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Detection Analysis of Adolescent Girls with Unwanted Pregnancy Using the HEADSSS Approach. Study at Dr. Saiful Anwar Hospital, Malang

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ABSTRACT

CONTEXT

Teenagers are assets for the country's future, but they are also associated with a variety of difficulties. Unwanted pregnancy is one of the most common issues among young women..

OBJECTIVES

The study's goal is to use the HEADSSS Assessment to examine risk factors for unintended pregnancy and develop evidence-based recommendations to improve adolescent reproductive health.

METHODS

The research is a case control study with two groups, cases and controls. Each group had a sample of 49 respondents. The inclusion criteria were young women aged 15 to 19, who were pregnant or postpartum and confessed that they did not desire the pregnancy. HEADSSS Assessment is used in data collection. The acquired data was then examined using an inferential test, logistic regression with an alpha value of 0.05.

RESULTS

The results indicated that there were no differences between the two groups in their influence on unplanned pregnancy, as indicated by the p-values for age (p-value 0.798), education level (p-value 0.742), and marital status (p-value 0.192). After that, a logistic regression analysis of the overall HEADSSS score in connection with unintended pregnancy revealed a p-value of 0.001 for differences between the two groups. This indicates a difference between the case groups and the control group's HEADSS scores.

CONCLUSIONS

The HEADSSS evaluation has demonstrated efficacy in identifying, developing, and implementing suitable treatments for young women, ensuring that they are prepared and capable of embracing pregnancy, the postpartum phase, and the birth of their child.

Keywords: *Teenagers, Unwanted Pregnancy, HEADSSS*

1. INTRODUCTION

Adolescents are an essential component of the global health agenda and the country's future resources. Teens are often associated with a number of health and social issues, including unintended pregnancy. Adolescent girls between the ages of 10 and 19 frequently become pregnant unintentionally, particularly in poor nations. (1). This is a significant dilemma for governments, health professionals, and teenagers as individuals, families, and communities.

According to data from Unicef and the WHO, 50% of the 21 million pregnancies among teenagers aged 15 to 19 in 2019 were unplanned. Teenage pregnancies between the ages of 10 and 14 will therefore account for 1.5 out of every 1000 females in Sub-Saharan Africa, Latin America, and the Caribbean in 2023 (2). In the meantime, Indonesia's teenage birth rate has dropped from 54.6 births per 1,000 teenagers aged 15 to 19 in 2000 to 32 in 2023 (3). However, at the moment, Indonesia has the most teenage girls (15–19 years old) born in Southeast Asia. (4). In addition, about 20% of Indonesian pregnant women choose to end an unintended pregnancy. Then, about 25% of women are at high risk of ending their pregnancy due to physical abuse from their spouse. (5).

Teenage premarital sex is caused by ignorance about reproductive health, which results in unwanted pregnancies. In addition, early marriage may also be a contributing factor to unintended pregnancy. (6). Unwanted pregnancies have different effects on different people. Depression, the desire for an abortion, social and environmental isolation, economic difficulties, and the rise in women's health issues are some of these effects. Pregnancy and postpartum depression in moms are substantially correlated with unwanted pregnancies. (7). Unplanned and untimely pregnancies are significantly associated with premature birth and low birth weight. (8). In the future, this will lead to a rise in both the prevalence of stunting in Indonesia and mental illnesses among youths.

One of the solutions implemented to prevent unwanted pregnancies is to increase sexual education among teenagers to prevent them from having premarital sex. Sex education must also be provided to the community so that they can accept teenage pregnancy and avoid stigma. (9). Teenage pregnancy can be resolved by offering specialized support, including gynecology, psychiatry, sexology, pedogogy, sociology, and pregnancy nutrition (10).

The HEADSSS Assessment is a method that can be used to assess the reproductive health of adolescents (Home, Education / Employment, Activities, Drugs, Sexuality, Suicide/Depression, and Safety). This evaluation is designed to identify teens and offer them intervention so that unwanted outcomes can be avoided. (11), Unwanted pregnancy is one of them. The HEADSS evaluation is used to identify issues in adolescents, such as risky conduct, mental health, and actions that can save lives. (12). A globally utilized instrument for providing structure and framework to the evaluation of teenage patients is the HEADSSS assessment. (13). The HEADSS assessment can also be used to detect and assess psychosocial dimensions in adolescents with unwanted pregnancies. The aim of the research is to analyze various risk factors for unwanted pregnancies in adolescents using the HEEADSSS Assessment approach to formulate evidence-based recommendations in an effort to improve adolescent reproductive health.

2. MATERIAL AND METHODS

The type of research used is observational analytics with a case-control study approach. This approach uses 2 research groups, namely the case group and the control group. The population of this study was teenage girls who were pregnant or postpartum at RSUD Dr. Saiful Anwar—Malang in July-September 2024. The sample size was 49 respondents in the case group and 49 respondents in the control group. Inclusion criteria are young women aged 15-19 years who are pregnant or postpartum, admit that they do not want the pregnancy, and are willing to take part in the research process.

The HEADSSS Assessment (Home, Education/Employment, Activities, Drugs, Sexuality, Suicide/Depression, Safety) was used to collect data. This instrument's scoring system includes the following: home (13 total points), education/employment (14 total points), activity (eight points), drugs (seven points), sexuality (12 total points), suicide/depression (16 total points), and safety (16 total points). In order to collect data, respondents were first split into two groups: cases and controls. The HEADSSS was then used to screen both to assess their health during and after pregnancy. An inferential test, logistic regression with an alpha value of 0.05, was then used to test the gathered data.

3. RESULTS AND DISCUSSION

Table 1 shows the frequency distribution of respondents based on age, education level, and marital status of pregnant or postpartum women at RSUD Dr. Syaiful Anwar–Malang

Characteristics	Statistics/Categories	Group		p
		Unwanted pregnancy (n=49)	Desired pregnancy (n=49)	
Age	$\bar{x} \pm$ SD (Min-Maks)	16,80 ± 1,15 (15-19)	16,73 ± 1,20 (15-19)	0,798
Education	Elementary School	22 (44,9%)	20 (40,8%)	0,742

	Junior High School	19 (38,8%)	18 (36,7%)	
	Senior High School	8 (16,3%)	11 (22,4%)	
Marital status	Married	6 (12,2%)	12 (24,5%)	0,192
	Not married	43 (87,8%)	37 (75,5%)	

Table 1 demonstrates statistical test findings with a p-value of 0.798 > 0.05, indicating that the incidence of unintended pregnancy and the age factor do not significantly differ between the two groups. This could be a result of the fact that every respondent falls within the middle adolescent demographic, which is characterized by psychological instability. Teenagers with a history of sexual activity are said to be at risk for unintended pregnancy. (14). In addition, adolescents who experience rapid physical development are susceptible to sexual and physical exploitation. (15). Exploitation can include harassment, rape, and forced marriage of underage teenagers. The results of statistical tests on the education factor show a p-value of 0.742 > 0.05. This means that there is no difference between education and unwanted pregnancy. This is most likely because respondents in both groups, 44.9% (case group) and 40.8% (control group), had primary education (SD). The higher a person's level of education, the higher the individual's level of knowledge. However, the reality is not always directly proportional to the level of knowledge, attitudes, and good behavior.

The two groups did not differ significantly, according to the statistical test of marital status on unintended pregnancy, which yielded a p-value of 0.192 > 0.05. According to the figures above, teenagers without spouses make up the majority of both groups. This might have something to do with the prevalence of premarital sex among youths and promiscuity (16). Married teenagers are more likely to get pregnant than unmarried teenagers. The data above shows that marital status has an impact on unwanted pregnancies, and seeking health assistance in terms of access to reproductive health services and adolescent skills (17).

Table 2 shows the frequency distribution of respondents based on diagnosis in pregnant or postpartum women at RSUD Dr. Syaiful Anwar – Malang

Characteristics	**Statistics/Categories**	**Group**		**p**
		Unwanted pregnancy (n=49)	**Desired pregnancy (n=49)**	
Diagnosis	Infectious abortion	3 (6,1%)	0 (0,0%)	0,044
	Incomplete abortion	8 (16,3%)	11 (22,4%)	
	Ante Partum Bleeding	1 (2,0%)	0 (0,0%)	
	Cephalopelvic Disproportion	7 (14,3%)	13 (26,5%)	
	Gemeli	1 (2,0%)	0 (0,0%)	
	Hemorrhagic Postpartum	2 (4,1%)	1 (2,0%)	
	IUFD	2 (4,1%)	0 (0,0%)	
	IUGR	0 (0,0%)	5 (10,2%)	
	Prolonged second stage	2 (4,1%)	3 (6,1%)	
	PROM	7 (14,3%)	8 (16,3%)	
	Breech Birth	3 (6,1%)	0 (0,0%)	
	Partus prematurus	4 (8,2%)	5 (10,2%)	
	Severe Preeclampsia	5 (10,2%)	2 (4,1%)	
	placenta previa	4 (8,2%)	1 (2,0%)	

Table 2 shows a statistical test between diagnosis and unwanted pregnancy where the p-value is 0.044 < 0.05. This means that there is no difference between the two groups regarding diagnosis and the incidence of unwanted pregnancy. The data

above shows that the two groups had the highest experience of incomplete abortion, namely 16.3% (case group) and 22.4% (control group). Incomplete abortion is likely to cause stress in itself, which can be traumatic when a teenager becomes pregnant again. This causes anxiety, which ultimately makes pregnant teenagers uncomfortable and not wanting to be pregnant. The second most common diagnosis was cephalopelvic disproportion (CPD), which was 14.3% (case group) and 26.5% (control group). Apart from that, there is the third most common diagnosis, namely Premature Rupture of Membranes (PROM), which is 14.3% (case group) and 16.3% (control group). As with abortion, the experience or medical treatment applied to the diagnosis above causes its own traumatic stress, anxiety, and depression so teenagers tend not to want pregnancy. All things related to medical diagnosis and intervention apparently influence the incidence of unwanted pregnancy. Compared with adult primigravidas, young women experience more dangerous perinatal problems, such as premature birth, neonatal death, and stillbirth, as well as the birth of children with low birth weight. (18). Many pregnancy conditions medically cause unwanted pregnancies.

Table 3 Logistic regression analysis of total HEADSS Assessment scores (Home, Education / Employment, Activities, Drugs, Sexuality, Suicide/Depression, Safety) in pregnant or postpartum women at RSUD Dr. Syaiful Anwar – Malang

Indicator	Group		p
	Unwanted pregnancy (n=49)	Desired pregnancy (n=49)	
Home	7,35 ± 0,77 (4,0-8,5)	0,88 ± 0,32 (0,5-1,5)	< 0,001
Education/Employment	6,44 ± 1,36 (5,0-8,5)	1,23 ± 0,64 (0,5-2,5)	< 0,001
Activities	3,63 ± 0,48 (3,0-4,5)	0,74 ± 0,25 (0,5-1,0)	< 0,001
Drugs	7,84 ± 1,46 (6,0-10,0)	2,86 ± 1,23 (2,0-8,0)	< 0,001
Sexuality	8,53 ± 1,16 (5,5-10,0)	1,64 ± 1,18 (0,2-4,0)	< 0,001
Suicide/Depression	6,90 ± 1,86 (4,0-10,0)	0,51 ± 0,55 (0,0-1,5)	< 0,001
Safety	6,29 ± 1,52 (3,0-8,5)	0,63 ± 0,52 (0,0-1,5)	< 0,001
Total	46,97 ± 4,37 (37,5-56,0)	8,50 ± 1,66 (5,5-11,75)	< 0,001

Table 3 Shows a logistic regression analysis of HEADSS Assessment scores (Home, Education/Work, Activities, Drugs, Sexuality, Suicide/Depression, Security) with an unwanted pregnancy, where the p-value is 0.001 < 0.05. This means that there is a significant difference in assessment results between the case group and the control group.

Analisis lebih lanjut pada regresi logistik digambarkan dengan kurva ROC berikut :

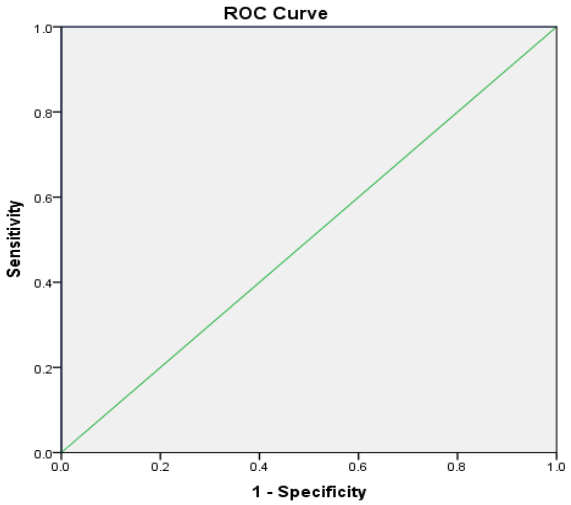

Figure 1 Logistic Regression Analysis with ROC Curve

The results of analysis using the ROC curve showed an AUC value of 100% with a cut-off value of 24.625 with a sensitivity and specificity of 100% each.

Table 4 Logistic regression analysis of total HEADSS Assessment scores (Home, Education / Employment, Activities, Drugs, Sexuality, Suicide/Depression, Safety) in pregnant or postpartum women at RSUD Dr. Syaiful Anwar – Malang

HEADSSS Scor	Unwanted pregnancy		Total
	Yes	No	
≥ Cut off	49	0	49
< Cut off	0	49	49
Total	49	49	98

Table 4 Pregnancy statistics indicate that a HEADSSS score of less than 24.625 indicates a low risk of unintended pregnancy, but a score of more than 24.625 indicates a high risk.

According to the HEADSSS evaluation on this panel, many teenagers reported having unsatisfactory connections at home in the "Home" examination. For young women in particular, family considerations are crucial in promoting and educating them about reproductive health. (19). Apart from that, several respondents had traveled far from home to play and work. This is a trigger factor for teenagers to have premarital sex. Support systems, parent-child relationships, and supervision of adolescent activities can reduce the rate of unwanted pregnancies. (20). Another thing that increases the incidence of unwanted pregnancies is stigma. Stigma and discrimination related to out-of-wedlock pregnancies can increase adolescent anxiety and stress. (21). Adolescents who are already pregnant, especially those out of wedlock, feel unsafe at home and in the surrounding community. The "Home" factor is exacerbated by ethnic culture, forced marriage, and access to health services. (22), Unwanted pregnancies may arise as a result of conservative social standards and financial obstacles. (23).

The "Education/Employment" assessment at school is still normative, even though several respondents admitted to having a partner at school. Most of them felt bored and wanted to leave school several times. Therefore, comprehensive sexual education will be able to educate teenagers about the importance of understanding healthy sex and provide information regarding contraceptive services (24). This will later be related to the "Activities" assessment, where the average respondent lacks positive hobbies and prefers playing on social media. Sexual education is important in recreational activities where teenagers often spend time with the opposite sex, whether friends or girlfriends. In the future, education and activities must be able to develop unmarried, multiparous, or low-educated young women to participate in preventing unwanted pregnancies. (25). The goal of education must be to address the social, familial, and individual demands for healthy sexual activity (26).

The assessment on "Drugs" found that a small number of respondents were involved in smoking, alcohol, and drugs due to peer influence. However, sex and drugs are common in today's adolescent relationships. In evaluating adolescents, it is

crucial to focus on "drugs and sexuality." According to the evaluation results, the majority of respondents—more than 75%—had engaged in extramarital sex. Teenage abortions and unintended pregnancies are actually influenced by early premarital sex. (27). This is also made worse because most do not use contraception, do not understand safe sex, and are worried about pregnancy. This is in accordance with studies that unwanted pregnancies often occur in young women and their partners when family planning methods are not used appropriately. (28). The association between teenage extramarital sex and unwanted pregnancies is frequently the subject of scientific and data-based research. (29) (30) (31) (32) (33).

Meanwhile, in the assessment "Suicide/Depression when realizing her pregnancy, young women felt stressed and sad, and even depressed. Apart from that, there are feelings of fear, not being able to sleep, and the most extreme is thinking about ending your life. This happens due to untreated stress, which triggers depression. Then depression can trigger despair so individuals can be at risk of attempting suicide. Bad childhood experiences are associated with risks that impact the pregnancy and the baby's health. (34). Apart from that, the cause of adolescent girls experiencing stress and anxiety, which tends to lead to depression, is the unequal rights to equality in society. If this happens to teenagers with unwanted pregnancies, it can also increase depression and the risk of attempting suicide. (35). Teens who experience unintended pregnancies may also become more depressed and have a higher chance of trying suicide.

The "safety" assessment in this study revealed that most participants expressed stress and a desire to avoid becoming pregnant when they were told they were pregnant. A number of respondents acknowledged experiencing sexual and physical harassment prior to becoming pregnant. The responder then suffered violence from people closest to her as a result of disappointment after becoming pregnant. This demonstrates how important families are in ensuring young women's safety (36). Pregnancy prevention with contraception is another safe option. For young women who have several sexual partners, contraception is recommended (37). Pregnancy prevention with contraception is another safe option. For young women who have several sexual partners, contraception is recommended (38).

Psychosocial assessment of adolescents experiencing unwanted pregnancies using HEADSSS in this study was proven to be effective for detecting early symptoms of emotional and behavioral disorders. Several studies report the effectiveness of the HEADSSS Assessment in supporting the integration of continuity in adolescent psychosocial assessment, one of which is at Sydney Children's Hospital. (39). Interventions using the HEADSS Assessment for adolescents in hospitals have increased. (40) and is felt to be an appropriate tool for exploring acute medical issues recommended especially for adolescents (41). This study's HEADSSS assessment describes the psychological and mental health of young women who become pregnant unintentionally. This is highly helpful in identifying, planning, and implementing treatments in a way that is appropriate for teenagers to secure their health during pregnancy and the postpartum period and their ability to accept the birth of their kid.

4. CONCLUSION

The HEADSSS assessment provides a detailed description of the psychological mental condition of young women with unwanted pregnancies. This is very useful for detecting, and preparing appropriate interventions and implementation with adolescents to ensure they are healthy during pregnancy, and postpartum and can accept the child being born.

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