ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG1394

Relationship between Socio-Demographic Factors and Postpartum Depression in Teen Mothers: A Case of Kibra Sub-County, Nairobi, Kenya

Ruth Ngugi; Naomi James, PhD; and Stephen Ndegwa, PhD

Abstract:- Postpartum depression is a type of depression that occurs to some mothers after childbirth. Studies show that Postpartum Depression (PPD) also affects teenage/adolescent mothers. The purpose of this study was to establish the prevalence of PPD in teen mothers in Kibra Sub County using descriptive research design. Stratified sampling procedure was used and snowballing method to which achieved a sample size of 300 participants. Data was collected through the use of a Social Demographic Questionnaire (SDQ), and the Edinburg Postnatal Depression Scale (EPDS) was used to assess PPD. Data collected was analysed using Statistical Package for the Social Sciences (SPSS) version 23. Inferential statistics such as Chi-square were also run. The study findings revealed that the PPD prevalence among teen mothers between six weeks and 24 months was at 74.3%.

Keywords:- *Teenage Mothers, Postpartum Depression, Teenage Pregnancy*

I. INTRODUCTION AND BACKGROUND

In the middle of the 19th century, a psychiatrist by the name of Jean-Etienne Esquirol published the first description of postpartum depression. He separated it into two categories: lactational, which occurs more than six weeks after childbirth, and puerperal, which occurs within six weeks of childbirth. Shortly after, a different psychiatrist by the name of McDonald questioned puerperal and stated that its diagnosis should not be limited to time alone but also the severity of symptoms. This was continued by other psychiatrists up to the 20th century, when Strecker and Ebaugh developed a theory to support PPD, after which other psychiatrists and academics began to develop more postpartum theories (Sparks, 2013).

The American Pregnancy Association (2017) defines a teenage pregnancy as one that occurs in a human female who is under 20 at the time of delivery. Despite not being considered a young adult by law, a pregnant young girl who is 12 years old or younger falls under the definition of a teenage pregnancy.

Due to the shift from childhood to maturity, identity crisis is a universal feature of the adolescent/teenage stage of development. Adolescents experience perplexity as a result of their physical, cognitive, emotional, and biological changes. Many females find themselves having children before the age of nineteen during this transitional period where there is a lack of appropriate direction and parental care (Chenneville & Gabiddon, 2021).

Postpartum Depression (PPD) is a mood illness that starts soon after childbirth and typically lasts longer than six weeks. In addition to at least four of the following symptoms, such as increased or decreased appetite, sleep disturbance, psychomotor agitation or retardation, low energy, a sense of worthlessness, low concentration, and suicidal ideation, it is characterized by at least two weeks of persistent low mood or anhedonia (APA, 2013).

While the International Classification of Diseases (ICD-10) classifies postpartum depression as a postpartum mood disturbance lasting six weeks and thus does not recognize postpartum depression as a separate diagnosis, the American Psychiatric Association (APA 2013) classifies postpartum depression as a Major Depressive Episode with onset symptoms within four weeks of pregnancy or four weeks postpartum.

According to Lind et al. (2017), PPD affects up to 20% of women after giving birth and is a global problem. A comprehensive assessment of recent studies on the global epidemiology of PPD was undertaken using a global meta regression analysis approach. The adoption of 565 PPD studies from a total of 80 countries was done. According to the survey, PPD affects 17.22% of the world's population.

A comprehensive assessment of earlier works on the risk factors for postpartum depression was carried out in the United States of America. A study carried out between 1996 and 2016, taking into consideration a total of eight databases, reviewed twenty-one articles. The study found that PPD affects 13% to 20% of women of childbearing age. In America, there are almost four million newborns each year, which results in 520,000–760,000 PPD infections (Hutchens & Kearney, 2020).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG1394

In their systematic study, Dinwiddie et al. (2018) attempted to discover knowledge gaps and studies' shortcomings. The study, which focused on moms who were 18 years old or younger, used studies that were published between 1996 and 2015. Only 67 of the 134 papers the study found matched the inclusion requirements. According to the study's findings, teen moms had a PPD prevalence rate between 14% and 53%, whereas adult mothers had a rate between 6.9% and 16.7%.

Approximately 12 million of the estimated 21 million females between the ages of 15 and 19 who get pregnant each year in developing countries give birth. The global adolescent birth rate (ABR), which was 64.5 births per 1,000 women (15–19 years) in 2000, was forecasted to drop to 41.3 births per 1,000 women by 2023. Although rates of change have varied widely across the world, Southern Asia (SA) has seen the biggest drops, while Sub-Saharan Africa (SSA), Latin America and the Caribbean (LAC), and the rest of the world have seen slower declines. SSA and LAC still have the highest rates in the world—99.4 and 52.1 births per 1000 women in 2022, respectively—despite declines in other regions. ABR varies considerably by region (WHO 2019). Furthermore, 97 per 1000 female adolescents is the estimated ABR for the WHO African Region in 2022, compared to 13.1 per 1000 teenage girls for the European Region. It was noted that there are notable variances between nations. For instance, in Zambia, the percentage of adolescent females between the ages of 15 and 19 who started having children in 2018 varied from 14.9% in Lusaka to 42.5% in the Southern Province (women who had given birth or were pregnant at the time of interview). According to WHO (2019), the mortality rates in the Philippines in 2017 ranged from 3.5 percent in the Cordillera Administrative Region to 17.9 percent in the Davao Peninsula Region.

A study conducted in Havana, Cuba on 273 women for the durations of 4, 12, and 24 weeks postpartum found that 16.4% of the women exhibited PPD symptoms. The prevalence was evaluated using EPDS. The study revealed that Cuban women had lower depression rates than women in other developing nations. However, the rates remained higher than those of high-income nations (Esquivel et al., 2022).

The prevalence rate for PPD was reported to be 20.9% in a cross-sectional study done in Jeddah, West Saudi Arabia. information was taken from a sample of 172 females. The most significant causes of PPD were a history of prior depression and stressful life experiences. Out of the overall population, 59.9% of the participants were married to spouses who were in the military, 80% were housewives, 54.1% had a university education or higher, and 91.3% said they had enough money (Alsayed et al., 2021).

Sangsawang et al. (2019) in Bangladesh looked at the prevalence rate of PPD in adolescent moms and suggested that because PPD affects 10%–57% of mothers, it is a public health concern and that there is a need to develop interventions to reduce PPD among them.

A study was conducted in Asia with the goal of identifying the factors that affects adolescent moms' risk for postpartum depression. The proportion increased when there was a first child and a history of mood problems in the family. Many factors contribute to this problem. Using a cross-sectional methodology, this study. The research was carried out between May 2021 and March 2022. 886 teen mothers in all participated in the survey as respondents. The Edinburg Postnatal Depression Scale (EDPS) questionnaire was utilized in the measurement. The factors linked to postpartum depression were estimated using multiple logistic regression. 50.68% of women have postpartum depression. Monthly family income, pregnancy desire, delivery method, satisfaction with the baby's sex, and spouse support were statistically associated with postpartum depression (Rahmadhani et al., 2022).

A cross-sectional survey was conducted in Malawi from September 7 to March 31, 2022 at the Mitundu hospital in Lilongwe, Malawi. A total of 395 teenage postnatal mothers between the ages of 19 were recruited. PPD was evaluated using the Edinburgh Postnatal Depression Scale. The classification of probable PND used a cut-off point of 10. The determinants of depression were discovered using binary logistic regression. The participants' average age was 17 and out of the entire sample, 43.6% (n = 172) of the respondents had PPD (EPDS scores 10) (Tembo et al., 2023).

A long-term study was conducted to determine the prevalence and risk factors for PPD in women in the Middle East. The 27% prevalence rate of PPD was discovered to be a result of low education, being a housewife, unexpected pregnancies, a weak economic background, and insufficient social support from family members. The prevalence of postpartum depression is higher in the Middle East than elsewhere in the world. In the developed world, it affects 10–15% of mothers. As a result, there is a need to expand routine postpartum screening for depression because 50% of mothers are likely to experience a recurrence during subsequent pregnancies. Depression may overtake heart disease as the top cause of death worldwide by 2030 if therapies are not implemented as part of preventive measures (Ahmad et al., 2021).

One in five adolescent girls in Africa start having children, with East Africa having the highest rate (21.5%). The high rate of adolescent pregnancy in Sub-Saharan Africa (SSA) is mostly a result of societal, economic, and health service-related factors, as well as personal preferences (Kassa et al., 2021).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG1394

In South Africa, the prevalence was highest at 39.96%. Low PPD rates were discovered in high income nations. The study found that PPD, which is related to wealth and geographic development, affects one in every five women (Wang et al., 2021).

A descriptive cross-sectional study using a sample of 326 teenage girls who were seeking maternal health care at a medium-sized rural peripheral district hospital in Ugu, Southern KwaZulu-Natal, between June and November 2017 produced the data. The participants were both pregnant and postnatal teenagers who were screened for depression using the EPDS. Teenagers who were pregnant or had recently given birth and had signs of depression were identified using a cut-off score of 13. The results indicate that Depression was present in 15.9% (21/132) of pregnant participants while it was present in 8.8% (17/194) of postpartum respondents (Govender et al. 2020).

A total of 1344 mothers under the age of 20 participated in the procedure in Cameroon, where a questionnaire was employed to collect social demographic data and information from the EPDS. The study's objective was to determine the prevalence of perinatal depression (PPD) and associated risk variables. The EPDS scores revealed that 70% of teen moms who experienced PPD were impacted. Risk factors such as unwanted pregnancies, being single, feeling depressed or anxious before having a kid, and having had an abortion were associated with this. The study discovered a sizable PPD prevalence and recommended putting a focus on maternity care services to assist moms and their infants (Nicolet et al., 2021).

Mental illnesses like postpartum depression take away from women' ability to function and be the best mothers they can be. Though postpartum depression is highly common in Africa, Kariuki et al. (2022) stated that there hasn't been much research done there to identify the causes, particular rly in low-income communities. They wanted to find out what factors were at-risk for women who visited the maternity and paediatric clinics in Lang'ata and Riruta. According to the research, out of the 567 women who took part in the study and were between the ages of 18 and 24 years old, 27.1% of them experienced postpartum depression as a result of an unplanned pregnancy, poor body image, stressful life events, low educational attainment, and exhaustion.

Do et al. (2018) state that PPD is detrimental to maternal health. PPD negatively impacts parents' health as well as the lives of their children. Thus, a cross-sectional quantitative study was conducted. Two groups of 116 women were created. There was one type of new mother who fit into the Edinburgh Postpartum Depression Scale (EPDS) category if she scored 12 or higher. Mothers in the other category were those with a score below 12. Furthermore, descriptive statistics and binary logistic regression analyses were performed. For EPDS 12, the frequency of PPD in new mothers was 27.6% in the year after delivery. education level, prenatal diseases, being first-time moms, unhappiness in the household, and inadequate communication.

Many biological and psychological changes are linked to the transition from teenage to adulthood. This is based on research that was done in the US. However, the study also pointed out that becoming a mother comes with a lot of difficulties, such as diminished financial resources, physical tiredness, lack of sleep, and other issues that are stressful for any new mother. Teen moms are especially prone to PPD when these two factors are combined with underdeveloped parenting abilities. Adolescent moms who experience PPD may also be affected by other variables, such as a lack of social support, low educational attainment, low socioeconomic position, negative body image, and dysfunctional families (Ladores &Corcoran, 2019).

A study on postpartum depression risk factors among 15 to 18-year-old teenage mothers conducted in Turkey on 135 teenage mothers found that living with a small family, mother age, economic status, mode of delivery, and prenatal care of the baby were risk factors associated with postpartum depression. (Bodur et al., 2010).

To find out if adult and adolescent moms' PPD risk factors differed, a cross-sectional study was carried out in Texas, USA. There were 82 participants in the study, 35 of whom were adult moms over the age of 20, and 47 of whom were under that age. Using the EPDS, postpartum depression was assessed. Adolescent women were shown to be more susceptible to PPD than adult mothers, according to the study. This is a result of their lower level of maturity and lack of education (Yu, 2022).

A long-term study designed to determine the prevalence and risk factors of postpartum depression (PPD) among women in Middle Eastern countries found that a 27% prevalence rate of PPD was caused by low social support from family members, being a housewife, having an unplanned pregnancy, having a low economic background, and having little education (Ahmad et al., 2021).

In a Jordanian study on the impact of parental stress, mother efficacy, and social support on PPD moms, a sample of 200 women under 20 years old was used, and the EPDS showed that 28.5% of them had probable depression. Individuals with high social support, high parenting stress, low self-efficacy, financial stress, and marital conflict reported higher EPDS scores than those without such reports. The results of the study suggest that perceived social support quality—rather than just its availability—should be taken into account (Mohammad et al., 2021).

A total of 520 adolescent mothers who were multistage randomly selected to participate in a structured questionnaire interview were the subjects of a cross-sectional study. At 1-6 weeks postpartum, the Edinburg Postpartum Depression Scale (EPDS) was used to evaluate PPD. The study found out that there were 520 teenage mothers in all, and their average age was 17.85 + 1.22 years. PPD was prevalent in 60.58% of cases. In conclusion,

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG1394

teenage moms in Central Java, Indonesia, frequently had postpartum depression (Rahmadhani et al., 2022).

Almost 500,000 American girls become moms each year, making adolescent pregnancy a frequent and expensive issue. Estimates place the prevalence of postpartum depression among teen moms between 53% and 61%. Psychiatric nurses can take action by identifying the high prevalence of postpartum depression in teenage females, conducting screenings, and making appropriate referrals for therapy (McGuinness et al., 2013).

From the reviewed studies, the researcher has established that postpartum depression is prevalent across the globe. The prevalence rates range from 10% to 70%. This is influenced by different factors such as culture, age, socio economic background, support, and level of education.

II. METHODOLOGY

- *A Total of 300 Questionnaires were Analysed and Used to Complete the Study.*

Authorization was sought from the following institutions; Daystar School of Applied Human Sciences, Daystar University Institutional Scientific Ethics Review Committee (DU-ISERC), The National Commission for Science, Technology and Innovation (NACOSTI) as well as the Nairobi County Government. The study was introduced to the teen mothers. For participants who were below the age of 18 years, the researchers obtained consent of parents/guardians to collect data from the minors. The minors were also given an opportunity to assent to participate in the study. Those who were 18 years and above voluntarily signed informed consent to participate.

The researchers constructed questionnaires to collect data on social demographic aspects for example, age, level of education residence etc. To assess prevalence of Postpartum Depression, Edinburg Postnatal Depression Scale (EPDS) was administered. With the help of research assistants, the teen mothers were guided on filling in the questionnaires and EPDS tool.

The Edinburgh Postnatal Depression measure (EPDS) is a 10-item self-rating measure created by Cox et al. in 1987. A validation study utilizing the Research Diagnostic Criteria for depressed illness derived from Goldberg's Standardized Psychiatric Interview was conducted on 84 mothers following a series of in-depth pilot interviews. The EPDS was shown to have appropriate specificity and sensitivity, and it was also proven to be responsive to changes in the duration and intensity of depression. The scale features a straightforward scoring system and can be finished in roughly five minutes (Cox et al. in 1987).

The study utilized Statistical Package for Social Sciences Version 23 to analyse the data. The prevalence of postpartum depression was analysed using descriptive statistics, frequencies and determined through socio demographic properties. To determine the relationships between PPD and socio demographic properties, chi square test of independence was used. The p-values were set at significance level of 0.05.

III. RESULTS

This study sought to establish the prevalence of Postpartum Depression among adolescent mothers in Kibra Sub-County, Nairobi, Kenya. To establish the prevalence of PPD, the 10-question Edinburgh Postnatal Depression Scale (EPDS) was rolled out to the study respondents, who were asked to check whether their responses to the questions came closest to how they had felt in the previous 7 days. A score of 14 points and above indicated probable depression.

Table below provides a summary of the study findings.

Table 1:The Prevalence of Postpartum Depression among the Respondents

	Frequency	Percent	Cumulative Percent
<8 (Depression less likely)	20	6.7	6.7
9-11 (Depression possible)	31	10.3	17.0
12-13 (Fairly high possibility of depression	26	8.7	25.7
>14 (Probable depression)	223	74.3	100.0
Total	300	100.0	

Based on Table 1 on the EPDS (Edinburgh Postnatal Depression Scale) scores of the teenage mothers in Kibra Sub-County, Nairobi, Kenya, the finding offers insightful information about the prevalence of postpartum depression in this population. Each of the four ranges of EPDS scores corresponds to a distinct chance of postpartum depression.

From the table, a sizable majority of the teen mothers, constituting 223(74.3%) of the respondents qualified into the "Probable depression" category with EPDS scores of 14 and above. . This study showed that a sizeable percentage of young women in Kibra Sub-County were at an increased risk of developing postpartum depression. The EPDS scores in this range indicated a high probability of depressive symptoms, which can have a negative impact on both the mothers' health and compromise their capacity to care for their infants.

Furthermore, 26(8.7%) of the respondents scored between 12 and 13, meaning a "Fairly high possibility of depression." This showed that symptoms that call for care and attention were being experienced by even more teenage mothers. Additionally, 31(10.3%) scored between 9 and 12 thus classified as "Depression possible," whereas 20(6.7%) had EPDS scores below 8, which was classified as "Depression less likely." These groups nevertheless

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG1394

represent a sizeable share of teen mothers who are either at risk for or are already dealing with postpartum depression.

These findings underscore the urgent need for a thorough mental health support and intervention programs tailored to the unique challenges faced by teenage mothers in Kibra Sub-County. The prevalence of postpartum depression in this population is alarmingly high, highlighting the importance of early discovery and roll out of appropriate intervention to mitigate the adverse effects on both the mothers and their infants.

A Chi-square Test for respondents' socio-demographic characteristics and PPD was done, to ascertain to what extent the social demographic characteristics influenced PPD. The results received are presented in table 2.

The prevalence rate is close to that of this study of 74.3% which was also carried out in a city slum where the socio economic situation and other environmental factors are more or less the same.

According to this study, educational background does not have any significant correlation with PPD. This is incongruent with Niyonsenga and Mutabaruka, (2020), who stated that low education level contributed to PPD among teen mothers in Rwanda. The study is also inconsistent with (Decastro et al., 2011) who indicated that low education level contributes to PPD among the teen mothers. the study also contrast a study carried out in Jordan which indicated that teen mothers with low education level are at a high risk of PPD. Atuhaire and Cumber (2018) also disagrees with the findings of this study and states that adolescent mothers with low education level are more prone to develop PPD.

This study was conducted shortly after Covid 19 pandemic which affected many people worldwide economically and psychologically. The effects of the pandemic are likely to have impacted on the study. Lack of social support also came out strongly in this study as a major contributor to the prevalence of PPD. Most girls cited lacking psychological support from their parents. Though the parents had accepted their children, they kept talking to them harshly about the situation which neutralized the financial support they had offered. Again most of the girls who are between 15-19 years are likely to have dropped out of school leading to idleness. Having dropped out of school, they are not able to easily acquire employment. On the other hand, it is difficult to get manual jobs as many people are not in a position to pay for them. This exacerbates the symptoms of PPD among them. The poverty levels in the slum areas is quite high as many households are not able to meet their basic needs.

IV. CONCLUSION

Postpartum depression is a significant risk to young moms and carries additional implications when it affects teenage mothers. PPD negatively affects the quality of life especially when left untreated. Moms suffering from PPD are more likely to experience poor health outcomes because of their tender age, cultural and societal standards, developmental crisis, and the demanding nature of parenthood. Creating long-lasting support networks, improving economic welfare of such moms as well as training them on self-efficacy, can significantly reduce the negative impacts of motherhood at this early age. The negative effects of motherhood at this early stage can be greatly reduced by designing sustainable support systems.

REFERENCES

[1]. Alsayed, N. A., Altayyeb, J. F., Althuniyyan, L. S., Alzubaidi, S. K., Farahat, F., & Althuniyyan, L. (2021). Prevalence of postpartum depression and associated risk factors among women in Jeddah, Western Saudi Arabia. *Cureus*, *13*(4).

[2]. Alshikh Ahmad, H., Alkhatib, A., & Luo, J. (2021). Prevalence and risk factors of postpartum depression in the Middle East: a systematic review and meta analysis. *BMC Pregnancy and Childbirth*, *21*, 1-12.

[3]. Atuhaire, C., & Cumber, S. N. (2018). Factors associated with postpartum depression among adolescents in Uganda. *Pan African Medical Journal*, *30*(1).

[4]. Bodur, S., Özdemir, S., & Ayvaz, K. (2010). Risk factors for postpartum depression in a group of teenage mothers. *Türkiye Klinikleri J Gynecol Obst*, *20*, 22-8.

[5]. De la Calle, M., Bartha, J. L., Lopez, C. M., Turiel, M., Martinez, N., Arribas, S. M., & Ramiro- Cortijo, D. (2021). Younger age in adolescent pregnancies is associated with higher risk of adverse outcomes. *International Journal of Environmental Research and Public Health*, *18*(16), 8514. Chicago

[6]. Chacko, M. R. (2017). Pregnancy in adolescents.

[7]. Chenneville, T., & Gabbidon, K. (2021). global perspectives on the sociocultural, economic, and political contexts shaping adolescent sexual behaviors: introduction to a special issue. *The Journal of Primary Prevention*, *42*(4), 319-322.

[8]. Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry 150:782-786.

[9]. Dinwiddie, K. J., Schillerstrom, T. L., & Schillerstrom, J. E. (2018). Postpartum depression in adolescent mothers. *Journal of Psychoomatic Obstetrics & Gynecology*, *39*(3), 168-175.DSM IV (1994), (4th Edn.)

[10]. Do, T. K. L., Nguyen, T. T. H., & Pham, T. T. H. (2018). Postpartum depression and risk factors among Vietnamese women. *BioMed Research International*, *2018*.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24AUG1394

[11]. DSM V (2013), (5th Edn.) Diagnostic Statistical Manual
[12]. Esquivel Lauzurique, M., Vera Fernández, Y., Dennis, C. L., Rubén Quesada, M., Álvarez Valdés, G., Lye, S., & Tamayo-Pérez, V. (2022). Prevalence, incidence, and persistence of postpartum anxiety, depression, and comorbidity: a cohort study among women in Havana Cuba. *The Journal of Perinatal & Neonatal Nursing*, *36*(4), E15-E24.
[13]. Govender, D., Naidoo, S., & Taylor, M. (2020). Antenatal and postpartum depression: prevalence and associated risk factors among adolescents in KwaZulu-Natal, South Africa. *Depression research and treatment*, *2020*.
[14]. Hutchens, B. F., & Kearney, J. (2020). Risk factors for postpartum depression: an umbrella review. *Journal of Midwifery & Women's Health*, *65*(1), 96-108.
[15]. Kariuki, E. W., Kuria, M. W., Were, F. N., & Ndetei, D. M. (2022). Predictors of postnatal depression in the slums Nairobi, Kenya: a cross-sectional study. *BMC Psychiatry*, *22*(1), 1-9.
[16]. Kassa, G. M., Arowojolu, A. O., Odukogbe, A. T. A., & Yalew, A. W. 2021). Adverse maternal outcomes of adolescent pregnancy in Northwest Ethiopia: A prospective cohort study. *Plos One*, *16*(9), e0257485.
[17]. Ladores, S., & Corcoran, J. (2019). Investigating postpartum depression in the adolescent mother using 3 potential qualitative approaches. Clinical Medicine Insights: Pediatrics, 13, 1179556519884042.
[18]. Lind, A., Richter, S., Craft, C., & Shapiro, A. C. (2017). Implementation of routine postpartum depression screening and care initiation across a multispecialty health care organization: An 18-month retrospective analysis. *Maternal and Child Health Journal*, *21*, 1234-1239.
[19]. Mohammad, K. I., Sabbah, H., Aldalaykeh, M., ALBashtawy, M., Z Abuobead, K., Creedy, D., & Gamble, J. (2021). Informative title: Effects of social support, parenting stress and self-efficacy on postpartum depression among adolescent mothers in Jordan. *Journal of Clinical Nursing*, *30*(23-24), 3456-3465.
[20]. McGuinness, T. M., Medrano, B., & Hodges, A. (2013). Update on adolescent motherhood and postpartum depression. Journal of psychosocial nursing and mental health services, 51(2), 15-18.
[21]. Nicolet, L., Moayedoddin, A., Miafo, J. D., Nzebou, D., Stoll, B., & Jeannot, E. (2021). Teenage mothers in Yaoundé, Cameroon—risk factors and prevalence of perinatal depression symptoms. *Journal of Clinical Medicine*, *10*(18), 4164.
[22]. Niyonsenga, J., & Mutabaruka, J. (2021). Factors of postpartum depression among teen mothers in Rwanda: a cross-sectional study. *Journal of Psychosomatic Obstetrics & Gynecology*, *42*(4), 356-360.
[23]. Petersen, I., Peltola, T., Kaski, S., Walters, K. R., & Hardoon, S. (2018). Depression, depressive symptoms, and treatments in women who have recently given birth: UK cohort study. *BMJ Open*, *8*(10), e022152.
[24]. Rahmadhani, W., Kusumastuti, K., & Chamroen, P. (2022). Prevalence and determinants of postpartum depression among adolescent mothers: A cross-sectional study. *International Journal of Health Sciences*, *6*(2), 533-544.
[25]. Sparks, R. (2013). *Sadness and Support: A Short History of Postpartum Depression*. Mary Becker Rysavy Essay Contest-UI Carver College.
[26]. Sangsawang, B., Wacharasin, C., & Sangsawang, N. (2019). Interventions for the prevention of postpartum depression in adolescent mothers: A systematic review. *Archives of Women's Mental Health*, *22*, 215-228.
[27]. Tembo, C., Portsmouth, L., & Burns, S. (2023). Postnatal depression and its social-cultural influences among adolescent mothers: A cross sectional study. *PLOS Global Public Health*, *3*(6), e0002025.
[28]. Wang, Z., Liu, J., Shuai, H., Cai, Z., Fu, X., Liu, Y., ... & Yang, B. X. (2021). Mapping global prevalence of depression among postpartum women. *Translational Psychiatry*, *11*(1), 543.
[29]. World Health Organization. Adolescent mental health. 2018 https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health
[30]. Yu, M. (2022). *Are Risk Factors for Postpartum Depression Different Between Adult and Adolescent Mothers of Infants in Neonatal Intensive Care?* [Unpublished doctoral dissertation].