

Factors Influencing Psychotic Disorders in Pregnant Women

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ABSTRACT

Background: Psychotic disorders are one of the serious mental health problems, particularly among pregnant women. Various factors, both biological and psychosocial, are suspected to play a role in influencing the occurrence of psychotic disorders during pregnancy. However, to date, evidence regarding the most influential factors remains inconsistent. This study aims to analyze the factors affecting psychotic disorders in pregnant women. **Method:** The study used a quantitative design with a cross-sectional approach. A total of 72 pregnant women who attended antenatal care at the Rappokalling Health Center in Makassar City were selected as respondents. Data were collected using a structured questionnaire and analyzed using the chi-square test to assess the relationship between independent variables and psychotic disorders. **Result:** The analysis showed no significant relationship between age (P-value = 0.7), education (P-value = 0.8), parity (P-value = 0.1), gestational age (P-value = 0.3), employment status (P-value = 0.1), family income (P-value = 0.2), knowledge (P-value = 0.08), and social support (P-value = 0.1) with psychotic disorders in pregnant women. **Conclusion:** This study concludes that factors such as age, education, parity, gestational age, employment status, family income, knowledge, and social support do not have a significant relationship with psychotic disorders in pregnant women in the population studied.

INTRODUCTION

Psychotic disorders are among the serious mental health issues that can affect women during pregnancy. These disorders are characterized by a loss of contact with reality, marked by symptoms such as delusions, hallucinations, and disorganized behavior. (1) Pregnancy, as a complex physiological process, is often associated with various biological, psychological, and social changes that may increase the risk of developing psychotic disorders. In this context, understanding the factors that influence the onset of psychotic disorders in pregnant women is crucial for effective prevention and management of these risks. (2) Previous studies have shown that psychotic disorders during pregnancy may be triggered by various biological factors, including hormonal and genetic changes. (3) Increased levels of hormones such as estrogen and progesterone during pregnancy are known to affect the central nervous system, which, in some vulnerable individuals, may lead to the onset of psychotic symptoms. In addition, a family history of mental disorders is a significant risk factor that can increase the likelihood of developing such conditions. (4) In addition to biological factors, psychosocial conditions also play a significant role in influencing the mental health of pregnant women. Psychological stress resulting from life changes associated with pregnancy including concerns about parenting roles, financial pressures, and lack of social support can increase the risk of developing psychotic disorders. (5) Strong social support, particularly from partners and family, has been shown to have a protective effect in reducing stress levels and preventing the emergence of mental disorders during pregnancy. (6,7)

Another equally important factor is the environmental aspect and access to healthcare services. Studies indicate that women living in areas with limited access to mental health services or who experience social discrimination are at higher risk of developing psychotic disorders during pregnancy. (8) Early intervention through comprehensive healthcare services can help prevent the worsening of this condition and improve the quality of life of pregnant women. Based on the above explanation, this study aims to examine the various factors influencing psychotic disorders in pregnant women, focusing on biological, psychosocial, and environmental aspects.

METHODS

This study employed a quantitative research design using a cross-sectional approach to identify the factors influencing psychotic disorders in pregnant women. This approach was chosen because it allows data collection at

a specific point in time and is suitable for analyzing the relationship between independent and dependent variables within the study population. Data analysis was conducted using bivariate analysis with the chi-square test, processed through SPSS version 27. The variables in this study consisted of independent variables, including age, education, parity, social and family factors, and economic status. The dependent variable was the occurrence of psychotic disorders during pregnancy.

The study population comprised all pregnant women who underwent antenatal check-ups at the Community Health Center (Puskesmas) and were recorded to have participated in antenatal visits, totaling 246 individuals. The sample was selected using a simple random sampling method, with a minimum sample size of 72 participants. Data collection was carried out using the SRQ-29 mental health questionnaire. This study received ethical approval from the Ethics Committee of Universitas Muslim Indonesia, with registration number UMI012410687.

RESULT AND DISCUSSION

RESULT

The following are the research findings regarding the factors influencing psychotic disorders in pregnant women, with a significance level of $\alpha > 0.05$.

Table 1. Factors Influencing Psychotic Disorders in Pregnant Women

Variable	Psychotic Disorder				Total (N=72)		P-Value
	Yes		No		N	%	
	N	%	N	%	N	%	
Age							
Low Risk	8	11,1	47	65,3	55	76,4	0,7
High Risk	3	4,2	14	19,4	17	23,6	
Education							
Elementary Education	5	6,9	30	41,7	35	48,6	0,8
High Education	6	8,3	31	43,1	37	51,4	
Parity							
Primiparous	1	1,4	13	18,1	14	19,4	0,1
Multiparous	6	8,3	40	55,6	46	63,9	
Grand multiparous	4	5,6	8	11,1	12	16,7	
Gestational Age							
Trimester 1	2	2,8	13	18,1	15	20,8	0,3
Trimester 2	6	8,3	20	27,8	26	36,1	
Trimester 3	3	4,2	28	38,9	31	43,1	
Employment status							
Employed	4	5,6	37	51,4	41	56,9	0,1
Unemployed	7	9,7	24	33,3	31	43,1	
Household Income							
<4 Million IDR	9	12,5	39	54,2	48	66,7	0,2
>4 Million IDR	2	2,8	22	30,6	24	33,3	
Knowledge							
Good	8	11,1	27	37,5	35	48,6	0,08
Poor	3	4,2	34	47,2	37	51,4	
Social Support							
Good	3	4,2	31	43,1	34	47,2	0,1
Poor	8	11,1	30	41,7	38	52,8	

In the age variable (Table 1), it was found that among 72 respondents, 55 mothers (76.4%) were in the low-risk age group (22–35 years), of whom 47 (65.3%) did not experience psychotic disorders. With a p-value of 0.7 ($p > \alpha$), this indicates that there is no significant relationship between maternal age and psychotic disorders. Regarding the education variable, 31 mothers (43.1%) with higher education did not experience psychological disorders, while 30 mothers (41.7%) with primary education also did not experience psychological disorders. The p-value obtained was 0.8 ($p > \alpha$), which suggests that there is no relationship between education level and psychotic disorders. In the parity variable, 46 mothers (63.9%) were multiparous, with 40 mothers (55.6%) not experiencing psychotic disorders and 6 (8.3%) experiencing them. The p-value of 0.3 ($p > \alpha$) implies no significant relationship between parity and maternal psychotic disorders. For the gestational age variable, 31 mothers (43.1%) were in their third trimester, with 28 (38.9%) not experiencing psychotic disorders and 3 (8.3%) experiencing them.

who did. The p-value obtained was 0.3 ($p > \alpha$), indicating no association between gestational age and psychotic disorders. In terms of employment status, 41 mothers (56.9%) were employed, of whom 37 (51.4%) did not experience psychological problems, while 7 (9.7%) unemployed mothers experienced psychotic disorders. The p-value was 0.1 ($p > \alpha$), suggesting no relationship between employment status and maternal psychotic disorders. For the household income variable, 48 mothers (66.7%) had an income of less than 4 million IDR, with 39 (54.2%) not experiencing psychotic disorders and 9 (12.5%) who did.

The p-value of 0.08 ($p > \alpha$) indicates no association between household income and psychotic disorders in mothers. Regarding knowledge, 37 mothers (51.4%) had poor knowledge, with 34 (47.2%) of them not experiencing psychotic disorders and 8 (11.1%) with good knowledge experiencing psychological problems. The p-value obtained was 0.08 ($p > \alpha$), indicating no significant relationship between knowledge and psychotic disorders. Finally, for the social support variable, 38 mothers (52.8%) reported low social support, with 31 (43.1%) experiencing psychotic disorders and 8 (11.1%) with good knowledge also experiencing such disorders. The p-value was 0.1 ($p > \alpha$), suggesting that social support is not significantly associated with psychotic disorders in pregnant women.

DISCUSSION

Age

Several factors may explain why maternal age does not have a significant direct relationship with psychotic disorders during pregnancy. Psychotic disorders in pregnant women are often more strongly influenced by other factors such as a history of mental illness, severe stress, poor social support, or past trauma, which may have a more dominant effect than age.⁽⁹⁾ For instance, women with a personal or genetic history of psychotic disorders are more vulnerable to experiencing symptoms during pregnancy, regardless of their age. While age is an important variable in reproductive health, it may not be a direct trigger for psychotic disorders when psychosocial factors are more significant.

Pregnancy is a highly individualized experience, and emotional and mental readiness to cope with physical and hormonal changes does not necessarily correlate with age. Both younger and older mothers may have similar experiences in terms of social support or available resources, which in turn affect their mental health.⁽¹⁰⁾ Some younger mothers may benefit from strong family support and good health literacy, making them more resilient to emotional stress. Conversely, some older mothers may face pressures related to increased responsibilities or medical complications. These factors can diminish or obscure the influence of age on psychotic disorders. Psychotic disorders, such as schizophrenia or bipolar disorder with psychotic features, typically arise from genetic predisposition or prior mental health conditions. Pregnancy can exacerbate or trigger a recurrence of psychotic symptoms, but maternal age may not be a primary factor in such cases. The greatest risk factor for psychosis during pregnancy is a poor mental health history, rather than age.⁽¹¹⁾

Some studies indicate that while advanced maternal age is sometimes associated with an increased risk of medical complications during pregnancy, this does not always correlate with a higher risk of psychotic disorders. For example, a study by Jones et al. (2010) concluded that the risk of psychosis in pregnant women is more closely linked to social factors, mental health history, and environmental stressors than to age.⁽¹²⁾ In this study, the finding that age was not significantly associated with psychotic disorders in pregnant women suggests that maternal age is not a major predictor of such conditions.

Education

Psychotic disorders in pregnant women often have strong biological and genetic components, which means that education does not necessarily influence or prevent these disorders. Conditions such as schizophrenia or bipolar disorder are more closely linked to family history, neurochemical imbalances, or hormonal changes during pregnancy than to external factors such as education.⁽¹¹⁾ Therefore, the level of maternal education may not play a significant role in the risk of experiencing psychotic disorders. Education is often regarded as a determinant of an individual's ability to cope with stress and challenges; however, in the context of psychotic disorders, social support and emotional stability may be more critical. For instance, a highly educated pregnant woman who experiences social isolation or lacks emotional support may be more vulnerable to psychotic disorders than a less-educated woman with strong social support.⁽¹³⁾ Thus, education is not always a determinant of mental health, especially in cases involving psychosis. During pregnancy, the body undergoes significant hormonal changes that can trigger or

exacerbate psychotic conditions in vulnerable individuals. Education may not directly influence the body's response to these hormonal shifts. Severe stress whether due to pregnancy or external factors is also a common trigger for psychotic disorders and can affect pregnant women regardless of educational background.(11) For example, in cases of postpartum psychosis, which often occur after childbirth, factors such as hormonal changes, traumatic labor experiences, or a history of mental illness are far more influential than education in determining the risk of psychotic disorders. Although formal education plays a role in providing access to information, mental health knowledge can be acquired from various other sources, including media, the internet, or healthcare services. With the advancement of technology and information access, pregnant women from diverse educational backgrounds may have equal access to mental health information, making education a less dominant factor in the risk of psychosis.(14)

Even women with lower levels of education may receive adequate information from health counseling or prenatal care services specifically designed to educate pregnant women about mental health, including the risk of psychotic disorders. A prior mental health history such as schizophrenia or bipolar disorder is more predictive than education in determining the risk of psychosis. Pregnant women with personal or family psychiatric history are more likely to develop psychosis during pregnancy, regardless of their educational attainment.(15) Therefore, in the context of psychotic disorders, education is not a significant variable. Other studies have also shown that education is not consistently associated with the risk of psychotic disorders. One study found that the primary risk factors for psychosis in pregnant women were previous mental illness and acute stress, while education did not show a significant relationship. This supports the finding that education is not always a protective or risk factor in the context of psychotic disorders.(11)

Parity

Psychotic disorders, such as schizophrenia or bipolar disorder, are often more strongly influenced by biological, genetic, and neurochemical factors than by social factors or pregnancy itself. Pregnant women with a family history of psychotic disorders or a personal history of mental illness are more likely to experience psychosis during pregnancy, regardless of the number of previous pregnancies.(16) This indicates that parity is not a dominant factor in the occurrence of psychotic disorders among pregnant women. Although pregnancy can be emotionally stressful, psychotic disorders have deeper roots in brain function and neurotransmitter imbalances. Pregnancy does not directly increase the risk of psychotic disorders based on parity. Both first-time mothers and multiparous women have a similar risk of developing psychotic disorders, especially if there is a previous history of such disorders or other predisposing factors.(11) A woman with high parity may experience the same level of stress as a first-time mother if she faces similar social conditions (such as lack of social support, financial difficulties, etc.). Therefore, parity is not always a primary determinant of psychotic disorders during pregnancy.(12) During pregnancy, significant hormonal changes particularly increases in hormones like progesterone and estrogen can affect mood and emotional responses. However, these hormonal changes are experienced by all pregnant women, whether it is their first or subsequent pregnancy. If a woman is predisposed to psychosis, hormonal changes can act as a trigger, but parity does not play a significant role in determining whether she will experience psychosis during pregnancy.(17) The risk of psychotic disorders during pregnancy is more closely related to mental health history and genetic predisposition than to obstetric factors such as parity. This study highlights the importance of assessing prior mental health to identify pregnant women at high risk of developing psychotic disorders. Moreover, psychotic disorders during pregnancy and the postpartum period are more frequently observed in women with a history of mood disorders than in those without such a history.(15,18)

Gestational Age

Pregnant women with a history of psychotic disorders are at risk of experiencing psychotic episodes during pregnancy, regardless of gestational age.(11) This suggests that pregnancy as a process does not significantly influence psychosis risk; instead, it is more dependent on the mother's biological and psychological predisposition. Although pregnancy involves hormonal changes, psychotic episodes do not appear at any specific trimester. The physiological changes that occur during pregnancy can trigger psychotic symptoms in at-risk mothers, but these disorders can manifest at any stage of pregnancy. Therefore, gestational age is not a determining factor in the onset of psychotic disorders.(17) One theory concerning psychosis during pregnancy involves hormonal changes, such as elevated levels of progesterone and estrogen, which affect mood and mental health. However, the influence of

these hormones is not specific to a certain gestational age, as hormonal fluctuations occur throughout pregnancy. This means a pregnant woman may experience a psychotic episode during any trimester depending on her mental predisposition and external factors (Davies et al., 2017). For pregnant women with a history of psychotic disorders, decisions regarding discontinuation or adjustment of medication during pregnancy may also influence the risk of symptom recurrence. Medication instability due to pregnancy may cause the reemergence of psychotic symptoms, but this is not dependent on gestational age. Women can experience psychosis at any point during pregnancy if their mental health is not well managed (Munk-Olsen et al., 2016). Although pregnancy involves significant physical changes, psychotic disorders tend to be more closely linked to psychological and neurochemical changes that may not have a direct relationship with the specific physical developments of each trimester. Since psychosis involves disruptions in perception of reality, these symptoms are more likely to be triggered by psychological or neurobiological factors not necessarily tied to stages of physical development.(15) Howard noted that a previous history of mental illness is the main risk factor for psychotic disorders during pregnancy, rather than pregnancy-specific factors such as gestational age. Their study also highlighted the importance of social support and psychological stability in reducing the risk of psychotic disorders in pregnant women.(15) Research by Meltzer-Brody further supports this by showing that psychotic disorders in pregnant women are often the result of a complex interaction between hormonal, psychosocial, and biological factors.(17)

Employment Status

Psychotic disorders in pregnant women are generally influenced by biological factors such as hormonal imbalances and a prior history of mental illness. For instance, women with preexisting mental disorders like schizophrenia or bipolar disorder may be more susceptible to psychosis during pregnancy, regardless of their employment status.(17) Although employment may increase stress levels, it is not likely significant enough to trigger psychosis in pregnant women, which is more heavily influenced by genetic and mental health history.

Employment may affect maternal mental health, but this influence is more commonly associated with anxiety and stress rather than psychosis. Psychotic disorders are typically more severe and are rarely triggered solely by external factors such as work. Anxiety, depression, or mood disorders are more commonly observed in working pregnant women. Although such conditions can negatively affect mental well-being, psychosis is more directly related to genetic predisposition and maternal mental health history. Excessive workloads and job-related stress may raise the risk of mental health issues like anxiety or depression, but psychosis is less frequently initiated by external stressors like employment. Psychotic disorders often occur as part of more serious psychiatric conditions, and while work-related stress may exacerbate symptoms in already vulnerable women, it rarely triggers acute psychosis.(19)

Pregnancy is a period marked by significant hormonal changes, and these fluctuations can contribute to psychotic disorders in pregnant women. Research shows that variations in progesterone and estrogen levels during pregnancy may affect maternal mental stability and, in rare cases, trigger psychosis. Therefore, psychotic disorders in pregnant women are more frequently linked to hormonal changes than to employment status or other external factors.(17) The lack of a significant relationship between employment status and psychotic disorders may also be attributed to study limitations, such as a small sample size or the methodology used. If this study utilized a cross-sectional design or failed to control for confounding variables such as prior mental health history, the conclusions drawn may not reflect broader associations. More in-depth or longitudinal research could offer clearer insights into how employment status relates to psychotic disorders in pregnant women

Family Income

Psychotic disorders, such as schizophrenia or delusional disorders, are generally caused by multifactorial factors a combination of genetic, neurobiological, and environmental influences. While environmental factors may include stress, trauma, or substance exposure, family income is not necessarily a direct causal factor in the development of psychotic disorders. According to the National Institute of Mental Health (NIMH), psychotic disorders are more frequently triggered by biological factors, such as neurotransmitter imbalances in the brain or a family history of similar conditions (20). Family income may be associated with access to healthcare resources, education, or lifestyle choices, but it does not directly cause psychotic disorders. Although lower socioeconomic status can elevate stress levels, it does not necessarily lead to psychosis. In this context, low income is more likely to be associated with anxiety or depression rather than psychotic conditions (20). While a higher family income

may provide better access to health services and social support, it does not guarantee protection against serious mental illnesses such as psychosis. Some individuals with higher incomes may also experience psychotic disorders if they possess genetic vulnerabilities or have undergone significant psychological trauma. Thus, family income is not a key variable in determining the risk of psychotic disorders (20).

Knowledge

Psychotic disorders, such as schizophrenia or delusional disorders, are typically caused by a complex interplay of biological, genetic, and environmental factors, which are more intricate than those involved in common psychological issues like anxiety or depression. Biological factors such as neurotransmitter imbalances and a family history of psychotic disorders play a more significant role in the development of psychosis than an individual's knowledge about mental health or pregnancy. Therefore, although knowledge of mental health can aid in managing certain psychological conditions, it may not be a strong enough factor to prevent or influence the onset of psychotic disorders. Research by Tandon suggests that psychotic disorders are more heavily influenced by genetic and biological factors than by knowledge or education levels, which may explain why pregnant women's understanding of mental health is not directly linked to psychosis (21).

Psychological issues such as stress or anxiety may be affected by external factors like knowledge level and stress management skills. However, psychotic disorders involve a disruption in the perception of reality, which is generally not directly associated with an individual's level of knowledge. While pregnant women's awareness may help in identifying early signs of mild psychological problems, it is not sufficient to prevent or mitigate psychotic disorders, which typically require medical interventions and specialized treatment. Psychotic disorders often require clinical management involving antipsychotic medications and intensive psychological therapy, which cannot be addressed merely through enhanced personal knowledge. Thus, even if pregnant women possess good knowledge about mental health or pregnancy, they may still need significant medical intervention to deal with psychotic conditions. Knowledge alone is insufficient to influence or prevent the emergence of psychotic symptoms, which usually involve neurological dysfunction. Biological factors such as chemical imbalances in the brain and family history of psychotic disorders are the primary causes of psychosis, making the link between knowledge and psychotic disorders weak or nonexistent. These biological factors are more dominant in triggering psychosis compared to knowledge about health or stress management, which may be more applicable to other, more common psychological disorders.

Social Support

Chemical imbalances in the brain particularly involving neurotransmitters such as dopamine as well as genetic factors tend to play a greater role in the development of psychotic disorders. While social support can assist individuals in coping with stress or anxiety, it may not be sufficient to prevent or reduce the onset of psychotic symptoms, which are inherently more complex and involve profound neurological dysfunction. Psychotic disorders are primarily associated with neurobiological factors, where social mechanisms such as support from family or friends do not have a direct impact on the onset or severity of psychotic episodes (2).

Psychotic disorders differ fundamentally from common psychological issues such as anxiety or depression. They are characterized by distortions in the perception of reality, such as delusions or hallucinations, which are rarely influenced by social interactions or environmental support. For individuals with psychotic disorders, social support may not produce significant effects, as the condition typically requires more complex medical interventions, including antipsychotic therapy and long-term treatment plans. While social support may benefit individuals with mild to moderate psychological issues, it is generally insufficient to alleviate the symptoms of psychotic disorders (5).

Individuals with psychotic disorders may also respond differently to social support compared to those with other psychological conditions. Symptoms such as social withdrawal or delusional beliefs can impair their ability to accept or perceive the value of social interactions. In some cases, they may even view social support as irrelevant or threatening, depending on the severity and nature of their psychosis (5).

CONCLUSION

The findings of this study indicate that there is no statistically significant relationship between maternal age, education level, parity, gestational age, employment status, family income, knowledge, and social support with the

incidence of psychotic disorders among pregnant women. These results suggest that the occurrence of psychosis during pregnancy is likely influenced by other factors, particularly biological and neurochemical mechanisms, rather than by sociodemographic or psychosocial variables. Therefore, preventive strategies and interventions aimed at addressing psychotic symptoms in pregnant women may need to focus more on medical and clinical approaches, rather than relying solely on educational or social support efforts.

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REFERENCES

1. Spry E, Moreno-Betancur M, Becker D, Romaniuk H, Carlin Jb, Molyneaux E, Et Al. Maternal Mental Health And Infant Emotional Reactivity: A 20-Year Two-Cohort Study Of Preconception And Perinatal Exposures. *Psychol Med*. 2020;50(5):827–37.
2. Pratt Dn, Aberizk K, Guest Rm, Williams Tf, Bilgrami Z, Karp El, Et Al. Schizophrenia Spectrum And Other Psychotic Disorders. *Psychopathology*. 2024;483–530.
3. Ravi M, Bernabe B, Michopoulos V. Stress-Related Mental Health Disorders And Inflammation In Pregnancy: The Current Landscape And The Need For Further Investigation. *Front Psychiatry*. 2022;13:868936.
4. Perry A, Gordon-Smith K, Jones L, Jones I. Phenomenology, Epidemiology And Aetiology Of Postpartum Psychosis: A Review. *Brain Sci*. 2021;11(1):47.
5. Nguyen K, Mukona Lt, Nalbandyan L, Yar N, St Fleur G, Mukona L, Et Al. Peripartum Complications As Risk Factors For Postpartum Psychosis: A Systemic Review. *Cureus*. 2022;14(9):E29224.
6. Glover L, Jomeen J, Marsden J, Wadehul F. Healthcare Professionals' Perspectives On Perinatal Well-Being Across The Perinatal Period. *Int J Childbirth*. 2024;
7. Organization Wh. Social Determinants Of Mental Health. World Health Organization; 2014.
8. Bakker Ab, Demerouti E. Job Demands–Resources Theory: Frequently Asked Questions. *J Occup Health Psychol*. 2024;29(3):188.
9. O'hara Mw, McCabe Je. Postpartum Depression: Current Status And Future Directions. *Annu Rev Clin Psychol*. 2013;9(1):379–407.
10. Stewart De. Depression During Pregnancy. *New England Journal Of Medicine*. 2011;365(17):1605–11.
11. Jones I, Chandra Ps, Dazzan P, Howard Lm. Bipolar Disorder, Affective Psychosis, And Schizophrenia In Pregnancy And The Post-Partum Period. *The Lancet*. 2014;384(9956):1789–99.
12. Jones I, Cantwell R, Nosology Working Group Perinatal Section Rc Of P. The Classification Of Perinatal Mood Disorders—Suggestions For Dsmv And Icd11. *Arch Womens Ment Health*. 2010;13:33–6.
13. Rubertsson C, Hellström J, Cross M, Sydsjö G. Anxiety In Early Pregnancy: Prevalence And Contributing Factors. *Arch Womens Ment Health*. 2014;17:221–8.
14. Lebel C, Walton M, Letourneau N, Giesbrecht Gf, Kaplan Bj, Dewey D. Prepartum And Postpartum Maternal Depressive Symptoms Are Related To Children's Brain Structure In Preschool. *Biol Psychiatry*. 2016;80(11):859–68.
15. Khalifeh H, Hunt Im, Appleby L, Howard Lm. Suicide In Perinatal And Non-Perinatal Women In Contact With Psychiatric Services: 15 Year Findings From A Uk National Inquiry. *Lancet Psychiatry*. 2016;3(3):233–42.
16. Mcgrath J, Saha S, Chant D, Welham J. Schizophrenia: A Concise Overview Of Incidence, Prevalence, And Mortality. *Epidemiol Rev*. 2008;30(1):67–76.
17. Meltzer-Brody S, Howard Lm, Bergink V, Vigod S, Jones I, Munk-Olsen T, Et Al. Postpartum Psychiatric Disorders. *Nat Rev Dis Primers*. 2018;4(1):1–18.

18. Meltzer-Brody S, Maegbaek Ml, Medland Se, Miller Wc, Sullivan P, Munk-Olsen T. Obstetrical, Pregnancy And Socio-Economic Predictors For New-Onset Severe Postpartum Psychiatric Disorders In Primiparous Women. *Psychol Med.* 2017;47(8):1427–41.
19. Almheiri Amaa, Al Zaman Kys, Alameeri Mas, Mohsinabualhab M, Mohamad Maa, Jabeen S. Psychological Impact Of Work-Related Stress During Pregnancy. *Neuroquantology.* 2023;21(6):218.
20. Fusar-Poli P, Cappucciati M, Bonoldi I, Hui Lmc, Rutigliano G, Stahl Dr, Et Al. Prognosis Of Brief Psychotic Episodes: A Meta-Analysis. *Jama Psychiatry.* 2016;73(3):211–20.
21. Tandon R, Nasrallah Ha, Keshavan Ms. Schizophrenia, “Just The Facts” 5. Treatment And Prevention Past, Present, And Future. *Schizophr Res.* 2010;122(1–3):1–23.