Association between Sleep Quality and Perinatal Depression

Subjects: Nursing

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Pregnancy is characterized by hormonal and physiological changes; some of these changes cause changes in sleep, presenting excessive sleep in early pregnancy due to the action of progesterone, and difficulty sleeping at the end of pregnancy due to weight gain and frequency of urination.

Keywords: perinatal care ; depression ; sleep hygiene

1. Introduction

Perinatal depression is a global public health problem with an estimated prevalence of 11.9% (95% CI, 11.4–12.5) according to a metaregression that included 96 studies [1]. Although the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) requires that the specifier “peripartum” in depression be necessary for depression to occur during pregnancy or in the first four weeks postpartum, most experts in the field still define postpartum depression as occurring at any time in the first postpartum year regardless of the time of onset [2]. Thus, perinatal depression is defined as depressive symptoms that occur during pregnancy and those that continue or start in the first year postpartum [2]. Depression in pregnancy is highly likely to persist after childbirth if it is not diagnosed and treated on time [3]. Mood changes characterize this depressive disorder, decreased self-esteem, concentration, energy, increased tension, agitation, pessimism, guilt, ideas of self-mutilation, sleep disturbances, and weight changes [4]. Perinatal depression profoundly impacts the mother, child, and the rest of the family. For example, it has a negative effect on the child’s neurocognitive development, mainly when maternal depression occurs during the first year of life [5]. In addition, the parents’ experience causes family fractures and frustration related to what they consider to be the ideal paternity [4]. Clinically, sleep quality may be associated with an increased risk of perinatal depression [6]. Poor sleep quality is frequent during the prenatal period. In a study with 2427 pregnant women that aimed to characterize their sleep patterns and sleep problems in all months of their pregnancy, 76% of the women had poor sleep quality during pregnancy [7]. However, because sleep difficulty is assumed to be a common and temporary complication in pregnancy, few studies have effectively investigated sleep quality during pregnancy and its consequences.

2. Association between Sleep Quality and Perinatal Depression

Poor sleep quality was significantly associated with increased symptoms of depression and anxiety [8]. Studies show that sleep quality during pregnancy is associated with prenatal stress and depression [9][10][11][12]. Pregnancy is described as stressful for many women, and stress-related disorders such as insomnia and depression are highly prevalent in this period [10]. Although insomnia is considered to be an independent disorder, insomnia and depression are associated during the perinatal period [13].

Sleep quality worsens with increasing gestational and maternal age [11][14][15]. An experimental study carried out on 267 pregnant women found that pregnant women from the second half of their pregnancy onwards had higher levels of insomnia, nocturnal rumination, depression, and suicidal tendencies [10]. Sleep quality worsens as the pregnancy progresses, worsening in the last trimester [11][15]. In addition, the quality of sleep declines with increasing age [13]. In one study, pregnant women aged 30 and over were found to experience poorer sleep quality than that of pregnant women under 30. Pregnant women aged 30 or over are also more likely to experience stress and depressive symptoms during pregnancy, which probably increases the risk of postpartum depression [14].

Results indicate that poor sleep quality is expected during pregnancy [16] and may be a vital intervention target, as disturbed sleep is predictive of postpartum depression and sleep disturbances [17][18]. The meta-analysis that quantified the prevalence of poor sleep quality during pregnancy concluded that it is necessary to identify women who need treatment, and to develop and provide evidence on appropriate interventions [17]. The poor quality of prenatal sleep seems

to be related to the poor quality of postnatal sleep, which can consequently increase depressive symptoms after childbirth [19]. However, few studies report on the potential role of postnatal sleep quality, and its relationship with prenatal sleep and perinatal depression [19]. Thus, future investigations should compare sleep patterns in pregnancy, and after childbirth and perinatal depression. Further studies are also necessary to understand the efficiency of exercise programs specialized for postpartum women who may be vulnerable to depression, since exercises such as Pilates improve the quality of sleep in pregnant women [20]. Women undergoing treatment for insomnia during the third trimester of pregnancy reported less symptomatology of postpartum depression than those who did not receive treatment, thus suggesting a link between sleep quality during pregnancy and perinatal depression [21]. There are also studies on mobile phone use as a strategy for treating perinatal depressive symptoms [22], which could be an advantage for rural areas with less access to health services.

Depressed pregnant women are not only underdiagnosed but also reluctant to seek help. So, it is essential to identify variables that may reveal prenatal symptoms of depression, and this can be an effective strategy to signal women who need additional care throughout the perinatal period [13]. In addition, prenatal depression is a significant risk factor for postpartum depression [23]. The association between poor sleep quality and perinatal depression leads to clinical complications, so specialist nurses in the field of maternal and obstetric health, and obstetricians should identify sleep quality in routine prenatal tests performed, thus avoiding the development of mood pathologies [9][24]. The American College of Obstetricians and Gynecologists (ACOG) recommends screening for depression and anxiety symptoms at least once during pregnancy and postpartum [25]. The literature shows that, as pregnancy progresses, sleep-related problems such as insomnia, daytime sleepiness, and poor sleep quality increase [26]. Pregnant women experience stress, anxiety, and depressive symptoms rising from 24 weeks to postpartum [27]. During regular prenatal care, signs of insomnia, difficulty in managing mental stress, and excessive preoccupation with pregnancy should be ruled out to reduce the rates of clinical depression and suicidal ideation [10]. Several studies presented the nonuse of objective measures to assess sleep quality as a limitation, so whenever possible, actigraphy should be included in the methodology of future studies [8][10][11][14][19]. The very meaning of sleep quality is still difficult to understand by subjective measures of women's sleep quality, which often only reflect individual satisfaction with sleep [28]. Due to its severe consequences for women, children, and families, perinatal depression needs to be identified early, preferably during pregnancy or soon after childbirth, justifying the priority of screening and prevention. During pregnancy, poor sleep quality increases the risk of perinatal depression, even controlling for risk factors such as psychological distress and stress. Treatments for prenatal sleep should be explored, such as stress reduction using mindfulness and/or psychoeducational programs.

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