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Mothers with acute and chronic postpartum psychoses and impact on the mother-infant interaction

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ABSTRACT

Background: Maternal postpartum psychoses pose a serious risk to the mother-infant interaction. It is unclear how different subtypes of postpartum psychosis, including acute and chronic, might differentially affect the mother-infant interaction.
Method: A systematic search of electronic journal databases was performed.
Results: This systematic review yielded 17 studies with adequate overall study quality. They focused on child custody and involvement of social services as indirect indicators of the mother-infant interaction, observed mother-infant interactions as direct indicators, or potential transitional mechanisms, including memory processing, mind-mindedness, and affect recognition, that may partially explain the effects of psychotic disorders.
An acute onset of psychosis during the postpartum period (de novo or relapse) was typically related to better mother-infant interactions. Mothers with schizophrenia have the highest risk of child displacement, and interventions by social services were more likely. However, mothers with postpartum schizophrenia did not exhibit more harm to the child or self-harm than mothers with postpartum depression. Heterogeneity of methodology, case definitions, and assessments characterized the studies; hence, they were not pooled.
Conclusions: In addition to evaluating social risk factors in patients with acute onset and chronic psychoses during the postpartum period, negative preconceptions about motherhood and schizophrenia have to be carefully examined. Clinical research on postpartum psychoses should consider the onset criteria, prevalence of self-harm or harm to the child, significance of specific (e.g., religious) delusions and expressed hostility toward the child. More studies on the impact of first-onset (de novo) postpartum psychoses on the mother-infant interaction are needed.

1. Introduction

1.1. Concept of postpartum psychosis

Psychotic disorders are severe psychiatric disorders that are characterized by cognitive disturbances, reality distortions (such as hallucinations or delusions), and abnormal behaviors and affect (e.g., agitation, restlessness, or withdrawal; Howard, 2005). An acute psychotic episode in a mother within the first few weeks after giving birth has been described as "postpartum psychosis," sometimes also called "puerperal psychosis" (Brockington, 2004a; Pfuhlmann et al., 2002; Sit et al., 2006). In a recent systematic review of epidemiological data, an incidence of 0.89–2.6 in 1000 women and a prevalence of 5 in 1000 women were reported (VanderKruik et al., 2017).

Despite its widespread use, the term "postpartum psychosis" is not equivalent to a specific diagnosis (Bergink et al., 2015). Instead, it includes any psychotic illness that occurs during the postpartum period, i.e., the first 12 months after childbirth, including schizophrenia, bipolar disorder, schizoaffective disorders, depression with psychotic symptoms, brief psychotic disorders, and psychotic disorders not otherwise specified, which differ in terms of onset, phenomenology, course, and etiology (Sharma and Sommerdyk, 2014).

Generally, women with postpartum psychosis share some important characteristics. In particular, distortions of thought and perception and abnormal behavior (confusion and disorientation) directed toward the child (Kumar et al., 1995) are prevalent. Some mothers develop persecutory thoughts, believing that the child is in danger of being stolen, hurt, or intoxicated. Others are convinced that their baby has been switched or that he or she is evil, ill-fated, or an incarnation of a demon or devil. These distortions of perception and thought may be associated with a profound fear of hostility or threatening behaviors toward the child (Glover et al., 2014; Saha et al., 2015).

Genetic factors and hormonal changes related to pregnancy, childbirth, and lactation, including sudden decreases in estrogen levels after childbirth, are causal factors for postpartum psychoses (Brockington, 2004a, 2004b; Gentile, 2005; Seeman, 1997).

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Prematurity, obstetric complications, and sleep deprivation are additional predisposing risk factors (Glover et al., 2014; Lawson et al., 2015; Sharma and Mazmanian, 2003). In addition, immunological factors were reported as risk factors (Bergink et al., 2013). Any previous history of psychopathology in the mother may increase the risk of psychotic symptoms (Sit et al., 2006), which may negatively affect her attending to and affection for her child (Bruland et al., 2017).

1.2. Postpartum psychosis and onset

Postpartum psychoses vary in terms of the timing of onset, namely first-onset (de novo), relapse, or chronic psychoses, which are detailed in the following sections.

First-onset postpartum psychoses (de novo). First-onset (i.e., acute, first occurrence) psychosis occurs in the postpartum period in approximately 0.25–0.6/1000 births (Bergink et al., 2016). Therefore, this type of acute psychosis is labeled as "first-onset" or "de novo onset postpartum psychosis" (Bergink et al., 2011; Tschinkel et al., 2007; Jones et al., 2014). In 20–50% of affected women, this is the only psychotic episode they will experience in their lifetimes (Bergink et al., 2016). However, the unexpected onset of acute psychosis after childbirth is particularly disturbing for the mother and her family (Glover et al., 2014).

Relapse postpartum psychoses. Twenty-seven percent of women with a history of prenatal psychotic illness experience a psychotic relapse during the first year after childbirth (Howard et al., 2004). The heightened relapse rate is explained by the discontinuation of prescription medication during pregnancy and lactation (Wakil et al., 2013). Because of better disease management and medications, more women of childbearing age previously diagnosed as having psychotic disorders are becoming pregnant (Matevosyan, 2011; Davenport and Adland, 1982). However, any prenatal psychotic disorder substantially enhances the risk of relapse during the postpartum period (Howard et al., 2004). Among all psychotic disorders, patients with bipolar disorder are at the highest risk of postpartum relapse (Chaudron and Pies, 2003; Wesseloo et al., 2016). Women with a prenatal history of bipolar disorder have a 1 in 5 risk of developing a postpartum psychotic episode, and nearly 1 in 2 are at a risk of developing a postpartum mood disorder (Jones et al., 2014). In addition, a family history of postpartum psychosis and a past episode of postpartum psychosis are risk factors for relapse (Jones et al., 2014).

Postpartum psychoses as chronic conditions. Schizophrenia is defined as a chronic disease, although short- and long-term variations exist (An der Heiden and Häfner, 2000; Huber, 1997). According to research on the course of schizophrenia, the relapse rate during the postpartum period is similar to that for bipolar disorder (Jones et al., 2014), and a lifelong diagnosis of schizophrenia increases the risk of postpartum relapse (Matevosyan, 2011). Although patients with bipolar disorder have the highest risk (Liu et al., 2010), those with schizophrenia more frequently have social risk factors, such as social isolation, unemployment, lack of a stable partnership, alcohol and substance abuse, lack of education, and lack of financial resources (Poinso et al., 2002).

1.3. First-onset postpartum psychoses: A diagnostic entity of their own?

Currently, it is controversial whether first-onset postpartum psychosis is a diagnostic entity according to the traditional concept of *puerperal psychoses* (Boyce and Barriball, 2010; Mowry and Lennon, 1998) or a first episode of bipolar disorder (Pfuhlmann et al., 2002). First-onset postpartum psychoses typically emerge within several days after delivery (Bergink et al., 2011), whereas bipolar disorders present immediately after delivery (Heron et al., 2007). Likewise, in 64.7% of patients with first-onset postpartum psychoses, psychotic symptoms were mood-incongruent, which was less common in mothers with a previous history of bipolar disorder (Bergink et al., 2011). In mothers with a prenatal bipolar disorder, several risk factors have been linked to the recurrence of psychotic symptoms, including complications during pregnancy, delivery, and lactation, which were unrelated to those of first-onset postpartum psychoses (Bergink et al., 2011; Nager et al., 2008). First-onset postpartum psychoses are distinct from chronic psychotic conditions with regard to the phenomenology, age of onset, course of illness, and associated risk factors, suggesting that first-onset postpartum psychosis is a distinct disease entity (Schöpf and Rust, 1994; Brockington, 2004a). However, researchers have not clearly determined whether an acute or chronic onset of psychotic illness during the postpartum period differentially affects the mother-infant interaction.

1.4. Aim of the review

A systematic review of studies on mothers with postpartum psychosis and their infants aged 0–12 months was conducted, and study quality was evaluated to obtain insights into the effects of postpartum psychosis with different onsets (i.e., first-onset, relapse, or chronic) on mother-infant interactions.

2. Methods

2.1. Inclusion and exclusion criteria

Original cross-sectional and longitudinal quantitative studies, including experimental, quasi-experimental, observational, and case-control, were included when they fulfilled the following criteria:

1. Participants were mothers of infants aged 0 to 12 months, which defines the postpartum period (Bosanac et al., 2003).
2. Participants presented with a diagnosed psychotic disorder during the postpartum period (acute or chronic).
3. The study reported quantitative outcome data for 1) observed or rated quality of the mother-infant interaction or relationship, or 2) indirect indicators of the quality of the mother-infant interaction, such as involvement of social services.

Only quantitative studies were considered. Qualitative studies, case studies, dissertations, book chapters, studies with non-human populations, and studies in languages other than English or German were excluded.

2.2. Search strategy

Digital literature searches of MedLine, PsycArticles, PsycInfo, and PSYNDEX databases (from January 1, 2000, to November 30, 2017) were conducted by the authors using the following search terms: ["FEMALE" or "FEMALES" or "WOMAN" or "WOMEN" or "MOTHERS" or "MATERNAL"] and ["PSYCHOSIS" or "PSYCHOTIC" or "SCHIZOPHRENIA" or "SCHIZOAFFECTIVE" or "SCHIZOPHRENIC"] and ["POSTPARTUM" or "POST-PARTUM" or "POSTNATAL" or "PERINATAL" or "PUERPERAL"] and ["CHILD" or "INFANT" or "BABY" or "OFFSPRING"] and ["ATTACHMENT" or "RELATIONSHIP" or "RELATIONSHIPS" or "INTERACTION" or "INTERACTIONS" or "PARENTING"]. The search was limited to scientific journals, and duplicate studies were omitted, resulting in 237 records. Of those, 11 records were excluded, because the publication was not written in English or German. The titles and abstracts of the remaining 226 records were screened for eligibility. Of those, 92 records were excluded, and 134 full-text articles were retrieved. The authors determined whether inclusion and exclusion criteria were met, and, as a result, 17 studies were included in the review (see flow-chart in Fig. 1).

2.3. Assessment of study quality

To evaluate study quality, the quality assessment tool by Goodman et al. (1994) was used. Because there was a wide variety of methodologies used in the included studies, this assessment tool was chosen,

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