

## PSYCHOSOCIAL INTERVENTIONS FOR PERINATAL DEPRESSION IN LOW AND MIDDLE INCOME COUNTRIES

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### Abstract

Perinatal depression is an incapacitating condition, associated with negative outcomes for both the mother and the child. It is perceived as a significant health concern, both in the high income and low to middle income countries (LAMIC). In this commentary, we investigated the potential effectiveness of task-shifting based psychosocial interventions targeting perinatal depression, moderate its antagonistic maternal and pediatric consequences and be effectively incorporated in poorly resourced health frameworks in LAMIC. Many multiphasic and task-shifting interventions including CBT, psychoeducation, interpersonal and exercise-based therapies were reviewed and were found to have a positive impact on perinatal depression. Such interventions are also cost effective and can become part of the management plan for a mother suffering from perinatal depression and lacking access to specialist care.

## Introduction

Childbirth can be an arduous experience for many women, owing to the hormonal and emotional variations in pregnancy (1). This change in social, emotional and physiological state associated with pregnancy, also puts some women at an increased risk of developing mood disorders, most commonly depression and anxiety (1). According to the Diagnosis and Statistical Manual-fifth edition (5th), perinatal depression can occur both during pregnancy and in the postnatal period within four weeks following childbirth. Perinatal depression is a debilitating condition, associated with poor health outcomes for both the mother and the baby (2). It is recognized as a major public health concern, both in the high income and low to middle income countries. Several studies have reported a very high prevalence of perinatal depression globally, especially in context of low and middle income countries. For instance, Gaynes et al., (2005) found the point prevalence of major and minor depression to be from 8.5 % to 11.0 % during pregnancy and from 6.5 % to 12.9 % during the first year postpartum (3). While for major depression, this prevalence was noted as 3.1 % to 4.9 % during pregnancy and from 1.0 % to 5.9 % during the first postpartum year (3). This prevalence increases to 15.6% (95% CI: 15.4-15.9) for antenatal depression and 19% (95% CI: 19.5-20.0) for postnatal depression in low and middle income countries (4). There is an abundant and high quality empirical evidence linking perinatal depression with adverse effects on the cognitive, social and emotional development among infants that may be mediated by a poor quality of mother-child relationship (5,6).

One of the hallmark characteristics of postnatal depression is rejection or lack of maternal emotional response, an urge to physically injure the baby and pathological anger towards the baby (7). Because the depressed mothers are slower to respond to their children; the latter show poor joint attention, more self-directed activity, and greater anxiety on brief maternal separation, poor cognitive development and difficulty forming attachments (8). A review of 337 human studies and found an association between maternal stress during pregnancy with temperament and behavior issues, developmental delays, impairment in intellectual and language development, prolonged dependence, altered social response, atypical or mixed handedness, ADHD symptoms, and impulsivity (9). Mothers suffering from depression are more likely to have infants with low birth weight and frequent diarrheal infections (10). Possible explanation of these findings is following less healthy habits and reduced help seeking attitude in the prenatal period; inability of the depressed mother to provide a nurturing environment and fulfill the emotional demands of the infant through appropriate psychosocial stimulation in the postnatal period. The association of maternal depression and increased diarrheal episodes is best elucidated by the mother's disability to maintain proper hygiene such as hand washing, safe food preparation and storage and providing clean drinking water to the infant (10). Inability of the mother to adopt a healthy lifestyle for the well-being of the infant can also lead to the infants having incomplete immunizations at 12 months (11).

The maternal and pediatric morbidities associated with perinatal depression are well documented in a growing body of literature. This double burden is superimposed with poor mental health provisions in the developing world. Therefore, the policy makers as well as interventionists felt the dire need to design and explore potential efficacy of psychosocial interventions that could reduce the prevalence of PD, mitigate its adverse maternal and pediatric consequences and be easily integrated in poorly resourced health systems in LAMIC. These interventions are also considered more suitable and safe for expectant mothers than their pharmacological counterparts such as SSRIs. Moreover, by accomplishing success in designing task shifting strategies to nurses, midwives and allied health workers, these interventions were made more cost-effective. Many of these interventions hold promise for future research:

## Exercise based therapies

Exercise based therapeutic regimen have been reported to be effective in alleviating depressive symptoms. For instance, in a study, women in second trimester were recruited (El-rafi et al, 2016) to undergo three weekly supervised exercise sessions lasting about an hour for a total of 12 weeks. Each session comprised of four components; warm up, aerobic exercises (step up, bicycle or treadmill), stretching and relaxation. Stretching was performed through Kegel exercises, pelvic curl, tailor press, back bridge, and crunches and relaxation included bending, arm reaches and shoulder circles. The research concluded that

exercise had notable beneficial effects on the depressive symptoms during pregnancy.

## Cognitive Behavioral Therapy

Cognitive Behavioral Therapy (CBT) has also shown promising results in a few studies. Therapists from various disciplines collaborated in a study, to design special sessions of CBT delivered through recordings and workbooks (12). These were made part of the standard prenatal visits. The main ingredients of the training were self-supervision, self-awareness, relaxation, understanding the problem through an alternative point of view, identifying and challenging negative thoughts, and detection of worry signals. Participants were also trained in psychoeducation, strategies to keep logical and rational expectations regarding pregnancy, delivery and parenting, entertaining activities and relaxation exercises (12). The findings showed a positive effect in depressive symptoms especially if given in the early phase of the disorder.

## Interpersonal therapy

Interpersonal therapy (IPT) has also been recently studied by several researchers. First time mothers in China who had given birth to a healthy full term baby were recruited to undergo therapy sessions with midwives (13). Midwives conducted a 1-h session and informed the mothers about the physical aspects of recovery from childbirth and ways to take care of the newborn. The techniques used under IPT included information giving, use of affect, clarification, signaling what is significant, reviewing relationship and communication patterns, and providing social support (13). They were educated about the essential features and course of postpartum depression and were encouraged to express how they feel about the transition into motherhood and any uncertainty associated with it (13). The challenges brought about by the birth of an infant and tending to her needs were also explained in detail. Mothers were made aware of the importance of moral support from family and friends, especially the mother in law.

Their interpersonal relationships were assessed and they were provided with the basic strategies to ameliorate behavioral coping skills and improve mother child interaction. This was followed by a phone call 2 weeks after the discharge focused on reminding the mothers what they had learnt and applying the knowledge and skills in their lives (13). The intervention was well accepted by the mothers and gave positive results in reducing the depressive symptoms by increasing social support.

## Psycho-education & Comprehensive interventions

A multiphasic intervention was studied in women suffering from postpartum depression (14). The intervention included psychoeducation groups, pharmacotherapy based on individual needs, monitoring of progress and compliance and physician re-assessment at the end (14). The intervention proved to be successful. Imparting education to pregnant women has also been found to be helpful in preventing postpartum depression. More successful intervention programs also tested combinations of therapies based on varied theoretical orientations. For instance, Singla et al., leveraged CBT, IPT and psycho-stimulation for children in their intervention (15). The intervention focused on three targets: a) child care b) maternal well-being c) interpersonal focus. Child care addressed play, talk, diet, hygiene, use of gentle discipline and love and respect and maternal wellbeing included cognitive behavioral technique such as problem solving, role playing and leveraging spousal support. While interpersonal strategies focused on improving relationship with spouse, community and the child (15).

Another study explored the effects of Health Locus Control (HLC) in prevention of PPD. HLC refers to a persons' perceptions of what controls their health; it could be internal (self) or external (other people or luck) (16). It is believed the people with a strong internal HLC hold themselves responsible for their health status and are more likely to adopt health seeking behavior (16). A planned participatory intervention gave information about components of HLC and relationship between locus of control beliefs and health-care-related behaviors, along with changes occurring in the body and mind during pregnancy, stages of pregnancy and the process of delivery and associated complications (16). It led to reduction in predilection of external control beliefs and improved mental health of the pregnant women resulting in prevention of PPD.

## Conclusion

Psychosocial interventions are effective in alleviating depressive symptoms among expectant or new mothers. Combined with task shifting strategies, these interventions reduce depressive symptoms

and mitigate adverse maternal and pediatric consequences in a cost-effective manner. These interventions have also proven useful in primary care settings.

# References

1. Waqas A, Raza N, Lodhi HW, Muhammad Z, Jamal M, Rehman A. Psychosocial factors of antenatal anxiety and depression in Pakistan: Is social support a mediator? PLoS One. 2015;
2. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5). 2013.
3. Gaynes BN, Gavin N, Meltzer-Brody S, Lohr KN, Swinson T, Gartlehner G, et al. Perinatal depression: prevalence, screening accuracy, and screening outcomes. Evid Rep Technol Assess (Summ). 2005 Feb;(119):1-8.
4. Fisher J, Cabral de Mello M, Patel V, Rahman A, Tran T, Holton S, et al. Prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries: a systematic review. Bull World Health Organ. 2012 Feb;90(2):139G-149G.
5. Rommelse NNJ. Life before birth: Are the dice tossed for the rest of our lives? Eur Child Adolesc Psychiatry [Internet]. 2012;21(4):181-3. Available from: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84862878213&partnerID=40&md5=ca3baba17b2044571b466961bc1ce26f>
6. Jedrychowski W, Maugeri U, Perera F, Stigter L, Jankowski J, Butscher M, et al. Cognitive function of 6-year old children exposed to mold-contaminated homes in early postnatal period. Prospective birth cohort study in Poland. Physiol Behav [Internet]. 2011;104(5):989-95. Available from: <http://www.scopus.com/inward/record.url?eid=2-s2.0-80053051344&partnerID=40&md5=6dcca94a6782ef639df168e005ef726f>
7. Müller D, Teismann T, Havemann B, Michalak J, Seehagen S. Ruminative thinking as a predictor of perceived postpartum mother-infant bonding. Cognit Ther Res. 2013;
8. Cooper PJ, Tomlinson M, Swartz L, Landman M, Molteno C, Stein A, et al. Improving quality of mother-infant relationship and infant attachment in socioeconomically deprived community in South Africa: Randomised controlled trial. BMJ. 2009;338(7701):997.
9. Beydoun H, Safitlas AF. Physical and mental health outcomes of prenatal maternal stress in human and animal studies: A review of recent evidence. Paediatric and Perinatal Epidemiology. 2008.
10. Waqas A, Elhady M, Dila K, Kaboub F, Trinh L, Nhien C, et al. Association between maternal depression and risk of infant diarrhea: a systematic review and meta-analysis. Public Heal [Internet]. 2018 [cited 2019 Jan 24];159:78-88. Available from: <https://www.sciencedirect.com/science/article/pii/S0033350618300477>
11. Rahman A, Iqbal Z, Bunn J, Lovel H, Harrington R. Impact of maternal depression on infant nutritional status and illness: A cohort study. Arch Gen Psychiatry. 2004;
12. Fathi-Asthani A, Ghobari-Bonab B, Azizi P, Saheb-Alzamani S. Randomized trial of psychological interventions to preventing postpartum depression among Iranian first-time mothers. Int J Prev Med cin. 2015;6:109.
13. Gao L ling, Xie W, Yang X, Chan SW chi. Effects of an interpersonal-psychotherapy-oriented postnatal programme for Chinese first-time mothers: A randomized controlled trial. Int J Nurs Stud [Internet]. 2015;52(1):22-9. Available from: <http://dx.doi.org/10.1016/j.ijnurstu.2014.06.006>
14. Rojas G, Fritsch R, Solis J, Jadresic E, Castillo C, Gonzalez M, et al. Treatment of postnatal depression in low income-mothers in primary-care clinics in Santiago, Chile: a randomised controlled trial. Lancet. 2007;370(9599):1629-37.
15. Singla DR, Kumbakumba E, Aboud FE. Effects of a parenting intervention to address both maternal psychological wellbeing and child development and growth in rural Uganda: a community-based, cluster randomised trial. Lancet Glob Heal [Internet]. 2015;3(8):e458-69. Available from: [http://dx.doi.org/10.1016/S2214-109X\(15\)00099-6](http://dx.doi.org/10.1016/S2214-109X(15)00099-6)
16. Moshki M, Baloochi Beydokhti T, Cheravi K. The effect of educational intervention on prevention of postpartum depression: An application of health locus of control. J Clin Nurs. 2014;23(15-16):2256-63.