sample of 15 pregnant women in Gisik Cemandi Village, Sidoarjo, East Java, Indonesia. This study was carried out in August 2022.

1.4. Measures and covariates

Primary data in this research are results of questionnaires completed by respondents who made up the sample. Primary information is data gathered from research subjects. Questionnaires are distributed to pregnant women to collect primary data. Data on respondent characteristics and maternal health knowledge during pregnancy were obtained.

1.5. Data analysis

The data collected, then analysed for the distribution of respondents based on characteristics and knowledge about maternal health during pregnancy using statistical test on each variable then analysed the relationship between it. Data reported in p-value analysis.

3. Results and Discussion

Table 1. Respondent Characteristics by Age

Age	Frequency	Percentage (%)
18	1	6,67
19	1	6,67
23	1	6,67
25	2	13,3
26	3	20
29	1	6,67
30	2	13,3
32	1	6,67
37	2	13,3
38	1	6,67
Total	15	100

Table 1 shows that there are respondents with an age range of 18 to 30 years. Respondents with a total of 1 (6.67%) were found at the ages of 18, 19, 23, 29, 32, and 38 years. While the majority of respondents, three (20%), were under the age of 26. According to (Bellieni, 2016) research the younger the age when pregnant, the more vulnerable the pregnancy will be.

Table 2. Respondent Characteristics by Last Education

Last Education	Frequency	Percentage (%)
Elementary School	1	6,67
Junior High School	4	26,67

Senior High School	10	66,67
Total	15	100

Table 2 shows that there were 1 respondent (6.67%) with the last education of elementary school, 4 respondents (26.67%) with the last education of junior high school, and the highest category in the last education of high school amounting to 10 respondents (66.67%). Similar to what was conveyed by (Yakubu & Salisu, 2018), that the lower the level of education of a mother, the more vulnerable her pregnancy conditions will be.

Table 3. Respondent Characteristics by Age of Marriage

Age of Marriage	Frequency	Percentage (%)
17	1	6,67
18	1	6,67
20	2	13,3
21	1	6,67
22	2	13,3
23	2	13,3
24	2	13,3
25	1	6,67
26	2	13,3
27	1	6,67
Total	15	100

Table 3 shows that the age of marriage of pregnant women varies in Gisik Cemandi varies greatly, from 17 to 27 years old. Respondents with a total of 1 (6.67%) were found at the ages of 17, 18, 21, 25, and 27 years. While respondents with a total of 2 (13.3%) were found at the ages of 20, 22, 23, 24, and 26 years. According to (Goli et al., 2015) early marriage will cause a decrease in nutritional levels which will affect the general decline in pregnancy conditions.

Table 4. Respondent Characteristics by Knowledge

Knowledge	Frequency	Percentage (%)
Good	7	46,67
Enough	6	40
Less	2	13,3
Total	15	100

Table 4 describes the knowledge of pregnant women about pregnancy. Data was obtained using a questionnaire by asking several questions about pregnancy and the following results were obtained, there were 7 respondents (46.67%) with good knowledge, 6 respondents (40%) with sufficient knowledge, and 2 respondents (13.3%) with poor knowledge.

Maternal knowledge about pregnancy and low levels of maternal education can lead to a

maternal ignorance about the significance of pregnancy tests. One of many factors that provide knowledge to humans is education, both formal and non-formal education (Kusyanti et al., 2022). According to the findings of this study, pregnant women's knowledge about pregnancy in Gisik Cemandi Village is high around 46.67%, where these pregnant women understand about pregnancy and reproductive health. High education also has an effect, according to the findings of this study, 66.67% of pregnant women have completed high school. Pregnant women with higher levels of education have a better understanding of pregnancy (Peterson et al., 2019).

Table 5. Respondent Characteristics by Reproductive Health

Reproductive Health	Frequency	Percentage (%)
Healthy	11	73,3
Moderately healthy	3	20
Less healthy	1	6,67
Total	15	100

Table 5 shows the reproductive health of pregnant women in Gisik Cemandi. Reproductive health is assessed from physical, mental, and social conditions from a reproductive point of view asked through a questionnaire. The results obtained were 11 respondents (73.3%) were declared healthy, 3 respondents (20%) were quite healthy, and 1 respondent (6.67%) was less healthy

Reproductive health of pregnant women is assessed from the physical, mental, and social conditions of reproduction, including questions on the questionnaire are the mental readiness of the mother during pregnancy, the incidence of abortion in the mother, contraceptive use, and family support during the pregnancy process (Shu et al., 2016). In this study, it was found that most pregnant women were declared reproductively healthy, which amounted to 73.3%. The higher the level of reproductive health, it also shows a good mental level during pregnancy, a minimal incidence of abortion, and good family support for pregnant women (Laurenzi et al., 2020).

Table 6. Relationship between Pregnant Women's Knowledge about Pregnancy and Reproductive Health

Knowledge	Reproductive Health			Total	P Value
	Healthy	Moderately Healthy	Less Healthy		
Good	5 (71,4%)	1 (14,3%)	1 (14,3%)	7	0.000
Enough	4 (66,7%)	2 (33,3%)	0 (0%)	6	
Less	2 (100%)	0 (0%)	0 (0%)	2	

Table 6 employs the Chi square method statistical test with a 95% confidence level to examine the relationship between pregnant women's knowledge of pregnancy and reproductive health. The results obtained were 5 out of 15 respondents (71.4%) had good and healthy knowledge, 4 respondents (66.7%) had sufficient and healthy knowledge, 2 respondents (100%) had poor and healthy knowledge. In addition, it was found that 1 out of 15 respondents (14.3%) had good knowledge and were quite healthy and 2 respondents (33.3%) had sufficient knowledge and were quite healthy. There is also 1 respondent (14.3%) respondent with good knowledge and unhealthy. From the data above, since the statistical test results obtained P value = 0.000, it can be concluded that there is a relationship between pregnant women's knowledge of pregnancy and reproductive health.

The findings revealed a link between pregnant women's knowledge of pregnancy and reproductive health in Gisik Cemandi Village, Sidoarjo, East Java. Table 6 shows the results of bivariate analysis using the Chi Square method. The P value result shows a result of 0.000 which means this value is less than 0.005. This shows that the higher the knowledge of pregnant women, the higher their reproductive health. Therefore, there is a significant relationship between pregnant women's knowledge of pregnancy and their reproductive health.

Knowledge is an essential part of humans. Knowledge is obtained through perception of stimuli using the sensory organs, the results of perception in the form of information will be stored in the memory system to be processed and given meaning, then the information is used when needed (Ward, 2017). Thus the higher the level of knowledge of respondents about pregnancy will affect the increase in awareness and willingness of respondents to maintain their reproductive health.

As stated by (Sujindra et al., 2015) the respondent's level of knowledge about pregnancy is obtained from experience about pregnancy, education level, environment, and so on. Experience about pregnancy is also one of the sources of prior knowledge, this experience can be obtained from pregnancies experienced by respondents themselves or get information from other people's experiences. If a pregnant woman has more knowledge about pregnancy, it is likely that the mother will think about determining attitudes, behaviors to prevent, avoid or overcome pregnancy problems better, one of which is about her reproductive health (Nsubuga et al., 2016).

Reproductive health that is closely related to pregnancy is about abortion and the use of contraceptives. Abortion is one of the emergencies in pregnancy. Abortion is the death of the fetus in the womb when the pregnancy reaches 20 weeks of gestation (Jurkovic et al., 2013). The higher the level of knowledge in pregnant women, the smaller the incidence of abortion. The higher the knowledge, the more aware of the use of contraceptives. So that when the knowledge of pregnant women is high, their reproductive health will also be high. This statement is the same as what has been conveyed by (Munakampe et al., 2018) regarding knowledge of abortion and contraception in countries with low-middle income. So it can be concluded that the knowledge of pregnant women about pregnancy can affect the level of reproductive health.

4. Limitation of The Study

Although some findings were made in this study, there are some limitations that must be addressed. This study only included Gisik Cemandi, Sidoarjo, East Java, Indonesia. As a result, generalization to other contexts may be impossible. As a result, future research hopes to select several villages as monitoring points to conduct regular monitoring of pregnant women's knowledge and reproductive health.

5. Conclusions and Suggestions

According to the findings of this study, there is a relationship between pregnant women's knowledge of pregnancy and reproductive health. The greater a pregnant woman's knowledge of pregnancy, the better her reproductive health.

6. Ethical Considerations

According to standard research ethics protocols, the research instrument used complied with the rules of research ethics for human objects. Each study participant provided written consent. The purpose, benefits, risks, and duration of the interview were all explained to study participants. To

maintain privacy and confidentiality throughout the study period, each questionnaire was number-coded without any personal identification. Only willing volunteers were interviewed.

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References

- Alam, K., & Rahman, M. H. (2014). Women in natural disasters: A case study from southern coastal region of Bangladesh. *International Journal of Disaster Risk Reduction*, 8, 68–82. <https://doi.org/10.1016/j.ijdr.2014.01.003>
- Barnett, J., Graham, S., Mortreux, C., Fincher, R., Waters, E., & Hurlimann, A. (2014). A local coastal adaptation pathway. *Nature Climate Change*, 4(12), 1103–1108. <https://doi.org/10.1038/nclimate2383>
- Bellieni, C. (2016). The Best Age for Pregnancy and Undue Pressures. *Journal of Family & Reproductive Health*.
- BKKBN. (2016). *Buku Panduan Praktis Pelayanan Kontrasepsi*. In PT Bina Pustaka Sarwono Prawirohardjo.
- BKKBN, BPS, Kemenkes, & ICF Internasional. (2013). *Survei Demografi dan Kesehatan Indonesia 2012*. Sdki.
- Collins, J. A., & Olson, I. R. (2014). Knowledge is power: How conceptual knowledge transforms visual cognition. In *Psychonomic Bulletin and Review* (Vol. 21, Issue 4, pp. 843–860). Springer New York LLC. <https://doi.org/10.3758/s13423-013-0564-3>
- Creanga, A. A., Syverson, C., Seed, K., & Callaghan, W. M. (2017). Pregnancy-Related Mortality in the United States, 2011–2013. *Obstetrics and Gynecology*. <https://doi.org/10.1097/AOG.0000000000002114>
- Cunningham, F., Leveno, K., Bloom, S., Hauth, J., Rouse, D., & Spong, C. (2009). *Williams Obstetrics: 23rd Edition: 23rd Edition*. New York.
- Dinkes. (2021). *Profil Kesehatan Dinas Kesehatan Provinsi Jawa Timur Tahun 2020*. In *Profil Kesehatan Dinas Kesehatan Provinsi Jawa Timur Tahun 2020*.
- Ferrol-Schulte, D., Gorris, P., Baitoningsih, W., Adhuri, D. S., & Ferse, S. C. A. (2015). Coastal livelihood vulnerability to marine resource degradation: A review of the Indonesian national coastal and marine policy framework. *Marine Policy*, 52, 163–171. <https://doi.org/10.1016/j.marpol.2014.09.026>
- Goli, S., Rammohan, A., & Singh, D. (2015). The Effect of Early Marriages and Early Childbearing on Women's Nutritional Status in India. *Maternal and Child Health Journal*. <https://doi.org/10.1007/s10995-015-1700-7>

- Hajar, S., Tanjung, I. S., & Yenni, E. (2018). Empowerment of Coastal Community Through Village Potential. 141(6), 297–299. <https://doi.org/10.2991/icosposdev-17.2018.61>
- Jurkovic, D., Overton, C., & Bender-Atik, R. (2013). Diagnosis and management of first trimester miscarriage. *BMJ (Online)*, 346(7913), 1–7. <https://doi.org/10.1136/bmj.f3676>
- Kemenkes RI. (2019). Profil Kesehatan Kemenkes RI Tahun 2019. In Short Textbook of Preventive and Social Medicine.
- Khodijah, N. (2014). Psikologi Pendidikan. Jakarta Raja Grafindo Persada.
- Kusyanti, T., Wirakusumah, F. F., Rinawan, F. R., Muhith, A., Purbasari, A., Mawardi, F., Puspitasari, I. W., Faza, A., & Stellata, A. G. (2022). Technology-Based (Mhealth) and Standard/Traditional Maternal Care for Pregnant Woman: A Systematic Literature Review. In *Healthcare (Switzerland)* (Vol. 10, Issue 7). MDPI. <https://doi.org/10.3390/healthcare10071287>
- Laurenzi, C. A., Gordon, S., Abrahams, N., Du Toit, S., Bradshaw, M., Brand, A., Melendez-Torres, G. J., Tomlinson, M., Ross, D. A., Servili, C., Carvajal-Aguirre, L., Lai, J., Dua, T., Fleischmann, A., & Skeen, S. (2020). Psychosocial interventions targeting mental health in pregnant adolescents and adolescent parents: A systematic review. *Reproductive Health*, 17(1). <https://doi.org/10.1186/s12978-020-00913-y>
- Leftwich, H. K., & Alves, M. V. O. (2017). Adolescent Pregnancy. In *Pediatric Clinics of North America*. <https://doi.org/10.1016/j.pcl.2016.11.007>
- Manuaba, I. (2010). Memahami Kesehatan Reproduksi Wanita. Jakarta: Arcan.
- Munakampe, M. N., Zulu, J. M., & Michelo, C. (2018). Contraception and abortion knowledge, attitudes and practices among adolescents from low and middle-income countries: A systematic review. In *BMC Health Services Research*. <https://doi.org/10.1186/s12913-018-3722-5>
- Notoatmodjo, S. (2012). Promosi Kesehatan & Ilmu Perilaku. In Jakarta: Rineka Cipta.
- Nsubuga, H., Sekandi, J. N., Sempeera, H., & Makumbi, F. E. (2016). Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: A cross-sectional survey. *BMC Women's Health*, 16(1), 1–11. <https://doi.org/10.1186/s12905-016-0286-6>
- Organization, world health. (2016). WHO Recommendation on Antenatal care for positive pregnancy experience. WHO Recommendation on Antenatal Care for Positive Pregnancy Experience. <https://doi.org/ISBN 978 92 4 154991 2>
- Pemkab. (2021). Tentang Sidoarjo.
- Peterson, E., Davis, N., Goodman, D., Cox, S., Syverson, C., Seed, K., Shapiro-Mendoza, C., Callaghan, W., & Barfield, W. (2019). Morbidity and Mortality Weekly Report: Racial/Ethnic

- Disparities in Pregnancy-Related Deaths - United States, 2007-2016. In US Department of Health and Human Services/Centers for Disease Control and Prevention.
- Poe, M. R., Norman, K. C., & Levin, P. S. (2014). Cultural dimensions of socioecological systems: Key connections and guiding principles for conservation in coastal environments. *Conservation Letters*, 7(3), 166–175. <https://doi.org/10.1111/conl.12068>
- Prijatni, I. (2016). Kesehatan Reproduksi dan Keluarga Berencana. In modul bahan ajar cetak kebidana.
- Shu, C., Fu, A., Lu, J., Yin, M., Chen, Y., Qin, T., Shang, X., Wang, X., Zhang, M., Xiong, C., & Yin, P. (2016). Association between age at first sexual intercourse and knowledge, attitudes and practices regarding reproductive health and unplanned pregnancy: a cross-sectional study. *Public Health*, 135, 104–113. <https://doi.org/10.1016/j.puhe.2016.01.021>
- Sujindra, E., Bupathy, A., Suganya, A., & Praveena, R. (2015). Knowledge, attitude, and practice of exercise during pregnancy among antenatal mothers. *International Journal of Educational and Psychological Researches*. <https://doi.org/10.4103/2395-2296.158347>
- Sully, E. (2019). Adding it up. UNFPA.
- Supit, J. A. M., Lumy, F. N., & Kulas, E. I. (2019). Promosi Kesehatan Reproduksi Terhadap Pengetahuan Remaja. *JIDAN (Jurnal Ilmiah Bidan)*. <https://doi.org/10.47718/jib.v6i2.820>
- Ward, V. (2017). Why, whose, what and how? A framework for knowledge mobilisers. *Evidence and Policy*, 13(3), 477–497. <https://doi.org/10.1332/174426416X14634763278725>
- Yakubu, I., & Salisu, W. J. (2018). Determinants of adolescent pregnancy in sub-Saharan Africa: A systematic review. In *Reproductive Health*. <https://doi.org/10.1186/s12978-018-0460-4>