



## ARTICLE

### EXAMINING THE MANAGEMENT AND TREATMENT APPROACHES FOR DEPRESSION IN PREGNANT WOMEN

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#### ABSTRACT

Pregnant women suffering from undiagnosed or inadequately treated depression during their pregnancy face increased postpartum risks and jeopardize the health and safety of both mother and fetus. To understand the management of depression in pregnant women at Gamping II Community Health Centre. This qualitative research employed a case study approach. Informants were selected using heterogeneous purposive sampling, comprising 9 participants: a pregnant woman, a head of the community health centre, a doctor, two midwives, a psychologist, a psychiatric nurse, and two pharmacists. The study reveals that the depression management provided to pregnant women is not comprehensive due to the lack of post-referral care, resulting in inadequate monitoring and evaluation. There is a lack of knowledge about using mental health screening tools, understanding care for depressed mothers, and implementing guidelines for managing depression in pregnant women. These factors hinder the provision of comprehensive care. **Conclusion:** Pregnancy care for women with depression requires comprehensive health management strategies. Comprehensive care is crucial to mitigate the impact of mental health disorders experienced during pregnancy

**Keywords:** Management; Depression; Pregnant Women

#### АБСТРАКТ

Беременные женщины, страдающие от недиагностированной или неадекватно леченной депрессии во время беременности, подвергаются повышенному послеродовому риску и ставят под угрозу здоровье и безопасность матери и плода. Чтобы понять, как лечат депрессию у беременных женщин в общественном медицинском центре Gamping II. В данном качественном исследовании использовался подход, основанный на изучении конкретных случаев. Информанты были отобраны с помощью гетерогенной целевой выборки, в которую вошли 9 участников: беременная женщина, руководитель общинного медицинского центра, врач, две акушерки, психолог, медсестра-психиатр и два фармацевта. Исследование показало, что лечение депрессии у беременных женщин не является комплексным из-за отсутствия постреабилитационной помощи, что приводит к неадекватному мониторингу и оценке. Не хватает знаний об использовании инструментов скрининга психического здоровья, понимании ухода за матерями с депрессией и применении рекомендаций по лечению депрессии у беременных женщин. Эти факторы препятствуют оказанию комплексной помощи. Выводы: Оказание помощи женщинам с депрессией во время беременности требует комплексных стратегий управления здоровьем. Комплексный уход имеет решающее значение для смягчения последствий психических расстройств, возникающих во время беременности.

**Ключевые слова:** Управление; депрессия; беременные женщины

## INTRODUCTION

Globally, depression and anxiety are reported as common mental health disorders, with prevalence rates ranging between 15% and 65%<sup>1</sup>. The World Health Organization (WHO) states that depression is currently the fourth most threatening disease worldwide, with an 18.4% increase in the last decade. Developing countries report higher depression rates, about 15.6% during pregnancy<sup>2</sup>. In Indonesia, mental health symptoms, including depression, occur in about 6% of the population, with a higher prevalence among women (22.3%) compared to men (21.4%)<sup>3</sup>. Reproductive age is often when depression first appears<sup>4</sup>.

According to data from the Yogyakarta Health Service, Gunung Kidul District has the highest incidence of depression at about 8.25%. It is followed by Sleman District (6.19%), Yogyakarta City (5.83%), Kulonprogo District (4.38%), and Bantul District (3.48%)<sup>5</sup>. Recent data indicate that approximately 10% of pregnant women worldwide suffer from mental health disorders, primarily depression, with higher rates in developing countries (15.6% during pregnancy and 19.8% postpartum)<sup>2</sup>. Perinatal depression is common, with around 18% of pregnant women experiencing mild to severe depression, many of whom remain unscreened or untreated<sup>6</sup>.

Pregnant women with undiagnosed or inadequately treated depression face higher maternal mortality rates, difficulties in completing the birthing process, and gestational hypertension, posing risks to both mother and fetus and increasing postpartum complications<sup>7</sup>. Mental health disorders adversely affect not only the mother but also the family and broader community. Symptoms of depression during pregnancy can also impact the mother-fetus relationship<sup>1</sup>. The WHO has published guidelines for the care of mothers with mental disorders, which healthcare providers can use to manage mental health issues in mothers, including the

management of depression in primary healthcare settings<sup>8</sup>.

A preliminary study conducted at the Gamping II Community Health Centre on 20 December 2022 revealed that of the 629 pregnant women attended from January to November 2022, 5 were experiencing moderate depression symptoms between September and November 2022 and were advised to return for follow-up visits. Therefore, the aim of this research is to examine the management of depression in pregnant women at Gamping II Community Health Centre.

## MATERIAL AND METHODS

This study employed a qualitative research method using a case study approach. Participants included healthcare professionals and pregnant women experiencing depression during their pregnancy. Participant selection was based on heterogeneous purposive sampling, with criteria including healthcare professionals who had served at the Gamping II Community Health Centre for at least two years, were involved in managing depression in pregnant women, and had a minimum of an advanced diploma in their field. Pregnant women participants included those with a history of depression during pregnancy and those who attended antenatal care (ANC) at the Gamping II Community Health Centre. A total of 9 participants meeting these criteria were selected. Data sources comprised both primary and secondary data, collected through interviews, observations, and documentation, analysed using Michael Huberman's model 2010. This research was conducted after obtaining Ethical Clearance number 1646/KEP-UNISA/V/2023

## RESULT

### Participant Characteristics

Participants were selected through purposive sampling based on specific criteria established by the researchers. The criteria for healthcare professionals included at least two years of experience at the Gamping II Community Health Centre, involvement in the

management of depression in pregnant women, and a minimum of an advanced diploma education. Pregnant women informants included those with a history of depression during pregnancy and those attending ANC at the Gamping II Community Health Centre. The selection of heterogeneous informants aimed to gather diverse perspectives and more varied information.

Based on these criteria, 9 informants consented to participate, comprising a pregnant woman, the head of the community health centre, a doctor, two midwives, a psychologist, a psychiatric nurse, and two pharmacists, each with different educational backgrounds, ages, and occupational histories. The characteristics of the informants are detailed in Table 1.

**Table 1.** Participant Characteristics

Code	Age (years)	Education	Employment
IFB1	29	Associate's Degree	Midwife
IFB2	42	Associate's Degree	Midwife
IFP3	39	Magister	Psychologist
IFK4	42	Associate's Degree	Nurse
IFD5	41	Bachelor	Doctor
IFA6	30	Associate's Degree	Pharmacy
IFA7	30	Bachelor	Pharmacy
IFKP8	48	Bachelor	Head of the health center
IFI9	27	Bachelor	Teacher

Based on offline interviews with healthcare workers and pregnant women visiting the Gamping II Community Health Centre, three themes emerged. The first theme relates to the care provided to pregnant women with depression, encompassing sub-themes like the first and second antenatal visits, management strategies, follow-up, and post-referral care. The second theme involves potential barriers to managing depression in pregnant women, with sub-themes including knowledge, time constraints, SOP guidelines, human resources, and infrastructure. The third theme explores factors potentially supporting the management of depression in pregnant women, including integrated ANC, maternal classes, and cross-program collaboration.

## Theme Analysis

### Theme 1: Care Provided to Pregnant Women with Depression

The care provided to pregnant women with depression follows the protocol of integrated antenatal care (ANC) check-ups. Interview data indicates that this care consists of five

sub-themes: First Antenatal Visit (K1), Second Antenatal Visit (K2), Management, Follow-up, and Post-Referral Care.

#### First Antenatal Visit (K1)

The first ANC visit involves mandatory mental health screening by a psychologist for all pregnant women. This is highlighted in the following quote from an informant:

*"For the screening, it happens at the first ANC visit. It's compulsory to see a psychologist, where depression screening is conducted." (Informant IFK 4).*

#### Second Antenatal Visit (K2)

The second ANC visit involves a psychological assessment only if there are symptoms of depression identified during the pregnancy check-up. An informant explains:

*"Subsequent visits involve a referral to a psychologist if mental health issues are identified, allowing for more in-depth discussion there." (Informant IFA7).*

### Management

The physical management of depression in pregnant women is conducted by midwives, while psychological care is provided by psychologists. An informant shares:

*"For management, because she is pregnant, the care is generally the same as for other pregnant women, including routine check-ups like weight monitoring. However, for depression, the focus shifts more towards psychological care."* (Informant IFB1).

### Follow-up

Follow-up care, post consultation for depression, doesn't occur at the health centre but rather through home visits by mental health programmers, community health workers, and midwives. An informant notes:

*"Follow-up is conducted by psychiatric nurses and local midwives who report on the mother's condition. Often, evaluations are only made by community health workers."* (Informant IFB1).

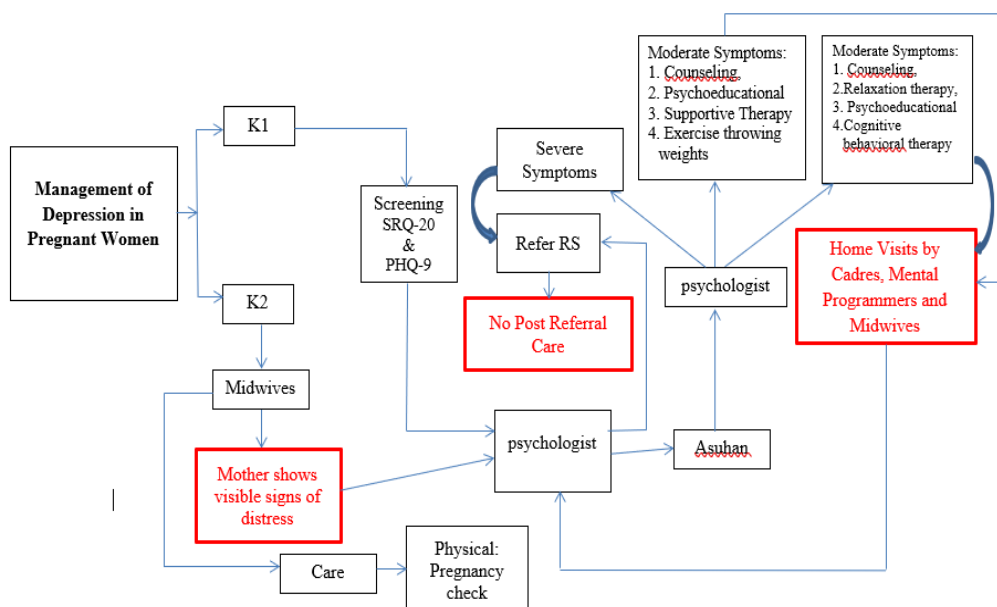
### Post-Referral Care

Post-referral care describes the treatment provided after a hospital referral. Informants indicate that there is a lack of feedback or information from the referral hospitals about the care provided and the patient's condition, leading to non-holistic and discontinuous care for pregnant women. This is expressed in the quotes below:

*"Sometimes hospitals are reluctant to give complete access to what treatments have been administered, and unless we inquire, they don't provide feedback."* (Informant IFB1).

*"So far, there's been no communication apart from the referral letter. So, if a patient doesn't come back to us, we don't know their condition."* (Informant IFD5).

A diagram illustrating the management of depression care in pregnant women can be found below:



**Figure 1.** Management of depression in pregnant women at the Puskesmas Gamping II.

Theme 2: Factors Potentially Hindering the Management of Depression in Pregnant Women

### Knowledge

This refers to healthcare professionals' lack of knowledge in probing psychological aspects and understanding the measurement tools used. An informant stated:

*"We have limited knowledge of psychological aspects, which is the main obstacle to providing services.."* (Informant IFB1).

*"...We usually refer patients to psychologists, so we are not fully familiar with the measurement tools used in their assessments."* (Informant IFB2).

### Time Constraints

This theme highlights the limited time available for providing care, focusing on psychological services due to time constraints. An informant noted:

*"Depression cases require a lot of time, and sometimes we can't delve deeply into these cases during routine services."* (Informant IFK4).

*"Indeed, considering the time needed, patients with these issues require extended consultation times."* (Informant IFA7).

### SOP for Managing Depression in Pregnant Women

This discusses the absence of specific SOPs for managing depression in pregnant women, with only general guidelines for mental health disorders currently in use. An informant remarked:

*"For pregnant women with depression, we don't have specific SOPs; our guidelines are more general and not tailored to this demographic."* (Informant IFB2).

### Human Resources (HR)

This pertains to the lack of healthcare professionals managing depression in pregnant women, with only one psychologist

available, leading to delayed and hindered care. Informants mentioned:

*"We only have one psychologist."* (Informants B2, P3, K4).

### Facilities

This theme indicates that the existing facilities are inadequate for providing care to pregnant women with depression, including the lack of comfortable rooms and educational materials like flip charts. Informants said:

*"There's a lack of informational materials here, like flip charts... We should have these available."* (Informant IFP3).

*"The rooms here aren't quite suitable for patients; they can sometimes be too noisy."* (Informant IFK4).

### Theme 3: Factors Potentially Supporting the Management of Depression in Pregnant Women

This section identifies factors that could support the management of depression in pregnant women, including Integrated ANC, Maternal Classes, Cross-Program Collaboration, and Facilities.

#### Integrated ANC

The presence of an integrated ANC program is seen as a supportive factor, where all pregnant women are required to consult a psychologist. Informants shared:

*"All pregnant women undergo psychological consultation as part of ANC, providing comprehensive support"* (Informant IFB2).

*"Integrated ANC at our clinic ensures detection of mental health issues in pregnant women"* (Informant IFP3).

#### Maternal Classes

Maternal classes involving psychologists provide education and screen for depression symptoms in pregnant women. Informants mentioned:



*"Psychologists offer advice and education on the impact of mental health disorders"* (Informant IFB2).

*"The first visit typically involves nutrition advice, followed by psychological support in subsequent visits"* (Informant IFP3).

### **Cross-Program Collaboration**

Collaboration across various programs supports the management of depression in pregnant women, including screening, monitoring, and evaluation. Informants noted:

*"Our cross-program collaboration is effective in managing mental health issues"* (Informant IFB1).

*"We collaborate across professions to detect risks in pregnant women, covering psychological to medical aspects"* (Informant IFKP8).

## **DISCUSSION**

### **Care Provided to Pregnant Women with Depression**

This research reveals that pregnant women attending their first antenatal care visit (K1) are required to undergo a psychological evaluation, which is conducted exclusively by psychologists. The screening tools used to detect depression symptoms include the SRQ-20 questionnaire as the standard Ministry of Health instrument and the PHQ-9 as an additional tool utilized in community health centers (Puskesmas). Integrated Antenatal Care (ANC) is a comprehensive and high-quality service provided to all pregnant women. This care includes both the initial (K1) and the subsequent (K4) antenatal visits<sup>9</sup>. During the first visit, psychological consultation is mandatory for early detection or risk assessment of mental disorders, including anxiety, depression, bipolar disorder, eating disorders, or post-traumatic stress disorder (PTSD)<sup>10</sup>.

According to WHO (2022), mental health screening can be conducted by healthcare professionals using the validated and reliable SRQ-20 questionnaire for psychiatric

disorder screening and research purposes<sup>11</sup>. The Patient Health Questionnaire-9 (PHQ-9) is a commonly used psychometric instrument for early detection of depression in primary healthcare settings<sup>12</sup>. Further findings indicate that subsequent antenatal visits involve a psychological assessment only if depression symptoms are identified by other healthcare professionals. The Directorate General of Health Services (2023) states that mental health screening can be performed by anyone, without waiting for symptoms to emerge<sup>13</sup>. Early detection improves the effectiveness of mental health treatment provided by psychologists and psychiatrists, thus preventing complications or more severe issues related to mental disorders, such as drug abuse or suicidal thoughts<sup>14</sup>. The study also reveals that psychological management of pregnant women is solely the responsibility of psychologists, while physical care is provided by midwives. According to the Indonesian Midwifery Law No. 4 of 2019, midwives serve as providers and managers of midwifery care, educators, counselors, community mobilizers, and researchers. The midwifery care delivered is based on the knowledge and competencies developed according to the clients' needs.

Psychologists in primary healthcare settings possess in-depth knowledge about the prevention, diagnosis, and treatment of mental health issues. Additionally, they can identify, analyze, and offer solutions for the psychological problems experienced by pregnant women through lifestyle or attitude changes<sup>14</sup>. As per WHO (2022), perinatal psychological interventions for common mental health conditions such as depression or anxiety are provided by professional healthcare workers. These interventions include Healthy Thinking, Relaxation Training, Problem Management Plus (PM+), Group Interpersonal Therapy, Behavioral Activation, Interpersonal Therapy, and Cognitive Behavioral Therapy (CBT).

Pregnant women with suspected or diagnosed mental health conditions receive psychoeducation and guidance on reducing

depression and enhancing social support<sup>15</sup>. This research aligns with findings from Ingram et al., (2021), demonstrating the positive impact of interventions such as Interpersonal Therapy, Cognitive Behavioral Therapy (CBT), and Relaxation Training on depression symptoms in pregnant women. Pregnant women with moderate to severe symptoms are referred to hospitals for further treatment. WHO (2022) states that severe mental health conditions, including psychosis, bipolar disorder, suicidal ideation, and major depression, require referral to more equipped healthcare facilities and continuous monitoring by psychiatric specialists for approximately two weeks.

According to the Indonesian Health Minister's Decision No. 406/Menkes/SKNI2009 on Community Mental Health Care Guidelines, psychiatric nurses, who have completed a minimum of a diploma in nursing, are authorized to provide mental health care to individuals, families, groups, and communities across various facilities. The characteristics of the informants in this study suggest that psychiatric nurses are empowered to provide care and monitoring for pregnant women with depression. The study also highlights the lack of post-referral care due to the absence of feedback from referral hospitals about the treatments provided and the patients' conditions, leading to discontinuity in patient care. According to WHO (2022), information on the provision of mental health care to pregnant women within maternal and child health services (KIA) should be continually monitored and evaluated to ensure quality and effectiveness. Regular monitoring helps identify challenges early, preventing more significant problems. Evaluations assess specific information at certain times to determine if the desired outcomes have been achieved.

Comprehensive mental health care is essential, as outlined by WHO<sup>8</sup>. Continuity of care is achieved through midwifery teams sharing case burdens, ensuring that mothers receive all their care from a single midwife or

the practice team. Midwives collaborate multidisciplinary in consultations and referrals with other healthcare professionals<sup>8</sup>. Research by Bayrampour et al. (2018) identifies a lack of continuity of care as a major barrier to integrating mental health care into midwifery practice<sup>16</sup>. The absence of continuous care increases the risk of complications in mothers and babies, leading to delayed treatment and higher morbidity and mortality rates<sup>17</sup>.

### **Factors Potentially Hindering the Management of Depression in Pregnant Women**

The results of this research show that the main obstacle in providing comprehensive services to pregnant women with depression at the Gamping II Community Health Center is the lack of healthcare professionals' knowledge in gathering specific information about mental disorders, and the screening tools used are a significant barrier. Several participants explained that their knowledge of depression in pregnant women and the use of screening tools were the main obstacles to implementing comprehensive care for pregnant women. Massie (2016) points out that the effectiveness of healthcare service management is yet to be achieved due to the limited support of adequate human resources to manage and provide standardized services<sup>18</sup>.

The limited regulations for improving resource quality impact the level of healthcare services that can be provided for mental health. The lack of skills and knowledge in mental health among healthcare providers is a hurdle in delivering adequate healthcare to mothers<sup>16</sup>. Research by Afifah Anisa Kartika (2016) indicates that healthcare professionals' ability to specifically identify mental disorder symptoms, risk factors, causes, and distinctions between types of mental disorders is low. This is evident from their inability to recognize mental disorder symptoms and seek information about the causes of these disorders. Further studies by

Nazira et al. (2022) suggest that the ability to recognize mental health issues is crucial in determining whether an individual seeks professional help<sup>19</sup>. Research by Ikwuka et al. (2018) found that 84.4% of respondents with mental disorders are at risk of not seeking appropriate professional help, primarily due to a lack of mental health knowledge<sup>20</sup>.

Increased knowledge and resources are critical for healthcare providers. Increasing knowledge and resources can be done by providing training to health workers regarding depression during pregnancy and how to manage depression in pregnant women. Apart from that, conducting outreach regarding guidelines for treating depression in pregnant women has been issued by WHO (*World Health Organization*) and Minister of Health Regulation Number 21 of 2021. So that health workers have good mental health literacy and can provide knowledge to someone about mental disorders and provide more information about appropriate places of service and care, as well as proper help<sup>21</sup>.

The study also reveals that time constraints in healthcare services are a significant impediment to providing proper management for depression in pregnant women. Research by Williams et al. (2016) reports that time limitation is a common barrier faced by healthcare workers. Sanders et al. (2016) found that one in four midwives reported not having enough time to conduct depression screening<sup>22</sup>. Another study showed that midwives require an additional 30 minutes for an effective depression screening<sup>23</sup>. These findings are consistent with research by Edga (2010), which reported that midwives need more time to conduct physical examinations, leaving most women with psychological stress untreated<sup>24</sup>. Another challenge identified is the healthcare professionals' lack of knowledge about managing depression and the absence of specific Standard Operating Procedures (SOP) or guidelines for managing depression in pregnant women at community health centers. In 2022, WHO published a guide for the management of depression in pregnant

women, "Guide for Integration of Perinatal Mental Health in Maternal and Child Health Services," which integrates mental health care in maternal and child health services (KIA). This guide is primarily intended for program managers, healthcare service administrators, and policymakers responsible for planning and managing services for mothers and babies during the perinatal period. It also serves as a resource for healthcare providers and other health professionals<sup>8</sup>.

The guide is research-based and supports KIA providers in promoting good mental health, identifying mental health disorder symptoms, and addressing them according to mental health conditions. It outlines steps for planning the integration of prenatal mental health care (PMH) and assessing its impact. The study also highlights the shortage of mental health professionals, particularly psychologists, in community health centers, and the inadequacy of monitoring or support provided by health cadres, who often lack training in mental health. Kurniawan & Sulistyarini (2016) emphasize the importance of forming a mental health cadre team in primary healthcare services and providing them with regular training related to mental health management<sup>25</sup>. Placing resources inappropriately can lead to suboptimal performance in healthcare services<sup>26</sup>.

Finally, the study reveals that inadequate facilities and infrastructure are barriers to providing care to pregnant women, evidenced by the lack of comfortable rooms and mental health service manuals for pregnant women, and insufficient educational kits such as flip charts. According to the Mental Health Service Program Standards published by the Ministry of Health (No. 21 of 2021), facilities should include waiting rooms, examination rooms, basic diagnostic equipment, mental health assessment instruments, educational kits, mental health service manuals, service procedures, patient records, operational vehicles, patient restraint equipment, medications, computers, and stationery for recording and reporting<sup>27</sup>. This research



aligns with subsequent studies that highlight the mismatch between healthcare services and the required standards, particularly the limitations of facilities and infrastructure in community health centers<sup>28</sup>.

### **Factors That May Support the Management of Depression in Pregnant Women**

In addition to the obstacles, there are also supporting factors in managing depression among pregnant women. These include integrated antenatal care (ANC) services and maternal classes. According to the Indonesian Ministry of Health Regulation No. 21 of 2021, integrated ANC is a comprehensive and high-quality service, carried out in conjunction with other health care programs, including mental health services. Antenatal Care is provided regularly by professional healthcare workers to improve the health of pregnant women and their unborn children. It is essential for pregnant women to have knowledge about Antenatal Care to ensure regular visits, at least six times during pregnancy<sup>3</sup>. ANC services are offered by various healthcare professionals, including specialists in obstetrics and gynecology, general practitioners, midwives, psychologists, and nurses. These services include various examinations assessing the physical and psychological (mental) state of pregnant women<sup>3</sup>. The purpose of ANC is to monitor pregnancy progress, ensuring the health of the mother and the development of the fetus, to prepare for childbirth, to minimize potential trauma during labor, and to reduce maternal and infant mortality rates<sup>8</sup>.

Maternal classes provide a platform for pregnant women and their families to learn together about maternal health in a group setting<sup>29</sup>. These classes aim to physically and mentally prepare pregnant women, enabling them to meet and exchange information and support with other pregnant women in similar conditions<sup>30</sup>. Maternal classes also offer interventions focusing on emotional and motivational aspects, empowering pregnant

women<sup>31</sup>. These classes can be facilitated by midwives or other healthcare workers, using materials such as the Maternal and Child Health (KIA) Book, flip charts, implementation guides for maternal classes, and facilitator manuals<sup>27</sup>. Several studies have concluded that participation in maternal classes can reduce complications, stress, and the potential for depression during and after pregnancy. These classes help in preparation and reduce labor pain, optimizing childbirth outcomes<sup>32</sup>.

Cross-program collaboration in managing depression in pregnant women is another supportive factor. This collaboration involves various programs within the same field working together towards a common goal. In community health centers, this means involving relevant programs to provide better mental health care during the perinatal period, expanding the scope of midwifery practice, and enhancing service integration and collaboration between mental health and maternity services<sup>33</sup>. Collaboration in mental health and nursing can be formed through joint planning and practice by nurses, doctors, and other healthcare teams<sup>34</sup>. It is a strategy to achieve desired quality outcomes efficiently and effectively in healthcare<sup>35</sup>.

In integrated antenatal services, all pregnant women are required to carry out psychological examinations during pregnancy. Additionally, integrated antenatal services allow all cross-programs to test pregnant women according to their competencies. Having an obligation to carry out a psychological exam at the first pregnancy visit can make it easier for health workers to detect symptoms of depressive disorders that the mother may experience during pregnancy<sup>36</sup>. Then, in antenatal care, midwives, mental health nurses, and psychologists will work together to manage and monitor mothers who have mental health disorders. Integrated antenatal care also improves the lives of pregnant women by providing effective communication between pregnant women and health workers and practical support, including social, cultural,

emotional and psychological support for the mental health of pregnant women<sup>3</sup>. Communication is a crucial element in collaboration to enhance patient care quality and safety. In mental health, collaborative practice can increase patient and team satisfaction, reduce treatment duration, lower care costs, decrease suicide incidents, and minimize outpatient visits<sup>37</sup>.

## CONCLUSION

The management of depression in pregnant women is not comprehensive due to the lack of post-referral care, leading to discontinuity in pregnancy care. Additionally, factors potentially hindering comprehensive service delivery include healthcare professionals' lack of knowledge about managing depression, absence of clear management guidelines in community health centers, time constraints in service provision, inadequate human resources, and insufficient infrastructure. Potential supportive factors are the integrated ANC program, which mandates mental health screening for all pregnant women, and maternal classes that provide opportunities for healthcare professionals to effectively communicate with pregnant women. Cross-program collaboration also enhances the quality of depression management.

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## REFERENCES

1. Perwitasari P, Wulandari RP. Symptoms of Depression in Pregnant Women: Prevalence and Relationship with Social Support. *Journal of Midwifery and Reproduction*. 2022 Mar 25;5(2):77-83  
DOI: <https://doi.org/10.35747/jmr.v5i2.825>
2. World Health Organization. Depression and other common mental disorders: global health estimates. World Health Organization; 2017. <https://iris.who.int/bitstream/handle/10665/254610/W?sequence=1>
3. Kemenkes RI. Kemenkes RI. 2020. Buku Kesehatan Ibu dan Anak. Jakarta. Kemenkes RI.
4. Brummelte S, Galea LA. Depresi pascapersalinan: Etiologi, pengobatan dan konsekuensi terhadap perawatan ibu. *Hormones and behavior*. 2016 Jan 1;77:153-66.  
<https://doi.org/10.1016/j.yhbeh.2015.08.008>
5. Riskesdas LN. Laporan Nasional RKD 2018 FINAL. pdf. Badan Penelitian dan Pengembangan Kesehatan. 2018;198.  
<http://ejournal2.litbang.kemkes.go.id/index.php/lpb/article/view/3539>
6. Rompala KS, Cirino N, Rosenberg KD, Fu R, Lambert WE. Prenatal depression screening by certified nurse-midwives, Oregon. *Journal of Midwifery & Women's Health*. 2016 Sep;61(5):599-605.  
<https://doi.org/10.1111/jmwh.12491>
7. Bouzari Z, Rad MN, Tayebi E, Khah FK, Hajiahmadi M. Depression risk factors in different trimesters of pregnancy in Iranian women. *of*. 2016;5:2. [https://scholar.google.com/scholar?hl=en&as\\_sdt=0%2C5&q=Depression+Risk+Factors+in+Differ+ent+Trime+ters+of+Pregnancy+in+Iranian+Women&btnG=](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Depression+Risk+Factors+in+Differ+ent+Trime+ters+of+Pregnancy+in+Iranian+Women&btnG=)
8. World Health Organization. Guide for integration of perinatal mental health in maternal and child health services. <https://iris.who.int/bitstream/handle/10665/362880/9789240057142-eng.pdf?sequence=1>
9. Kementerian Kesehatan Direktorat promosi kesehatan dan pemberdayaan masyarakat. (12 Agustus 2018). Pentingnya Pemeriksaan Kehamilan (ANC) di Fasilitas Kesehatan. <http://promkes.kemkes.go.id/pentingnyapemeriksaan-kehamilan-anc-difasilitas-kesehatan>
10. Ayers S, Bond R, Webb R, Miller P, Bateson K. Perinatal mental health and risk of child maltreatment: A systematic review and meta-analysis. *Child abuse & neglect*. 2019 Dec 1;98:104172.  
<https://doi.org/10.1016/j.chiabu.2019.104172>
11. Sudirman S, Soleman SR. Analysis of Efforts to Improve Health Services for Mentally Disordered Patients in Kotamobagu City. *Jurnal Ilmu Kesehatan Masyarakat*. 2021 Sep 30;17(2):96-102

- DOI: <https://doi.org/10.19184/ikesma.v17i2.25522>
12. Dian, C.N. Validitas dan Reliabilitas the Patient Health Questionnaire (PHQ-9) Versi Bahasa Indonesia. Program Studi Psikiatri Fakultas Kedokteran Universitas Sumatera Utara Medan. 2020. DOI: <https://doi.org/10.3889/oamjms.2022.9293>
  13. Kementerian Kesehatan Direktorat Jenderal Pelayanan Kesehatan 2023
  14. Madigan S, Oatley H, Racine N, Fearon RP, Schumacher L, Akbari E, Cooke JE, Tarabulsy GM. A meta-analysis of maternal prenatal depression and anxiety on child socioemotional development. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2018 Sep 1;57(9):645-57. <https://doi.org/10.1016/j.jaac.2018.06.012>
  15. Ingram J, Johnson D, O'Mahen HA, Law R, Culpin I, Kessler D, Beasant L, Evans J. 'Asking for help': a qualitative interview study exploring the experiences of interpersonal counselling (IPC) compared to low-intensity cognitive behavioural therapy (CBT) for women with depression during pregnancy. *BMC Pregnancy and Childbirth*. 2021 Dec;21(1):1-8 DOI: <https://doi.org/10.1186/s12884-02104247-w>
  16. Bayrampour H, Hapsari AP, Pavlovic J. Barriers to addressing perinatal mental health issues in midwifery settings. *Midwifery*. 2018 Apr 1;59:47-58. <https://doi.org/10.1016/j.midw.2017.12.020>
  17. Saifuddin AB, editor. Practical guidebook for maternal and neonatal health services. Yayasan Bina Pustaka Sarwono Prawiroharjo; 2002.
  18. Massie RG. The Assesment of Integrity on HIV/AIDS Prevention Program in Manado City. *Buletin Penelitian Sistem kesehatan*. 2016 Jan 1;19(3):190-9. DOI: [10.22435/hsr.v19i3.6543.190-199](https://doi.org/10.22435/hsr.v19i3.6543.190-199)
  19. Nazira D, Mawarpury M, Afriani A, Kumala ID. Mental Health Literacy among Students in Banda Aceh. *Seurune: Jurnal Psikologi Unsyiah*. 2022 Jan 2;5(1):23-39. DOI: <https://doi.org/10.24815/s-jpu.v5i1.25102>
  20. Ikwuka U, Galbraith N, Manktelow K, Chen-Wilson J, Oyebode F, Muomah RC, Igboaka A. Ideological vs. instrumental barriers to accessing formal mental health care in the developing world: focus on south-eastern Nigeria. *Journal of Health Care for the Poor and Underserved*. 2016;27(1):157-75. DOI : [10.1353/hpu.2016.0025](https://doi.org/10.1353/hpu.2016.0025)
  21. Falasifah M, Syafitri DU. Literasi Kesehatan Mental dan Stigma Publik Sebagai Prediktor Sikap Terhadap Bantuan Psikologis Pada Mahasantri. *Jurnal Ilmu Perilaku*. 2022;5(2):159-73. DOI: <https://doi.org/10.25077/jip.5.2.159-173.2021>
  22. Sanders GD, Neumann PJ, Basu A, Brock DW, Feeny D, Krahn M, Kuntz KM, Meltzer DO, Owens DK, Prosser LA, Salomon JA. Recommendations for conduct, methodological practices, and reporting of cost-effectiveness analyses: second panel on cost-effectiveness in health and medicine. *Jama*. 2016 Sep 13;316(10):1093-103. DOI : [doi:10.1001/jama.2016.12195](https://doi.org/10.1001/jama.2016.12195)
  23. Fisher J, Mello MC, Patel V, Rahman A, Tran T, Holton S, Holmes W. Prevalence and determinants of common perinatal mental disorders in women in low-and lower-middle-income countries: a systematic review. *Bulletin of the World Health Organization*. 2012;90:139-49. DOI: [10.2471/BLT.11.091850](https://doi.org/10.2471/BLT.11.091850)
  24. Edgar DA, Brinton J, Burgess B, David V, Glass M, Horning L. Education pathways, mentoring and future intentions of nurse and midwifery consultants in a NSW Health District. *Health Education in Practice: Journal of Research for Professional Learning*. 2019 Jun 1;2(1):5-31. DOI: <https://doi.org/10.33966/hepi.2.1.12918>
  25. Kurniawan Y, Sulistyarini I. Komunitas SEHATI (Sehat Jiwa dan Hati) sebagai intervensi kesehatan mental berbasis masyarakat. *INSAN: Jurnal Psikologi dan Kesehatan Mental*. 2016;1(2):112-24. DOI: [10.20473/jpkm.V1i22016.112-124](https://doi.org/10.20473/jpkm.V1i22016.112-124)
  26. Widiyanti RF, Noor HM, Kala R, Linggi MS. Performance of Community Health Center Employees in Health Services in South Sangatta District, East Kutai Regency. *EJournal Ilmu Pemerintahan*. 2018;6(1):185-98. <https://ejournal.ip.fisipunmul.ac.id/site/?p=2736>
  27. Kemenkes. (2019). Peraturan Menteri Kesehatan Republik Indonesia Nomor 4 Tahun 2019
  28. Tumiwa R, Pangemanan S, Sondakh E. Effectiveness of the Quality of Public Health Services at Community Health Centers in Dumoga District. *Jurnal eksekutif*. 2018 Oct 9;1(1). <https://ejournal.unsrat.ac.id/index.php/jurnaleksekutif/article/view/20926>
  29. Departemen Kesehatan RI. 2018. Pedoman Pelaksanaan Kelas Ibu hamil.
  30. Hati FS, Aryani F. Effectiveness of Pregnancy Classes as an Effort to Improve Mothers' Attitudes and Knowledge About Post Partum Blues. 2018. <http://elibrary.almaata.ac.id/id/eprint/2260>
  31. Ekhtiari H, Rezapour T, Aupperle RL, Paulus MP. Neuroscience-informed psychoeducation for addiction medicine: A neurocognitive perspective. *Progress in brain research*. 2017 Jan 1;235:239-64. <https://doi.org/10.1016/bs.pbr.2017.08.013>
  32. Cankaya S, Simsek B. Effects of antenatal education on fear of birth, depression, anxiety, childbirth self-efficacy, and mode of delivery in primiparous pregnant women: A prospective randomized controlled study. *Clinical Nursing Research*. 2021 Jul;30(6):818-29. <https://doi.org/10.1177/1054773820916984>

33. Syafridayani F. Nurse Collaboration with Other Medical Teams to Achieve Patient Safety 2019. <https://doi.org/10.31219/osf.io/jr7ks>
34. Stuart, G.W., & Sundeen, S. J. (2013). Buku Saku Ilmu Keperawatan Jiwa (5<sup>th</sup> ed). Jakarta : EGC
35. Rahmawati A, Wulandari RC. Influence of Physical and Psychological of Pregnant Women Toward Health Status of Mother and Baby. Jurnal Kebidanan. 2019 Oct 30;9(2):148-52. DOI: <https://doi.org/10.31983/jkb.v9i2.5237>
36. Marcano-Belisario JS, Gupta AK, O'Donoghue J, Ramchandani P, Morrison C, Car J. Implementation of depression screening in antenatal clinics through tablet computers: results of a feasibility study. BMC medical informatics and decision making. 2017 Dec;17(1):1-1. <https://doi.org/10.1186/s12911-017-0459-8>
37. Sharfina D. Pentingnya Kolaborasi Antar Profesi Demi Keselamatan Pasien di RS 2019. DOI:[10.31219/osf.io/k6cza](https://doi.org/10.31219/osf.io/k6cza)