



Factors Related to Pregnancy Incidents in Adolescents at Mebung Primary Healthcare Center Working Area, Alor Regency

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Abstract

Introduction: The number of teenage (less than 20 years old) pregnancies at Mebung Primary Healthcare Center working area increased every year from 2020 to 2023. In 2020, there were 28 cases of pregnancy; increased to 30 cases in 2021 and 40 cases in 2022 until 50 cases in 2023. Thi study aimed to determine the factors of teenage pregnancies at Mebung Primary Healthcare Center, Alor Regency working area.

Methods: This quantitative study used a *cross-sectional* study design. The dependent variable was teenage pregnancy, while the independent variables were knowledge, attitudes, exposure to information, the role of parents, and the role of peers. The population in this study was 565 adolescents at Mebung Primary Healthcare Center working area. The subjects were 65 female adolescents, which was chosen through *simple random sampling* method. Data analysis were done through chi-square tests, with a significance level of 95% ($\alpha=0.05$).

Results: There was a significant association between knowledge ($p=0.0001$), attitude ($p=0.0001$), exposure to information ($p=0.0001$), the role of parents ($p=0.006$), the role of peers ($p=0.0001$) with the incidence of pregnancy in adolescents at Mebung Primary Healthcare Center working area.

Conclusion: Lack of knowledge, attitude, information exposure, parents' support, peers' support could lead to a higher incidence of teenager's pregnancy at Mebung Primary Healthcare Center working area.

Keywords: Factors, Pregnancy, Adolescents, knowledge, attitude.

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Introduction

Adolescence is a transitional process from childhood to adulthood.¹ Indonesian National Population and Family Planning Board (BKKBN) states that adolescents are people who are in the age range of 10-20 years. Adolescence is an age when

children are filled with curiosity about something relatively new. One topic that steals the attention of adolescents and their curiosity is related to sex. Adolescents tend to have a great curiosity about sex, which is a positive thing, but also has a negative impact because it triggers the emergence

of sexual behavior that results in pregnancy in adolescence.²

Pregnancy that occurs on under 20 years old is called a teenage pregnancy. Pregnancy in adolescence is at risk for the mother's or baby's death, baby's abnormalities or defects, prematurity, low birth weight, STIs (Sexually Transmitted Infections), and mother's depression during childbirth.³ WHO stated that the incidence of teenage pregnancies aged 15-19 years reached 12.8 million, with an annual prevalence of 44 births per 1000 teenage pregnancies.⁴ Based on data from the Indonesian National Population and Family Planning Agency (BKKBN), it was stated that in 2019 the percentage of pregnancy incidence in teenagers reached 47 per 1000 pregnancies, and in 2021 it decreased to 20.49 per 1000 pregnancies. The decrease in the incidence did not last long; in 2022, BKKBN noted that there was an increase in the pregnancy rate among teenagers, with the prevalence of 26.64 per 1000 pregnancies.⁵ Therefore, the health problems related to pregnancy in teenagers can't be ignored.

East Nusa Tenggara (NTT) Province was the highest contributor to the Total Fertility Rate in Indonesia, with the rate of 3.37 children per woman. In 2020, the teenage pregnancy rate in NTT Province reached 27/1000, or 27 out of 1000 teenage girls experienced pregnancy at the age of 15-19 years. The pregnancy rate of teenage girls in NTT aged 15-19 years reaches 20.4% each year, meaning that every year there are 20 teenage girls in NTT aged 15-19 years who experience pregnancy.⁶ The Alor Regency Health Office stated that many teenagers aged 15-19 years experience pregnancy. The results of the data summary from the Kalabahi Regional Hospital showed that there was an increase in the number of teenage pregnancies every year. Based on data from Klaabahi Regional Hospital, in 2019 there were 5 cases of teenage pregnancy, and this increased to 15 cases of teenage pregnancy in 2020. Mebung Health Center is one of the areas with a fairly high number of teenage pregnancy cases in Alor Regency. Based on data from the last four years, Mebung Primary

Healthcare Center noted that 2019 was the year with the smallest number of pregnancy cases, 7 cases, and increased in 2020 to 28 cases, in 2021 to 30 cases, in 2022 to 40 cases and in 2023 became the largest contributor to teenage pregnancy cases, or 50 cases of teenage pregnancy. This data showed the increased number of teenager pregnancy cases every year in Mebung Primary Healthcare Center working area that must be considered.

Pregnancy in adolescents occurred due to factors that encourage the formation of behavior that deviates from healthy behavior.⁷ This behavioral deviation is usually related to sexual behavior deviation. Risk factors for pregnancy in adolescents include adolescent knowledge about sex, adolescent attitudes in responding to every issue of sex or reproductive health, the role of parents in providing support and information, the role of peers or the environment where adolescents socialize, and access to information obtained by adolescents, in this case, exposure to pornography and dating behavior that is risky for adolescent pregnancy.⁸ This study aimed to analyze the factors related to the incidence of pregnancy in adolescents in the work area of Mebung Primary Healthcare Center, Alor Regency.

Methods

This quantitative study used a *cross-sectional* study design that aimed to determine the association between the factors to the incidence of adolescents' pregnancies. This study was located in Mebung Primary Healthcare Center working area, Alor Regency. The population in this study was 565 young women in Mebung Primary Healthcare Center working area.

The sample in this study was 65 adolescent girls in the working area of Mebung Primary Healthcare Center, with 31 pregnant adolescents and 34 non pregnant adolescents. The sampling technique uses a simple random sampling technique. This sampling was done by taking a lottery or random that writes the name of the adolescent girl on a piece of paper, then placed in contact, stirred and

then taken randomly. Independent variables in this study are knowledge, attitude, information exposure, the role of parents, and peer support. The dependent variable was teenage pregnancy. The data collection technique used a questionnaire containing 53 questions on the variables, which were divided into five aspects, namely knowledge, attitudes, information exposure, parental roles, and peer roles. The questions on knowledge were 10 questions, attitudes were 15 questions, information exposure were 8 questions, parental roles were 10 questions, peer roles were 10 questions. Data were analyzed using the chi-square test with a significance level of 95% ($\alpha = 0.05$). The results of the study are presented in the form of tables and narratives.

Results

Based on the results, most of the respondents were 15-17 years old (63.1%), and most of the respondents were students (78.5%), as shown in Table 1.

In Table 2, it is shown that among 37 respondents who had good knowledge, 6 (16.2%) of them experienced pregnancy and 31 (83.8%) respondents did not experience pregnancy. Among the respondents with low knowledge were more likely to experience pregnancy, or 25 (89.3%) respondents experienced pregnancy and 3 (10.7%) respondents did not experience pregnancy. The results of the chi-square test showed a p-value of 0.0001 ($p < 0.05$), which mean that there was a significant association between the knowledge of adolescent girls about reproductive health and the incidence of teenage pregnancy in the working area of Mebung Primary Healthcare Center, Alor Regency.

In regards to attitude, out of 42 respondents who had a positive attitude, 33 (78.6%) respondents did not experience pregnancy and 9 (21.4%) respondents experienced pregnancy. On the other hand, the respondents with a negative attitude were more likely to experience pregnancy, or 22 (97.7%) respondents, while only 1 (4.3%) respondent with a negative attitude who did not experience

pregnancy. The results of the chi-square test showed that the p-value = 0.0001 ($p < 0.05$), which mean that there was an association between the attitude of respondents and the incidence of pregnancy in adolescents in Mebung Primary Healthcare Center Working Area, Alor Regency.

Regarding the information exposure, out of 42 respondents who were exposed to information about reproductive health, 34 (81.0%) respondents did not experience pregnancy, and 8 (19.0%) respondents experienced pregnancy. On the other hand, among the respondents who were not exposed to information all of them experienced pregnancy in adolescence. The results of statistical tests using chi-square showed that the p-value was 0.0001 ($p < 0.05$), which mean that there was a significant association between information exposure on reproductive health to the incidence of pregnancy in adolescents in the working area of Mebung Primary Healthcare Center, Alor Regency.

In parental role variable, it shown that out of 40 respondents who get less parental support, 25 (63.5%) respondents experience pregnancy, and 15 (37.5%) respondents did not experience pregnancy. On the other hand, 19 (76.0%) respondents who got a good support from parental role do not experience pregnancy, while only 6 (24.0%) respondents who got a good parental role support, experience pregnancy in adolescence. The results of statistical tests using chi-square show that the p-value = 0.006 ($p \leq 0.05$), which means that there is a relationship between the role of parents and the incidence of pregnancy in adolescents in the working area of Mebung Primary Healthcare Center, Alor Regency.

In the peer role variable, it is shown that of the 30 respondents with a less supportive peer role, there were 25 (83.3%) respondents who experienced pregnancy and 5 (16.7%) respondents who did not experience pregnancy. On the other hand, of the 35 respondents who had supportive peers, 29 (82.9%) respondents did not experience pregnancy, and 6 (17.1%) respondents experienced pregnancy. The

results of statistical tests using chi-square obtained the results of $p\text{-value} = 0.0001$ ($p < 0.05$), which means that there was an association between the role of peers and

the incidence of pregnancy in adolescents in the working area of Mebung Primary Healthcare Center, Alor Regency.

Table 1 Subjects' Characteristics

Characteristics	Category	Total (n)	Percentage (%)
Age	15-17 years old	41	63.1%
	18-19 years old	24	36.9%
Job	Farmers	2	3.1%
	Housewife	12	18.5%
	Students	51	78.5%

2. Determinants of pregnancy incidence.

Table 2. Association between factors related to pregnancy incidence

Variables	Teenage Pregnancy Incident				Total		p-values
	Yes		No		N	%	
	n	%	N	%			
Knowledge							
Low	25	89.3	3	10.7	28	100	0.0001
Good	6	16.2	31	83.8	37	100	
Attitude							
Negative	22	97.7	1	4.3	23	100	0.0001
Positive	9	21.4	33	78.6	42	100	
Information Exposure							
Not Exposed	23	100.0	0	0.0	23	100	0.0001
Exposed	8	19.0	34	81.0	42	100	
The Role of Parents							
Less support	25	63.5	15	37.5	40	100	0.006
Good support	6	24.0	19	76.0	25	100	
The Role of Peers							
Less support	25	83.3	5	16.7	30	100	0.0001
Good support	6	17.1	29	82.9	35	100	

Discussion

The association between knowledge and pregnancy

Knowledge is one of the predisposing factors that influence a person's health behavior. Knowledge related to reproductive health for adolescents is knowledge that talks about reproductive health, including safe and healthy sex education.⁹

The results of the study showed that there was an association between knowledge on reproductive health and the incidence of pregnancy in adolescent girls. The analysis result found that respondents with good knowledge tended not to

experience pregnancy, conversely, respondents with less knowledge tended to experience pregnancy. The results of the study also found that there were respondents with good knowledge who had experienced pregnancy. This is caused by several other factors, such as support or encouragement from the peers and parents. A study conducted by Budiharjo (2017) showed that there was an association between knowledge on reproductive health and the incidence of pregnancy in adolescent girls, where behavior that is carried out based on knowledge will last longer than behavior that is not based on knowledge.⁹

Education/ counseling is one form of media exposure to information that is least often obtained by respondents, as well as encouragement/support. Based on the results, respondents who did not experience pregnancy get support/encouragement from people around, so they tend to have good knowledge compared to respondents who experience pregnancy events. Increasing knowledge can be done through health promotion efforts such as providing education/counseling in every school in the working area of Mebung Primary Healthcare Center. The education on reproductive health should be attractive in order to get the attention from the adolescents. Besides that, health promotion efforts can also be carried out through the social media such as Facebook, Instagram, or TikTok.

The association between attitudes and pregnancy

Attitude is an action or behavior in responding to a particular object or desire. Attitude is related to perception, personality, motivation, and how to assess oneself that each person has.¹⁰ The results of the study showed that there was an association between attitudes towards pregnancy in adolescents in Mebung Primary Healthcare Center working area, Alor Regency. The results of the analysis showed that the respondents who had negative attitudes tended to get pregnant. Conversely, adolescents who had positive attitudes tended not to get pregnant. This means that an adolescent who has a negative attitude tends to have deviant behavior related to sexuality. Research shows that many teenagers have negative attitudes towards sex education, where teenagers still think that sex education is not an important thing to get from an early age. Many teenagers think that following sex education is boring, these things are one of the factors in the formation of negative attitudes, due to lack of knowledge which forms a deviation in attitude. In addition, encouragement and access to information can also cause negative attitudes.

Research conducted by Masae (2019) shows that there is a significant association between attitudes and pregnancy incidents in adolescent girls. This study showed that someone who has a positive attitude is less likely to engage in deviant behavior, such as sexual behavior that causes pregnancy in adolescence. A good attitude is not only based on broad and good knowledge, but access to information and encouragement provided can also shape a person's attitude. The higher the person's knowledge, the more positive attitudes and behaviors they will form.¹¹ A good attitude starts from good knowledge so that it can provide a positive impetus in responding to sexual behavior itself. To improve knowledge, reproductive health, and sexuality education can be carried out to adolescents so that adolescents can have a good attitude and understanding.

The association between Exposure to Information and Pregnancy

Information is something related to knowledge, and also new things that are not yet known to someone. Exposure to information itself is one of the factors that supports the occurrence of a behavior. Information itself can also support the high insight or knowledge possessed by someone, information can also be accessed through various media such as print media, electronics, social media, or face-to-face.¹²

The results of the study showed that there was a significant relationship between exposure to information and the incidence of pregnancy in adolescent girls in Mebung Primary Healthcare Center work area, Alor Regency. Based on the results of the study, it was found that all of the subjects who were not exposed to information on health reproduction, experienced pregnancy. Only small number of the subjects who were exposed to information experienced pregnancy. This shows that exposure to information received by a person greatly influences the formation of behavior in a person. The higher the positive information obtained, the better the behavior shown; the more negative information obtained, the worse

the behavior shown.¹² Based on the results of the study, it was also found that adolescents who experienced pregnancy tended to access pornographic information that appeared on social media or through pornographic websites visited by respondents. Respondents who experienced pregnancy also used social media more to read novels/comics or watch films that contained elements of sexuality, thus triggering the emergence of stimulation for adolescents to have sex. Lack of exposure to information such as counseling, seminars, and talk shows related to reproductive health and sexuality is also a major factor in the lack of adolescent knowledge about reproductive health and sex. The results of this study are in line with research conducted by Sari (2014), which stated that there was a significant association between exposure to information on pregnancy in teenagers.¹² The more access to positive information obtained regarding sex education, the more it encourages the formation of positive behavior. On the other hand, the more negative information related to sex is accessed, the behavior shown will be negative. The use of application-based information systems is more effective in preventing pregnancy incidence because adolescents often get information through social media, so it is necessary to provide regular education through social media in the form of pictures, slogans, posters, and educational videos involving health workers.

The association between parental Roles and pregnancy incidents

Parents are the most important part of a family, including the father and mother. The role is one aspect that has a dynamic nature, where a person can carry out and carry out every obligation according to responsibility and duty.¹³ The role of parents tends to be associated with the obligation to meet children's needs in the form of food, drinks, school, and so on, but several parental roles are often ignored, such as supervision, discussion time and gathering.¹³

The results of the study showed that there was a significant relationship

between the role of parents and the incidence of pregnancy in adolescents in Mebung Primary Healthcare Center work area, Alor Regency. The results showed that respondents with poor parental roles tended not to experience pregnancy. Meanwhile, respondents with good parental roles tended not to experience pregnancy, but there were several respondents with good parental roles who experienced pregnancy. This proves that the role of parents is very necessary in the formation of a child's characteristics and behavior.¹³ This study is in line with research conducted by Kartikasari (2022) which states that there is a significant relationship between the role of parents and the incidence of pregnancy in adolescent girls, where parents who lack communication with children regarding sex education and reproductive health tend to have free sex behavior that results in pregnancy at a young age, but parents who can build communication with children regarding reproductive health and sex education tend to influence the knowledge, attitudes, and behavior of the child regarding sexuality and reproductive health.¹⁴ Parents who can build bonding with children in adolescence can make them more courageous and open to sharing stories and complaints. Parents have an important role in encouraging the formation of the characteristics and behavior of a child so parents must also provide time for children or quality time together by opening up discussion space related to sexuality education, parents are also expected to be able to be more active in finding out associations and so on, Puskesmas is also expected to be able to create an education in the form of talk shows or talks that are FGDs and training for parents to be able to build discussions with children about sex education, besides that it can provide understanding to parents related to sex education.

The association between the role of peers and pregnancy incidents

Peers are a place to share many things, including a place to share stories about what has been done and what has not been done. Peers are one of the most

important forms of support in adolescence. Peers are often used as objects or role models so that they greatly influence the friends around them. In adolescence, children spend more time with their peers, even teenagers are more comfortable conveying, telling, and asking about personal matters, especially related to reproductive health and sexuality education, to their peers than telling or asking about these problems to their parents.

The results of the study showed that there was a significant association between the role of peers and the incidence of pregnancy in adolescents in the working area, Mebung Health Center, Alor Regency. The results of the study found that adolescents who had less supportive peers tended to experience pregnancy, and some adolescents received peer support but experienced pregnancy. This means that peer support greatly influences the behavior shown by an adolescent, although there are adolescents who experience pregnancy despite receiving support from peers, this occurs due to other factors such as seduction from close friends: boyfriends or girlfriends, which causes risky sexual behavior for pregnancy. This study is in line with research conducted by Moshi & Tilisho (2023), which shows that there was an association between the role of peers and the incidence of pregnancy in adolescents. The closer the friendship that is built, the stronger the influence given by peers, as adolescents are at the age of searching for their identity.¹⁵ So if in the friendship there are friends who have free sex behavior, then friends who are in the circle of friends tend to be at risk of having free sex behavior. This makes adolescents have to be able to be more selective in choosing friends that can build toward positive things. Peers also play a very important role in preventing teenage pregnancy.

Conclusion

There were associations between knowledge, attitude, exposure to information, the role of parents, and the role of peers and the incidence of pregnancy on adolescents in the working

area of Mebung Primary Healthcare Center, Alor Regency.

Primary Healthcare Centers, Schools, and Health Services are expected to be able to increase health promotion efforts related to sex education and reproductive health by using methods that attract the attention of adolescents. This is done to increase knowledge, attitudes, and the formation of adolescent behavior related to sexual relations. In addition, parents are also expected to be able to build communication with children regarding sex education and reproductive health, and be able to supervise children in using cellphones to prevent free sex behavior.

Ethics approval

This research has received ethical approval from the Health Research Ethics Commission, Faculty of Public Health, Nus Cendana University, with the number: 00675-KEPK FKM UNDANA- year 2024

Availability of data and materials

Available

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Author Contribution

Collecting and analyzing data using questionnaires and SPSS to determine the relationship between knowledge, attitudes, exposure to information, the role of parents, and the role of peers on the incidence of pregnancy in adolescents, in the working area of Mebung Primary Healthcare Center, Alor Regency.

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