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Intervention Strategies for Postpartum Depression among Mothers with Newborn Babies in Nairobi County

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ABSTRACT: Postpartum depression (PPD) is common, disabling, and treatable. The strongest risk factor is a history of mood or anxiety disorder, especially having active symptoms during pregnancy.This paper examines Intervention Strategies for Postpartum Depression among Mothers with Newborn Babies in Nairobi County. The study adopted mixed method approacha mixed-method approach (Triangulation Design) was considered suitable for the study since both qualitative and quantitative data were collected, allowing the researcher to have a thorough grasp of the phenomenon under the study. Purposive sampling was specifically used in this study as a nonprobability sampling technique to select a sample of 184 from 350 patient mothers in Nairobi County. Data was collected using questionnaires and analyzed using descriptive and inferential statistics using statistical Software Package for Social Science (SPSS) version 22. Cronbach's Alpha Coefficient was used to ensure reliability of research instruments. The findings of the study identified peer support, family support and professional support as an effective intervention and treatment of postpartum depression among mothers with newborn babies in Nairobi County Kenya. Findings showed that clinically, physiologically, and psychologically significant reductions in participants' feelings of anxiety and high stressful means of living. Majority of the mothers reported positive result of the intervention and treatment of PPD. The study recommends that on the family level support is needed to support mothers to improve their conditions through strengthening family psychological and emotional support; Partners should intensify love and care to enable mothers to appreciate motherhood as they care for their babies. The study also recommended mothers to register their pregnancy to public health clinics and continue after giving birth in order to benefit from intervention and treatment of PPD. And finally the government should take care of the mothers and their babies by improving public health facilities, offer home-visit services to new parents.

I. Introduction

Postpartum depression (PPD) is a significant public and mental health issue, with long-lasting effects on mothers and children. It is expected to be the second largest problem among all general health issues by the year 2030 and 10% - 20% of new mothers experience PPD globally. Early intervention has shown to be effective yet the consensus on best practice is not clear.

Postpartumdepression is a highly prevalent mental health problem with harmful consequences forwomen, babies, and mother–infant relationships.Postpartum depression is a common occurrence which is often undiagnosed when symptoms are not severe and may progress into severe or chronic state if unrecognized and untreated. Being the most frequent form of mental illness in the postpartum period, it can begin as early as two

weeks after delivery and can persist indefinitely if untreated. There is no routine screening of PPD at the postnatal clinic. Its effects are not only on the mother but also on the infant and the family at large. A depressed mother will have difficulties in taking and following postpartum advice from a health care provider such as: Recognizing postpartum danger signs, self- care and care of infant, attending scheduled hospital visits and compliance to other medications. The impact of this would be increased maternal and perinatal morbidity and may be mortality from direct or indirect causes of PPD.

II. BACKGROUND

Treatments involving education and early support for mothers were found to be helpful in addressing early symptoms as well as reducing the long-term detrimental effects of PPD (Brazeau et al., 2018). Some evidence-based programs were prominent across the literature and included Mothers & Babies (MB), Interpersonal Psychotherapy (IPT) and Mindfulness based programs (Malis et al., 2017). Mothers and Babies (MB) is a manualized intervention used for prevention and treatment of PPD. It is based on Cognitive Behavioral Theory and Attachment Theory and focuses on mood, stress and attachment of mother and infant (Tandon et al., 2018). Interpersonal Psychotherapy (IPT) is a brief and present-focused therapy that centers on the interpersonal context of depression (Carter et al., 2010). Mindfulness interventions typically involve training in concepts of attention and focus on the present moment to encourage a more open and less judgmental view of any situation (Sheydaei et al., 2017). There was no uniform approach and the research consistently suggested that providers take an individualized, patient-centered approach(Malis et al., 2017; Mao et al., 2012).

In US, a well-developed treatment strategy comes from an interactional/problem-solving viewpoint, and it consists of seven tactics (accepting conflicting complaints, normalizing these complaints, assessing significant others for the possibility of change, reframing depression as positive but costly, deriving adaptive behaviors from maladaptive premises, involving others in childrearing, and predicting and preventing relapse (Cohen, et al., 2010; Kraus & Redman, 1986). On the other hand, Albright (1993) suggested that the most crucial factor for treating patients with PD is a complete psychological assessment in order to identify the variables involved in each case; theninterventions addressing specific variables should be formulated. Furthermore, there is little research addressing primary interventions aimed at PD before delivery that focuses on single mothers. One study currently under investigation involves five sessions of individual and group psychotherapy and some psycho-education aimed at a select group of soon-to-be mothers ruling out of the study women with particular risk factors listed above as critical to the development of such disorders (Zlotnick, 2008).

Access to care was shown to be an important factor in determining the success of any intervention. Women across high and low risk groups often had barriers to treatment due to stigma or fear and shame to disclose symptoms to doctors or untrusted professionals (Jewell et al., 2015). Regardless of treatment setting (e.g. group therapy in a community center or hospital, Listening Visits in the home or individual psychotherapy in a private office), if women encountered too many barriers to stable access treatment, intervention was ineffective, regardless of approach (Mcfarlane et al., 2016; Segre et al., 2015; Yator et al., 2016). However, if women were provided solutions to barriers such as transportation or childcare, or offered community based treatment in their own home with a trusted provider, then there was a higher success rate unrelated to treatment approach, intervention, or risk level (Pessagno& Hunter, 2013). Effective interventions include those that address the whole person, and focus on behavioral and cognitive changes, emotional regulation strategies and education that can increase sense of wellness and self-efficacy (Letournea et al., 2017; Kleinman&Reizer, 2018; Mao et al., 2012; Thitipichayanant et al., 2018).

According to Rojas et al., (2007) in Chile psychotherapy interventions in the context of larger multicomponent packages were examined. From the study psychosocial interventions in the context of a comprehensive care approach delivered in primary care settings in women diagnosed with depression during the first year postpartum found significant improvement associated with participation in a group intervention providing

psycho-education and CBT in addition to monitoring and support for treatment adherence and pharmacotherapy if needed, as compared with care as usual.

According to Strom (2017) Social connection is necessary during the postpartum time. Encourage mothers to ask for help and connect with family, friends, and supportive people through recreation, classes, and religious groups among others. Postpartum Support International (PSI), a world-wide organization founded in 1987, exists to provide support, reliable information, resources, and education for distress in pregnancy and postpartum. PSI coordinators help women, families, and providers to find support and make connections. Women can connect with a local volunteer who can put her in touch with appropriate postpartum resources depending on her needs.

Interventions to treat the postpartum depression include drug interventions, psychological interventions and psychosocial interventions (Werner *et al*., 2015), and nursing interventions (Segre *et al.*, 2010; Horowitz *et al*., 2013).

Drug interventions involve using psychotropic medications and hormone administration (Werner *et al*., 2015). Psychological interventions include interpersonal therapy, cognitive behavioral therapy and postnatal psychological debriefing (Werner *et al*., 2015). Interpersonal therapy can help pregnant women improve intimate relationships, build social support networks and manage the shift to a mother's role with public assistance (Werner *et al*., 2015). Cognitive behavior therapy (CBT) is an empirically supported treatment for prevention and treatment of depression across the life course (Drury *et al*., 2016). There is evidence that CBT provided as individual therapy has effect on postpartum depression when CBT was provided to highest risk individuals (Drury *et al*., 2016). Psychological debriefing is a controversial treatment which requires interviewer explores a person's experience of a traumatic event with the aim of reducing psychological distress after trauma and preventing post-traumatic stress disorder (Werner *et al*., 2015). Psychosocial interventions include antenatal and postnatal classes and postnatal support (Werner *et al*., 2015). Antenatal and postnatal classes will help to introduce the PPD and how to identify and treat it; discuss the social and emotional challenges of pregnancy; have education about self-care, social support and problem-solving skills (Werner *et al*., 2015). The classes also have several of the interventions to avoid unrealistic beliefs about pregnancy and motherhood (Werner *et al*., 2015).

III. METHOD

Research Design

A research design, according to Kathori (2013), is a conceptual framework used to carry out a study. It acts as a roadmap for data collection, measurement, and analysis. In this research, the author employed convergent parallel mixed-method design. A mixed-method approach (Triangulation Design) was considered suitable for the study since both qualitative and quantitative data were collected, allowing the researcher to have a thorough grasp of the phenomenon under the study. The key idea behind this approach is that due to the design, the researcher was able to simultaneously gather both qualitative and quantitative data, evaluate each kind individually, and then combine them during interpretation (Creswell, 2014). The advantage of this strategy is that it includes both the generalizability of quantitative data and the information about the context or setting offered by qualitative data (Creswell, 2014).

Location of the Study

The Pumwani Hospital and the Nairobi Women's Hospital were the two hospitals chosen for this study in Nairobi County. Nairobi County contains the city of Nairobi. Nairobi is the most ethnically diverse city in the nation because of the variety of races and ethnic groups that call Nairobi home. According to the 2016/2017 census, the County has a population of over 5 million people; the majority of them are from diverse regions of

the nation.The choice of the location was supported on the assumption that Pumwani (PMH) is the largest maternity hospital in East Africa that caters for women from lower socio-economic status. In addition to serving women from informal settlements and low-income residence areas, this public hospital is a referral center for complicated obstetric cases (Beard et al., 2010).Nairobi Women's was chosen because it is located in Nairobi(Hurlingham),it serves over 120,000 inpatient customers annually.it also provides affordable, comprehensive and high quality delivering packages. This inspired the researcher to investigate different types of social support associated with postpartum depression among mothers that gave birth in those hospitals.

Target Population

Gravetter and Forzano (2009) define population as the entire group of persons who are significant to the researcher and the subject of the investigation findings are to be generalized. In this study, the population (N) comprises all mothers that are confirmed to be in their postpartum period within 6 weeks to 12 weeks of delivery in those two hospitals in the Kenyan county of Nairobi. In this research, the target population was mothers between the ages of 16 years to 45 years and above who have babies ranging from birth to a year and living in Nairobi County. Target population was 239 mothers at risk of PPD mothers at risk of PPD from both Pumwani and Nairobi women hospital formed the population for this study.

Sampling Procedure and Sample Size

As stated by Gravetter and Forzano (2009) sampling involves selecting the participants that the researcher intends on using in the study. This process is done in such a manner that the participants selected will be representative of the whole populace. How closely the sample reflects the population is referred to as the degree of representativeness. Sampling strategies are defined by Mugenda and Mugenda (2003) as the procedures for choosing the respondents who will be the study's participants. These techniques fall under the categories of non-probability sampling and probability sampling. When the entire population is known to the researcher, probability sampling was used; therefore, the odds of selecting a particular individual are known and can be calculated. With regard to non-probability sampling, Mugenda and Mugenda (2003) assert that it is used when it is not in the interest of the researcher to use a sample that is a good representation of the general populace. Purposive sampling was specifically used in this study as a nonprobability sampling technique. Gravetter and Forzano (2009) describe purposive sampling as the most used method in behavioral science where participants are selected on the basis of availability. The researcher justified the choice of Pumwani Maternity hospital and Nairobi women hospital as an appropriate place for obtaining the data. Gravetter and Forzano (2009) assert that the bigger the sample size, the more the improvement in accuracy and the more representative it will be of the entire population. Pumwani Maternity hospital has a bed capacity of 354 beds and an average of 40-60 deliveries per day (Beard et al., 2010). Mogire (2013) gives a figure of approximately 1,500 deliveries each month. Based on these numbers, the researcher selected 150 participants for this study and 250 participants from Nairobi women hospital which has a bed capacity of 479 beds. Through the sharing of their opinions and personal experiences, research participants in qualitative studies can contribute to the expansion of theoretical and practical knowledge and offer potential professional practice interventions (Orodho, 2004).

Sampling Frame for Mothers with newborn baby,

Table 1;

Category Population	Target	Sample	Sampling Technique	% Size
Pumwani Hospital	354	100	Purposive Sampling	100%
Nairobi Women Hospital	479	80	Purposive Sampling	100%

Total	**833**	**184**

Yamane's formula (Sample size)

The study utilized Yamane's (1967:886) simplified formula because we were working with a finite population to calculate sample sizes. From the target population of 100 patients per hospital, a sample size of 50 respondents was arrived at as follow:

$$n = \frac{N}{1 + N(e^2)}$$

Where: n = Sample size.
N = Population size
e = the error of Sampling (0.05)

Population size-354.at 5% Moe, the sample size would be 354

1+354(0.5)2
= 354
26
=184

Barley (1987); Mugenda and Mugenda (2009) contend that the minimum considerable sample size should be 55 participants. Guthrie (2010) points out that result from a sample of 55 participants typically follow a normal distribution. The size of the sample is less crucial, however, if the primary goal of the research is to explain a condition, problem, or phenomena (Kumar, 2011) using the sample size of less than 55 patients, the sample framework allocation will be computed using average proportionate weight of the total as advanced by Neyman (1934).

$$n_k = \left[\frac{N_k}{N}\right] n$$

.

Where: n_h - The sample size for stratum (department/parastatal) h,
n - Total sample size,
N_H -The population size for stratum (department/parastatal) h,
N- The total target population

Research Instruments

The study used a questionnaire and interview guides. The questionnaire had four sections; the first section consisted of socio-demographic items to collect data concerning the women's age, babies' gender, employment status, marital status, mode of delivery, whether the pregnancy was planned or unplanned and the living arrangement. The questionnaire had open-ended inquiries. The respondents had the flexibility to express themselves in open-ended surveys. The interview guide provided a chance to inquire about the mothers on their perceived interventions that have helped them and the social support they received during the period of PPD.

To Examine Interventions Available for the Treatment of Postpartum Depression among Mothers with newly born babies in Nairobi County

The current study's third objective was to ascertain how postpartum depression was treated among mothers in Nairobi County who had recently given birth to children. To get the data, the researcher used quantitative tools

the Enderburge screening scale, as well as postpartum social support questionnaires developed for mothers to determine the available treatment of PPD.

Statistical Information on Postpartum Care Options Depression

The study's goal was to identify the various postpartum depression treatments available that are accessible to new mothers. Table 17 details the results in more detail.

Table2: Descriptive Statics on available Treatment of PPD

STATEMENT	Mean	S.D
I receive care and support from partner	3.29	1.14
I attend clinic	4.76	1.01
I attend counseling	3.00	1.16
I received emotional support	3.48	1.17
I received good treatment	3.75	1.10
I have experienced love and moral support	3.22	1.13
I have received medical support	3.44	1.12
I received miscarriage prevention	3.37	1.20
I received no treatment and support	2.12	1.29

The findings in table 16 showed a consistent mean score at different levels of treatment received from the participants between (Mean= 2.12 - 4.76). Again, the findings showed the highest mean score among the participants who attend clinic (Mean = 4.76). This implies that participants who have received treatment from attending clinics might have experienced a reduction in postpartum depression incidence.The results indicated that participants who received no treatment recorded the lowest mean score (Mean = 2.12).The findings reaffirmed Tripathy, et al. (2020) that showed that psychosocial and Reducing postpartum depression can be accomplished with psychological therapies. Results suggested using a community-based strategy for a group-based intervention. Anokye, Acheampong, Budu-Ainooson, Obeng, and Akwasi (2018) also came to the same conclusions. The results demonstrated that the most successful intervention utilized by healthcare professionals to lessen depression symptoms was psychosocial support (p=0.001). The findings reaffirmed Knopp, Y. M (2017). The study found partner support as the highest-ranking source of support for the women. The study of support from a partner, family, and friends in terms of feeling and evaluation were found to be sources and forms of support as perceived by the mothers experiencing PPD.

"I have been treated well. I have come for clinics and I'm following the doctor's instructions. She's told me not to do hard chores so that I don't re-open the wound and I haven't and I think I'm healing quite fast because of it." C160

"Able to have more milk for breastfeeding." OR 17

The above interview responses from the second guiding question 'How has the treatment help to improve your state of health?' Show that doctors are also critical to helping new mothers with problems relating to the baby and her body which could be stressful to her mental health and hence help with PPD.

To Examine the Success of the Treatments That Are Currently Offered For Postpartum among Mothers with newly born babies in Nairobi County.

The current study's third objective was to ascertain how postpartum depression was treated among mothers in Nairobi County who had recently given birth to children. To get the data, the researcher used quantitative tools the Enderburge screening scale, as well as postpartum social support questionnaires developed for mothers to determine the available treatment of PPD.

Descriptive Statistics on the Effectiveness of the Interventions Available for the Treatment of Postpartum

The investigation's objective was to ascertainhow well postpartum depression treatments for moms of new newborns actually worked. The table provides the finding's specifics.

Table 3: Descriptive Statistics of the Effectiveness of the Treatment of PPD

Effectiveness of the Treatment	Mean	S.D
I can focus on physical and mental recovery	4.57	1.01
I have learned anger management	3.23	1.24
It leads to avoidance of miscarriage	3.06	1.45
Increased in self esteem	3.61	1.29
I enjoyed motherhood	4.92	1.00
I have enough rest and peace of mind	3.23	1.32
I find joy and happiness	3.12	1.10
No improvement	2.17	1.00
It has reduced the level of stress and anxiety	3.46	1.28
I have improved in healthy living	3.26	1.47

The data in table 16 revealed that participants had grown completely after receiving PPD treatment and intervention with a similar pattern of mean score between (Mean= 2.17 - 4.92). Again, the findings showed the highest mean score among the participants who believed the treatment has improved their physical and mental recovery and helped them to enjoy motherhood (Mean = 4.57) and(Mean = 4.92) respectively. This implies that the different treatment and intervention received by the participants has generally brought a holistic growth on their mental well-being .The finding showed that participants who believed the treatment they received had no impact on their mental well-being recorded the lowest mean score (Mean = 2.17). Additionally, cultural differences have a significant impact on desired forms of assistance.(Shorey,Ng,Siew,Mörelius&Yoong 2019). Social support as perceived by mothers with newly born babies in relation to cultural diversity could reduce PPD incidence may increase the risk of PPD.The conclusion is consistent with the studies done by Mutisya, Ngure, and Mwachari's (2018) study, between the psychosocial intervention group and the control group receiving conventional antenatal care, there was a statistically significant difference in the overall ratings for physical and intimate partner violence.

IV. Discussions

A study carried out by Shorey, Chee, Ng, Lau, Dennis, and Chan (2019) to evaluate using a randomized controlled trial in China, a peer-support intervention program based on technology is being used to

prevent postpartum depression. A parallel-armed, randomized controlled study was carried out. From a tertiary hospital in Singapore, 138 mothers at risk of PND were enlisted for the trial (69 in the intervention group and 69 in the control group). 20 peer volunteers were recruited to assist these mothers by word-of-mouth, and a psychiatrist trained them in social support techniques prior to the intervention. A weekly phone call or text message check-in with a peer volunteer was part of the 4-week intervention. Peer support was provided to the intervention group in addition to the level of treatment provided by the hospital. The control group received only regular postnatal care. The finding reported that has been discovered that social support is useful in recovering new moms' emotional wellbeing. Therefore, it is essential to provide mothers with support during the critical postpartum time in order to reduce in addition to the caliber of care the hospital offered. The control group only received standard postpartum care discovered to be beneficial in lowering new mothers' likelihood of developing PND, and it also shown a generally encouraging trend toward increasing felt social support and decreasing PNA.

Interventions according to Aubry, C., et al., (2021), the lived experiences of pregnant and non-pregnant women with depressive symptoms (N = 44) who participated in 2 studies involving group-based face-to-face mindful physical activity interventions for depressive symptom self-management were examined. In contrast to a technology-based or asynchronous alternative, participants chose a synchronous group-based intervention for treating depressed symptoms. Regarding the group structure, four key features emerged: Shared experiences increased the sense of safety and the effectiveness of the group interventions; group facilitators were crucial in creating a secure environment. The results of this study showed that depressed women benefit from and like synchronous group-based therapies because they can relate to other women's experiences and feel comfortable in the environment that group instructors provide.

In the United States counseling is has been suggested as one of the preventive measures , it is the role of the counselor is to provide primary intervention whenever possible to assist in the normal development and functioning of people in the least invasive and restrictive manner. Prevention also applies to counseling activities that remove barriersto services thus preventing worsened outcome. In any case, prevention is the avoidance of illness (Rose, 2001) and counselors take measures to decrease the incidence of postpartum mood disorders. Increasing the client's knowledge of stressors and potential stressors with a focus on particular stress reduction, problem solving, stress inoculation and relaxation training, physical health interventions such as nutritional guidance and exercising, and goal planning and time management (Pfost, Stevens, &Matejcak, 1990). Psychoeducation and counseling aimed at modifying the client's negative expectations of the entire process from pregnancy through early infant care and negative self-statements regarding the client's capacity can assist in prevention of PPMDs. Assisting the client and the father of the baby to increase communication skills, negotiating tasks of child care and household management, and revamping role assignments to fit the couple's specific situation, and increasing problem solving skills can all serve as means of reducing the stress associated with PPMD. Further, increasing the client's social support network to extended family and beyond may provide needed preventative measures (Pfost et al., 1990).

Coo, S., et al., (2018) conducted a qualitative and case series report study to examine the results of a group intervention for emotional wellbeing created to address maternal anxiety and depression while promoting the growth of the mother-infant bond. Five women with depression and/or anxiety disorders were enrolled in the study, and their infants made up the group for emotional wellbeing. The pre- and post-intervention evaluations that the participants completed included self-report measures of mood and the experience of motherhood. Four of the individuals experienced clinically significant reductions in their anxiety symptoms, according to the study's findings. All women expressed satisfaction with their children and their mothering experiences.

In Africa, few studies examined intervention for treatment of PPD as perceived by the mothers with PPD. Baumel, Tinkelman, Mathur and Kane (2018) carried out a non-randomized trial that aims to investigate the

applicability, acceptability, and early clinical results of 7 Cups of Tea (7Cups). This intervention is a digital platform that offers moms with PPD self-help resources and round-the-clock emotional support from trained volunteers. In order to account for potential confounders, the study compared women who received 7 Cups to those who received standard care. This study also showed that the level of emotional support obtained through this channel is seen by those with mental illness as appropriate, enabling technology to not only permit an unprecedented expansion in supporting human resources. The study recommended employing a computerized training system to prepare laypeople to interact with patients with mental illnesses as part of routine care, without any in-person advice or screening. The research was pertinent to the current study since it aimed to solve the problems of quality support deemed adequate for PPD patients.

According to Musau (2013) who conducted a study on prevalence of postpartum depression among women delivering at kenyatta national hospital. The findings realized that they should be formed the bases for the need of routine screening of PPD in the PNC especially those mothers of low social economic status. This would help prevent PPD at all levels hence a healthy mother.

V. CONCLUSION

Postpartum Depression **(**PPD) is one of the most common complications of childbirth. When untreated, it has the potentialfor a profound negative impact onmothers, children, and families. Case identification and accurate diagnosis are important. Psychosocial, psychological, pharmacological, and somatic interventions are each effective treatment options for PD, depending on the severity of the clinical presentation. Uptake of effective treatments is a problem, so innovative treatments and models of care are being developed to combat barriers to treatment acceptability and access. It is hoped that emerging knowledge about the pathophysiology of the disorder and new somatic treatments will lead to the development of promising new treatments for PPD.The study also recommended mothers to register their pregnancy to public health clinics and continue after giving birth in order to benefit from intervention and treatment of PPD. And finally the government should take care of the mothers and their babies by improving public health facilities, offer home-visit services to new parents.

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