

Manuscript received September 19, 2022; revised October 19, 2022; accepted October 19, 2022; date of publication October 30, 2022

Digital Object Identifier (DOI): <https://doi.org/10.35882/ijahst.v2i5.158>

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How to cite: Marcelis Stia Anggraini, Asri Hidayat, Remedios L. Fernandez "Analysis of the Causes of Mental Health Disorders in Pregnant Women in Developing Countries: A Systematic Review", International Journal of Advanced Health Science and Technology, vol. 2, no. 5, pp. 309–320, October. 2022.

Analysis of the Causes of Mental Health Disorders in Pregnant Women in Developing Countries: A Systematic Review

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ABSTRACT Pregnancy is a time of increased vulnerability to the development of anxiety and depression. Mental health of pregnant women needs attention, because it will have an impact on their physical health. The International World Health Organization (WHO) appeal entitled "There is no health without mental health" pays attention to the importance of mental health and their main concern in resource-limited countries with limited health care budgets. Maternal mental health requires a clear definition of each relevant factor to help health care providers develop effective preventive care plans. Anxiety and depression in pregnant women have a high risk of abortion, impaired fetal growth and even in serious conditions can be a cause of suicide. Pregnancy depression is associated with negative effects such as low birth weight, prematurity and cognitive or behavioral problems on the child. The role of health workers in maternal and child health services (MCH), so far has still encountered obstacles in knowing for sure the mental health status of pregnant women. So far, the focus of examination of pregnant women at health service centers is still limited to physical health checks, such as blood pressure monitoring, hemoglobin levels, physical complaints of pregnant women, weight gain and monitoring of nutritional intake, while mental health examinations have not become a special concern, especially in developing countries where there are still very few screenings related to mental health examinations during the perinatal period. This analysis aims to the causes of health problems in pregnant women in developing countries by using the method Scoping review With stages, among others: Identifying the research question, Identifying relevant studies,. Study selection, Charting the data, Collating, reporting the results, This review raises four themes that are the most common causes of mental health disorders during pregnancy in developing countries, namely economic factors, sexual partner violence, family support and education level. In this review study, it was also found that the inability of women to fight against the bad actions they received was another factor causing mental health disorders. So it can be concluded that mental health disorders in pregnant women can actually occur in any country, only in developing countries with low economic income, the risk of mental health disorders, especially during pregnancy, has a higher number with more varied causes.

INDEX TERMS Health Risk Assessment, Dust Exposure, Weaving Industry

I. INTRODUCTION

Pregnancy is a happy event for husband and wife. However, pregnancy is a time of increased vulnerability to the development of anxiety and depression. In the process of pregnancy, a mother will experience several changes, both physical changes and psychological changes. Change must be handled properly so as not to lead to a situation that is not wanted. Mental health of pregnant women needs attention,

because it will have an impact on their physical health. Anxiety and depression in pregnant women have a high risk of abortion, impaired fetal growth and even in serious conditions can be a cause of suicide. Mental disorders are more common and are more common among young women. Depression occurs in about 12-13% of all pregnant women, with a higher frequency among high-risk women, eg there is a history of depression. Pregnancy depression is associated with

negative effects such as low birth weight, prematurity and cognitive or behavioral problems on children[4]. According to the World Health Organization (WHO), perinatal mental health problems are a major public health problem. Pregnancy is an important period in a woman's life because at this time it also determines the welfare of the fetus in the womb [5]. Currently, mental health problems or mental health are still considered less important than physical health. Mental health disorders have not been seen as a disease, especially in developing countries. If mental health problems are not handled properly, they can have a very serious impact and threaten human life. In Indonesia, the prevalence of households with family members suffering from schizophrenia or psychosis is 7 per 1000 with treatment coverage of 84.9%. In adolescents aged more than 15 years, the prevalence of mental emotional disorders is 9.8%. This figure increased compared to 2013 which was 6% (1). These data represent disturbances in the entire population, not yet differentiated by certain groups[6]. The lack of screening on mental health, especially during the perinatal period, makes mental health problems still difficult to diagnose with certainty, and many of these problems are delayed in getting medical help[5]. Because mental health during pregnancy is more prone to occur in developing countries, researchers are therefore interested in analyzing what factors cause health problems during pregnancy in developing countries.

The difference between this analysis and previous journals is where the analysis is carried out. Previously, mental health problems, especially in pregnant women, were only discussed and studied in one country, but in this study researchers took comparisons from various countries with literature sources. The most recent is the research conducted in the last one year, In addition to the place of analysis, differences are also found in the variables discussed, techniques, methods and designs, time and also the literature sources used as analysis material.

II. METHODS

This study is a scoping review using a framework starting from[7].

A. IDENTIFY QUESTIONS.

Questions were identified using the PEOS framework. The use of PEOS helps to identify key concepts in the focus of the question, develop appropriate search terms to describe the problem and determine inclusion and exclusion criteria. PEOS is used to identify the elements of research questions[8].

TABLE 1

Based on the scoping review question framework above, the researcher's question was obtained, namely "How and what causes mental health disorders in pregnant women in developing countries?"

B. IDENTIFY RELEVANT ARTICLES

Identify relevant articles by specifying inclusion and exclusion criteria:

The inclusion criteria in this literature are Articles published from 2020-2022, articles in Indonesian, English and published in developing countries, documents / reports / draft policies / guidelines from WHO / certain formal organizations, articles that discuss mental health in pregnant women in developing countries. While the Exclusion criteria are Opinion articles, inaccessible articles with full text, publication manuscript, protocol documents, guidelines, official government policies and formal institutions. Articles are obtained from trusted, reputable and indexed database sources and can be accessed

TABLE 1.
Framework PEO's

P (Population)	E (Exposure)	O Outcome	S (Study Design)
Pregnant women	developing countries	mental health factor disorders in pregnant women in developing countries	Any study related to the mental health of pregnant women in developing countries

on the internet such as Pubmed, ProQuest, Willey and EBSCO. After that, the researcher determines the search keywords that are considered appropriate to the title, the search words used are: mental health, perinatal period/ Pregnancies, developing countries.

C. SELECTION OF RELEVANT ARTICLES

Articles were selected based on inclusion and exclusion criteria. articles are selected based on trusted and reputable databases such as PUBMED, EBSCO, and Proquest, and are the latest journals published in the last 1 year (2020-2022) and The keywords used in the search for articles are Developing Countries, Mental Health, Perinatal Period/Pregnancies.

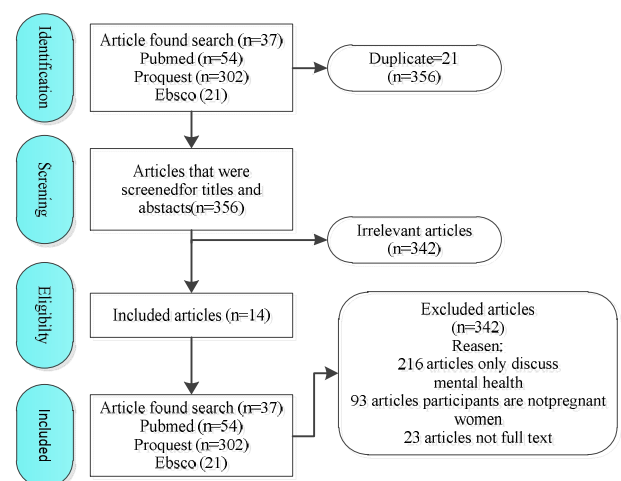


FIGURE 1. Prisma Flowchart

At the article selection stage, the transparency of the search was described using Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) **FIGURE 1.**

Within the scope of this review, the researcher presented his literature findings using the PRISMA flowchart, which found 377 articles based on predetermined keywords, consisting of 3 different databases, namely, PUBMED as many as 54 articles, EBSCO 302 articles and PROQUEST 21 articles. , then the author uses the Rayyan application to check and re-screen the articles that were found based on the inclusion and exclusion criteria and found the same 21 articles, 342 articles that were considered irrelevant as reasons for irrelevant articles, namely 216 articles discussing mental health in general., 93 articles are not related to pregnant women, 23 articles are not full text and 10 articles use languages other than Indonesian and English.

D. CHARTING DATA

After selecting the study, to determine the quality of the selected articles, a critical appraisal is carried out. The critical appraisal tool in the scoping review uses The Joanna Briggs Institute (JBI). The purpose of the assessment using tools The Joanna Briggs Institutethis is to assess the methodological quality of the study and to determine the extent to which a study has addressed possible biases in design, behavior and analysis(Peters, 2017).The assessment criteria used are:

Yes	:	4	Unclear	:	2
No	:	3	Not applicable	:	1

Grade based on the number of questions and different scores determined by the author.

III. RESULTS

At this stage the researcher will present the results by presenting a summary of the scope of the article in the form of themes and sub-themes.

A. CHARACTERISTICS OF ARTICLES

a) Based on Research Design and Approach

Based on the identification of 14 articles, the authors classify articles based on design and research approach. A total of 5 articles used a cross-sectional study design with article numbers (2,4,9,10,14). 2 articles used a cohort study design

using a quasi-experimental research design with article numbers (6,13) [TABLE 2](#) and [FIGURE 2](#).

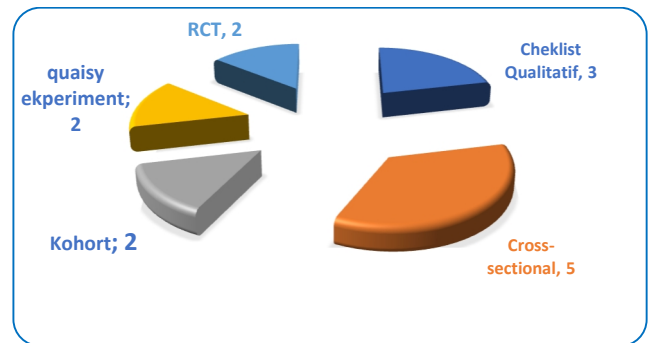


FIGURE 2. Characteristic Diagram By Method

b) characteristics based on article grade

In the JBI critical appraisal cross-sectional there are 5 articles, 4 articles grade A and 1 article grade B. In the JBI critical quaisy experiment there are 2 articles, both articles are grade A. In the JBI critical appraisal cohort there are 2 articles, 1 article grade A 1 Grade B articles. In the JBI critical appraisal qualitative checklist there are 3 articles, 1 article grade A and 2 articles grade B. In the JBI critical appraisal RCT there are 2 articles, 2 of which are grade A (FIGURE 3).

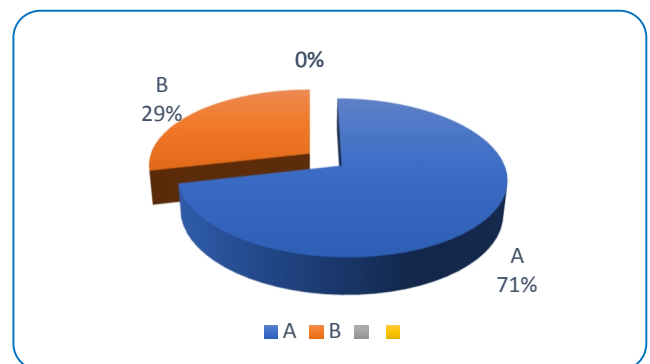


FIGURE 3. Characteristics By Grade

TABLE 2
MAPPING

No	Theme	Sub theme	No article
1.	Ekonomi	low income, Poverty	3,5,6,7,8,10
2.	Sexual partner violence	Rape case Domestic violence	4,9,11,13
3.	Family support	Husband's support, Parental support, Environmental support	4,8,14
4	Level of education	low level of education, accompanied by a lack of socialization from health workers.	1,3,7,12,13

with article numbers (3,5). 2 articles using a random control trail (RCT) with article numbers (8, 12), 3 qualitative checklist articles with article numbers (1,7,11), 2 articles

B. THEME

a) Economy

Economics and health have a very close relationship. Economic conditions greatly affect public health conditions. High socioeconomic groups can access health services and take good care of their family's health, on the contrary, people in low socioeconomic groups tend to prioritize meeting their daily needs rather than thinking about maintaining health and getting good health services. Based on the analysis and mapping that has been done, found 6 articles that discuss economic factors as the most common cause of mental health disorders during pregnancy experienced by mothers in developing countries (3,5,6,7,8,10). This is also in line with research conducted by (Pramesti and I K. G Bendesa, 2019) which states that low

TABLE 3
Critical Appraisal Quaisy Experiment

No	Research Elemen	Article	
		6	13
1.	Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?	4	4
2.	Were the participants included in any comparisons similar?	4	4
3.	Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	2	4
4.	Was there a control group?	4	3
5.	Were there multiple measurements of the outcome both pre and post the intervention/exposure?	4	4
6.	Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	4	3
7.	Were the outcomes of participants included in any comparison measured in the same way?	4	4
8.	Were outcomes measured in a reliable way?	4	4
9	Was appropriate statistical analysis used?		
Total Score		30	30
Grade		A	A
Information:		Grade :	
Yes: 4	Unclear :2	A: 27-36	C: 9-17
No: 3	Not applicable: 1	B : 18-26	D: : 8

TABLE 4
Critical Appraisal Random Control Trail (RCT)

No	Research Element	Article	
		8	12
1.	Was true randomization used for assignment of participants to treatment groups?	4	3
2.	Was allocation to treatment groups concealed?	2	2
3.	Were treatment groups similar at the baseline?	4	3
4.	Were participants blind to treatment assignment?	2	3
5.	Were those delivering treatment blind to treatment assignment?	3	4
6.	Were outcomes assessors blind to treatment assignment?	3	3
7.	Were treatment groups treated identically other than the intervention of interest?	2	2
8.	Was follow up complete and if not, were differences between groups interms of their follow up adequately described and analyzed?	4	3
9.	Were participants analyzed in the groups to which they were randomized?	4	4
10.	Were participants analyzed in the groups to which they were randomized?	4	4
11.	Were outcomes measured in a reliable way?	4	3
12.	Was appropriate statistical analysis used?	4	4
Total score		36	38
Grade		A	A
Information:		Grade :	
Yes: 4	Unclear :2	A: 36-48	C: 12-34
No: 3	Not applicable: 1	B : 24-35	D: : 11

per capita income greatly affects people's purchasing power and lifestyle, including difficulties in buying drugs and financing in hospitals, there are 47% of families the poor have difficulty in financing drugs, even though health insurance is available such as Jamkesmas in the ASKES program. The same thing was also conveyed by (Pramesti nd I K. G Bendesa, 2019) in their research using the Chi Square test which showed that there was a significant relationship between family economic status and the level of parental

knowledge (TABLE 3 and TABLE 4). This shows that with a p value of less than 0.05, which is 0.000, from the analysis and results of previous studies we can conclude that economic factors and poverty bring special pressures for groups of people with low incomes, the inability to access and meet needs during pregnancy causes The impact of stress is also very influential on the physical health of the mother and fetus. On economic matters, the author attentions that to create the rate of violence against women with economic

TABLE 5
Critical Appraisal Cross sectional

No	Research Element	Article				
		2	4	9	10	14
1.	Were the criteria for inclusion in the sample clearly defined?	4	4	4	4	4
2.	Were the study subjects and the setting described in detail?	4	4	4	4	4
3.	Was the exposure measured in a valid and reliable way?	2	4	4	4	2
4.	Were objective, standard criteria used for measurement of the condition?	4	3	4	2	2
5.	Were confounding factors identified?	4	4	4	3	3
6.	Were strategies to deal with confounding factors stated?	4	3	3	3	3
7.	Were the outcomes measured in a valid and reliable way?	4	4	3	4	2
8.	Was appropriate statistical analysis used?	4	4	4	4	3
Total Score		30	30	30	28	23
Grade		A	A	A	A	B
Information:		Grade :				
Yes: 4	Unclear :2	A: 24-32		C: 15-22		
No: 3	Not applicable: 1	B : 16-23		D: : 14		

TABLE 6
Critical Appraisal Checklist Study Cohort

No	Research Elemen	Article	
		3	5
1.	Were the two groups similar and recruited from the same population?	4	4
2..	Were the exposures measured similarly to assign people to both exposed and unexposed groups?	4	4
3.	Was the exposure measured in a valid and reliable way?	2	4
4.	Were confounding factors identified?	4	3
5.	Were strategies to deal with confounding factors stated?	4	3
6.	Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?	4	3
7.	Were the outcomes measured in a valid and reliable way?	2	3
8.	Was the follow up time reported and sufficient to be long enough for outcomes to occur?	4	3
9.	Was follow up complete, and if not, were the reasons to loss to follow up described and explored?	4	2
10.	Were strategies to address incomplete follow up utilized?	4	4
11	Was appropriate statistical analysis used?		
Total score		36	33
Grade		A	B
Information:		Grade :	
Yes: 4	Unclear :2	A: 33-44	
No: 3	Not applicable: 1	B :22 -32	
		C: 11-21	
		D: : 10	

factors which is good before decided to be pregnant and have children all things related to financiality and economic factors which have been prepared by human lubitah haras to

read about the economy adequate. Just decided to marry and have children (TABLE 5 and TABLE 6).

b) Sexual partner violence

TABLE 7
CRITICAL APPRAISAL CHECKLIST QUALITATIVE

No	Research Elemen	Article		
		1	7	11
1.	Is there congruity between the stated philosophical perspective and the research methodology?	4	4	4
2..	Is there congruity between the research methodology and the research question or objectives?	4	3	2
3.	Is there congruity between the research methodology and the methods used to collect data?	2	3	2
4.	Is there congruity between the research methodology and the representation and analysis of data?	4	3	4
5.	Is there congruity between the research methodology and the interpretation of results?	4	2	2
6.	Is there a statement locating the researcher culturally or theoretically?	4	4	3
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	2	3	3
8.	Are participants, and their voices, adequately represented?	4	3	2
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	2	1	3
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	1	1	4
Total score		33	28	29
Grade		A	B	B
Information:		Grade :		
Yes: 4	Unclear :2	A: 30-40		
No: 3	Not applicable: 1	C: 10-19		
		D: : 9		

Table 8
Critical Appraisal Quaisy Experiment

No	Research Elemen	Article	
		6	13
1.	Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?	4	4
2.	Were the participants included in any comparisons similar?	4	4
3.	Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	2	4
4.	Was there a control group?	4	3
5.	Were there multiple measurements of the outcome both pre and post the intervention/exposure?	4	4
6.	Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	4	3
7.	Were the outcomes of participants included in any comparison measured in the same way?	4	4
8.	Were outcomes measured in a reliable way?	4	4
9	Was appropriate statistical analysis used?		
Total Score		30	30
Grade		A	A
Information:		Grade :	
Yes: 4	Unclear :2	A: 27-36	
No: 3	Not applicable: 1	C: 9-17	
		D: : 8	

Violence perpetrated by a partner or in Indonesia known as domestic violence is a problem that has deep roots and occurs

in Indonesia all countries of the world. In this regard, the international community has created a standard effective

TABLE 9
Charting Table

No	Title/ Author/ year	Ojective	Designt/method/ Respondent	Result
1.	Implementation outcomes of a health systems strengthening intervention for perinatal women with common mental disorders and experiences of domestic violence in South Africa: Pilot feasibility and acceptability study [10].	This pilot study aims to evaluate the implementation outcomes of a health systems strengthening (HSS) intervention for improving the quality of care of perinatal women with CMD and experiences of domestic violence, attending public healthcare facilities in Cape Town	Qualitative study/with design The ASSET study consisted of three phases: pre-implementation, intervention development, and pilot evaluation.	Health workers are still unfamiliar with the HSS program, and the HSS program has not been fully implemented in various health facilities.
2	Psychosis risk among pregnant women in Ghana [11].	The current study investigated the prevalence and correlates of PLEs among pregnant women in Ghana, a West African state.	A cross-sectional survey design was used to collect data from 702 pregnant women who responded to measures of PLEs, COVID-19 concerns and behavioral maladies such as anxiety and depressive symptoms	Mental health screening of pregnant women has not been carried out effectively, mother's knowledge about mental health is still low, and health workers have not fully actively contributed to disseminating information related to mental health during pregnancy.
3	Adverse maternal outcomes of adolescent pregnancy in Northwest Ethiopia: A prospective cohort study [12].	this study was conducted to assess the adverse maternal outcomes of adolescent pregnancy in Northwest Ethiopia.	Study cohort sample included 1,134 participants, all pregnant adolescent (aged 15–19) and pregnant adult women (aged 20–34) who visited randomly selected health facilities in the study area	Gender-based violence is more prone to occur in teenage pregnant women, health workers have not placed teenage pregnant women as a group at risk for mental health disorders. In particular, psychosocial counseling and early diagnosis and treatment services to prevent and treat health complications during pregnancy have not been fully implemented.
4	Intimate partner violence disclosure and associated factors among pregnant women attending a city hospital in South-Western Uganda: a cross-sectional study [13].	this study determined IPV disclosure and associated factors among pregnant women attending a large City hospital	In a cross-sectional design, 283 women attending Mbarara City Hospital Antenatal care (ANC) clinic were consecutively recruited into the study	Most pregnant women who experience stress during pregnancy do not disclose it to health workers. In addition, the different characteristics of each pregnant woman make the screening process difficult, making it difficult for health workers to detect it.
5	Burden and risk factors for antenatal depression and its effect on preterm birth in South Asia: A population-based cohort study [14].	the purpose of the research in the journal is not clearly explained, it is only implied that this study is intended to determine the factors that cause depression during pregnancy.	Study cohort, 5,500 pregnant women between August 2014 and December 2018 from two South Asian countries, Bangladesh, and Pakistan. Bangladesh	Perinatal depression increases the risk of preterm delivery and is closely associated with other risk factors.
6	Booklet sebagai Media Edukasi dalam Meningkatkan Pengetahuan Kesehatan Mental Ibu Hamil [4].	This study aims to increase knowledge of mental health of pregnant women by providing education with booklet media, and testing the effectiveness of booklet media in increasing knowledge of mental health of pregnant women.	quasi-experimental study, population was primigravida pregnant women who did a pregnancy check at the Surakarta City Health Center. Samples of pregnant women each as many as 26 people.	knowledge of pregnant women and level of education affect booklet filling. Pregnant women with good knowledge and level of education tend to have low levels of depression.

laws and specifically pay attention to domestic violence (TABLE 7 and TABLE 8). The act of committing violence against women has been included in international and regional human rights conventions which are legally binding

on countries that have ratified them (TABLE 9). Sexual violence and other domestic violence both physically and psychologically greatly affect the mental health of pregnant women, unfortunately this still happens a lot, especially in

No	Title/ Author/ year	Objective	Design/method/ Respondent	Result
7	High levels of depressive symptoms and low quality of life are reported during pregnancy in Cape Coast, Ghana; a longitudinal study [15].	not explained in the article	Longitudinal study with qualitative method. Women were recruited in their first trimester of pregnancy (< 13 weeks; n = 116) and followed through to their 2nd (n = 71) and 3rd (n = 71) trimesters.	Anxiety experienced, low quality of life, gestational age and low economic quality are significant predictors of mental health disorders experienced by mothers.
8	Predicting Remission among Perinatal Women with Depression in Rural Pakistan : A Prognostic Model for Task-Shared Interventions in Primary Care Settings [16].	not explained in the article	randomized, controlled trial, This secondary analysis utilized data from 903 pregnant women with depression who participated in a cluster	Depression experienced by pregnant women is caused by living with a large family with various characteristics, low economic class, and the limitations of the mother in various ways being the dominant factor..
9	Physical morbidity and psychological and social comorbidities at five stages during pregnancy and after childbirth: a multicountry cross-sectional survey [17]	sought to explore when this ill-health occurs and is most significant.	cross-sectional study in India, Pakistan, Kenya and Malawi, across as representative sample of 12 secondary and 17 primary care level facilities in rural and urban areas.	Pregnancy depression in the form of thoughts of self-harm often occurs in the second trimester of pregnancy, this is caused by social morbidity, domestic violence, and substance abuse.
10	Prevalence of depression among HIV-positive pregnant women and its association with adherence to antiretroviral therapy in Addis Ababa, Ethiopia [18].	determine the prevalence of depression and its association with adherence to ART among HIV-positive pregnant women attending antenatal care (ANC) clinics in Addis Ababa, Ethiopia.	Crosssectional and Participants were conveniently sampled from 12 health institutions offering ANC services. approached 397 eligible individuals, of whom 368 (92.7%) participated and were included in the analysis.	Pregnant women with low incomes and a history of clinical illness are twice as likely to be at risk of antenatal depression.
11	Association between intimate partner violence and male alcohol use and the receipt of perinatal care: Evidence from Nepal demographic and health survey 2011-2016 [19].	The aim of this study is to determine the association between IPV and male alcohol use and the receipt of perinatal care in Nepal	This study used pooled data from 2011 and 2016 Nepal Demographic and Health Surveys (NDHS). A total of 3067 women who interviewed for domestic violence module and had most recent live birth 5 years prior surveys were included in the analysis.	Physical violence, emotional violence, and sexual violence are the causes of mental health disorders in pregnant women.
12	Assessing the effectiveness of mindfulness- based programs on mental health during pregnancy and early motherhood - a randomized control trial.[20].	This study was designed to evaluate the efficacy of a mindfulness-based childbirth and parenting program in improving psychological health during the postpartum period	Randomised control trial.A total of 74 women between 13 and 28-weeks gestation were allocated either to the intervention group or to the comparison group.	Intervention programs, meditation and education during counseling are effective in reducing stress and depression during pregnancy and postpartum.

developing countries. ,11,13) which discusses mental health disorders experienced by mothers during pregnancy caused by sexual partner violence, both physically, mentally and emotionally. Based on research conducted by (Marchira, Amylia and Winarso, 2020) showed that more than 50% of respondents experienced mental health disorders in the form of anxiety due to experiencing more than one form of violence, and (43.3%) respondents experienced psychological and economic violence. . Other research results were also conveyed by (Nurrachmawati and Rini, 2019) stating that sexual violence in the form of torture, forced sex during menstruation causes dyspareunia, urinary tract infections, uterine tract infections and cysts. Disrupted

mental health manifestations are trauma, stress, depression to severe mental disorders until being treated in a mental hospital. From this we can draw the conclusion that basically violence perpetrated by partners both physically and psychologically or other violence in the form of rape experienced by women in developing countries has a tremendous impact, especially on mental health status during pregnancy.

The author's opinion that women's physical or verbal violence is a problem that cannot be tolerated. To overcome this, the effort that must be made is that women must be firm and brave to report these problems to the government as a

forum for legal protection, and provide a deterrent effect for perpetrators of violence.

c) Family support

The social support factor is a general description of the causes of mental health disorders, especially during pregnancy [23].

Social relationships, particularly family relationships, can have both long-term and short-term effects on a person's mental health. Good family relationships make a person feel safe and loved, and provide a sense of belonging. When family relationships are stable and supportive, someone who has mental health problems or disorders is more responsive to treatment, however, the Australian Department of Health reveals, negative family relationships can cause stress, affect mental health, and cause symptoms of physical disorders. An unsupportive family can reduce a person's mental health and or cause mental illness to worsen [24]. From the results of the analysis conducted, found 3 articles that discuss the role of family support as a cause of perinatal health disorders (4,8,14). The results of the same analysis were also conveyed by (Rahmayani and Hanum, 2019) with the results of the study showing that the Chi-Square test was found to have a relationship between emotional support and mental disorders ($p = 0.010$). Family support during pregnancy is very influential on the mental health of the mother, for that it is very important for the family, especially the husband, to keep the mother's emotions stable, not only causing various impacts on the mother's health but mental health disorders during pregnancy also have an impact that can stimulate growth and development. -bang the fetus in the womb.

The problem of family support is often the main problem causing mental health disorders, especially in pregnant women with changing emotional conditions, to overcome this it is necessary to provide education for families regarding physical problems during pregnancy. In addition, if there are problems in the family, it is better if everything is resolved by deliberation and not protracted. Here the role of health workers as counselors and forums in conveying information in the community must be more active together with community shops.

d) Education level and role of health workers

The level of education with mental health disorders during pregnancy has a relationship with each other, this is related to the mother's level of knowledge, the higher the level of education the better the knowledge and the way to deal with the factors causing stressors the better. Mental health disorders experienced can range from anxiety to stress. The results of the mapping found 5 articles (1,3,7,12,13) which stated that the level of education had a major influence on the causes of depression during pregnancy, this was seen from the majority of respondents who experienced the highest mental health problems in countries developing is dominated by mothers with a low level of education or only limited to elementary school. These findings are also in line with research conducted by [25]. With the results of this study it was found that 16 of the 30 respondents (53.3%) experienced anxiety with statistical

test results there was a significant relationship between anxiety and education factors with a p value of 0.002. Another study conducted by [26] stated that the majority of respondents had less knowledge before health education was given, namely 15 people (51.7%) and after health education was given the majority of respondents had good knowledge as many as 25 people (86.2%). From the results of the mapping and the results of previous studies, we can conclude that a low level of education affects the level of knowledge, and the lack of knowledge is also related to the role of health workers who also need to be considered again, the lack of information that can be accompanied by the level of knowledge Low levels trigger stress factors during pregnancy.

The low level of education is a characteristic of a country with low income capabilities, because many people prefer to work rather than continue education to meet the needs of their families, this also greatly affects the quality of health, especially for pregnant women, not only physical health but also psychological health. because education is very influential on the level of knowledge, the advice that the author can give about this is in the era of technology and digitalization which has become very global, currently government agencies must be able to provide information related to education related to mental health, for example making innovations in web-based mental health services or a kind of telemedicine for free to the whole community, especially pregnant women, making it easier to consult for pregnant women in need. the role of health workers must also be more selective in screening mental health problems during pregnancy, for example by holding a special meeting forum for pregnant women who are considered to have psychological problems.

However, maternal compliance in carrying out the advice and opinions of health workers also affects the success of handling health problems [27]

IV. DISCUSSION

In the discussion section, there are several things the author wants to convey about mental health during pregnancy, including: Unhealthy lifestyles such as smoking and consuming alcohol are also very influential during pregnancy, although these two things are considered calming for pregnant women who feel emotional stress [28]. Environmental factors, such as the current COVID-19 pandemic, also affect the psychological condition of mothers during pregnancy [29], The quality of life factor that is lived is the dominant thing that affects during pregnancy [30].

Awareness in overcoming mental health problems can actually be done independently by pregnant women first at this time technological advances have developed very rapidly and all things can be found a solution in a mobile phone [31].

In addition, there are many educational facilities as a solution to overcome mental health, one of which is Heart Rate Variability Biofeedback training for Mental Health of Pregnant Women [32]. Listening to music and singing also

has an effect on peace of mind for both the mother and the baby in the womb [33]. Regular exercise is also influential in preventing depression. This is because exercise can make the brain's nerve muscles more relaxed, mothers feel more relaxed and get a positive influence, mothers can also think clearly when facing problems [34]. For certain cases that are considered quite serious, the use of drugs is very appropriate to treat health problems but must be under the supervision of an expert doctor. This is because the use of antidepressant drugs is very risky for the health of the fetus [35].

V. CONCLUSION

Basically mental health disorders during pregnancy can occur in various parts of the world, it's just that in developing countries mental health disorders during pregnancy have a higher prevalence rate with more varied causative factors and how to handle health workers who still need to be a common concern, especially government.

This paper aims to analyze the factors that cause mental health disorders in pregnant women, especially in developing countries, as well as what opinions the author can offer as a solution to overcome this.

Broadly speaking, mental health disorders during pregnancy in developing countries are caused by 4 main factors, namely, economic factors (low income and poverty), factors of violence perpetrated by partners (both physical, psychological and violent deviant forms such as cases of rape), family support (both husband and nuclear family support) and the level of education which is still limited to basic education, accompanied by the role of health workers in providing information that is still very limited.

The analysis of other factors that were found to be the cause of mental health disorders in pregnant women, namely the powerlessness to resist when receiving psychologically shocking ill treatment and limited ability to divide themselves into causes of mental health problems during pregnancy.

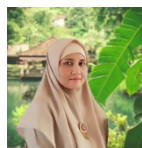
This study there are still many shortcomings, because this is only in the form of a scoping review, with very limited literature sources, a very short analysis period, and only including the variable with the most dominant value without including other variables that are also quite influential, such as the COVID-19 pandemic factor and the mother's previous mental health history.

It is hoped that further research can use more up-to-date methods with more varied variables, and it is also hoped that further researchers will study other things with more sources and references related to mental health during pregnancy with better and more complete facilities and infrastructure. and further researchers are expected to be able to conduct direct interviews with competent sources in their fields, such as psychologists and special psychiatric doctors as additional information in the preparation of writing.

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