

# Childbirth and Manic-Depressive Illness An Account of Emil Kraepelin's Contribution

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## Abstract

**Background:** Kraepelin reported on the relationship between childbirth-related psychiatric disorders and manic-depressive illness.

**Methods:** Kraepelin's texts were reviewed to gather the relevant information on the relationship between childbirth and manic-depressive illness.

**Results:** Kraepelin's single most important contribution to the area of perinatal psychiatry was perhaps his decision to include *amentia*, also called *confusional insanity*, under the rubric of manic-depressive illness.

**Conclusions:** Kraepelin's seminal observations about the relationship between childbirth-related psychiatric disorders and manic-depressive illness have largely been ignored (*German J Psychiatry* 2008; 11: 168-172).

**Keywords:** bipolar disorder; Emil Kraepelin; manic-depressive illness; postpartum disorders; postpartum psychosis

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## Introduction

Kraepelin (1899a) is best remembered for his formulation of manic-depressive illness and its differentiation from dementia praecox (schizophrenia). At the turn of the nineteenth century, he proposed grouping of circular psychoses, simple manias, melancholia and amentia (confusional insanity) under the diagnostic umbrella of manic-depressive illness. He provided the rationale for this classification as follows: "In the course of the years I have become more and more convinced that all the above-mentioned states only represent manifestations of a single morbid process" (p.1). He elaborated that, "...all the morbid forms brought together here as a clinical entity, not only pass

over the one into the other without recognizable boundaries, but they may even replace each other in one and the same case" (p.2). Prognosis, common heredity, and the sharing of common fundamental features among the different mood states also provided a basis for the proposed formulation of manic-depressive illness.

Kraepelin (1899a) used the term *amentia* to describe cases where "... as a result of an obvious external harmful influence, an acute state of dreamlike confusion, illusionary or hallucinatory distortion of reality and motor agitation develops" (p.28). He also referred to this group of illnesses as a prolonged collapse delirium and noted its similarity to hallucinatory insanity of the puerperal period. Among its many causes, childbirth was reported as a major factor for *amentia*.

His observations on childbirth-related psychiatric disorders and their relationship to manic-depressive illness are not widely known. This paper describes his contribution to the literature on manic-depressive illness as it pertains to pregnancy and postpartum.

## Methods

Kraepelin's two textbooks, *Psychiatry: A textbook for students and physicians*, (1899a, 1899b) and *Manic-depressive insanity and paranoia* (1921) were reviewed to obtain information regarding the relationship between manic-depressive illness and childbirth-related psychiatric disorders.

## Results

### Childbirth-related psychiatric disorders

According to Kraepelin (1899b), mental disorders of pregnancy, delivery, and lactation accounted for 14% of all the psychiatric diagnoses in women admitted to psychiatric hospitals. Three percent of them belonged to gestational psychoses. Biological factors were thought to play a major causal role; but psychological factors, including apprehension of childbirth, were also considered important.

#### Disorders during pregnancy

Pregnancy was described as exerting a varied influence on the expression of psychiatric illness, depending on the type of psychiatric illness. Kraepelin (1899b) concluded that the catatonic type of schizophrenia frequently developed during pregnancy. In regards to the relationship between depression and pregnancy, he wrote "...there remains a small group of slight depressive states taking a favorable course which start in the beginning of pregnancy; these states are probably true forms of melancholia..." (p.46).

Kraepelin (1921) observed that the time following delivery and to a lesser extent, pregnancy was a high-risk period for the onset of mood episodes, "For more frequently an attack of manic-depressive insanity follows a confinement closely, or it begins during pregnancy. Among 38 cases of the former kind similar cases appeared 25 times, among ten cases of the latter kind five times, also before or afterwards several times spontaneously" (p.179).

#### Postpartum disorders

Kraepelin (1899b) distinguished between disorders caused by childbirth and those triggered by it. Disorders caused by childbirth followed one in 400 deliveries and accounted for the diagnoses of 6.8% of all women admitted to mental hospitals. He observed that disorders triggered by childbirth were more frequent than those caused by it. According to

Kraepelin (1899b), "the violent delirious states of excitation" appearing during delivery belonged to the former group. Disorders triggered by childbirth were considered important from the forensic point of view due to their association with violent acts. Factors such as physical pain, blood loss, and circulatory changes in combination with the "psychic influences of parturition and possibly disturbance to this process" were thought to contribute to the development of these disorders. Toxic and infectious factors including eclampsia with underlying uremia, mastitis, ulcerative endocarditis, parametritis and perimetritis were considered causal factors for a second group of puerperal psychosis with a clinical picture of febrile and infectious delirium.

Exhaustion psychosis was considered the most peculiar form of puerperal psychoses. Sudden onset and brevity marked cases appearing during the first few days postpartum. Such cases were described as having collapse delirium and were thought to result from an acute disturbance of equilibrium of the central nervous system. The term dementia acuta was used to describe a strong impairment of intellectual functioning due to serious infectious illnesses (Lanczik, et al., 2006). Cases appearing one to two weeks after delivery were referred to as having amentia (Kraepelin, 1893).

#### *Amentia*

Meynert (1881) used the term acute confusion (amentia) to describe a form of illness characterized by clouding of consciousness along with symptoms in various sensory and motor domains. Kraepelin argued that certain periodic mental disturbances ought to be distinguished from others grouped under the diagnostic umbrella of collapse delirium and suggested that the term amentia be reserved for those cases "where, as result of an obvious external harmful influence, an acute state of dreamlike confusion, illusionary or hallucinatory distortion of reality and motor agitation develops". He considered this group of illnesses was largely identical with the "hallucinatory insanity of puerperae" described by Fuerstner (1875). According to Kraepelin (1899a), amentia belonged to the spectrum of manic-depressive illness, "the overwhelming majority of cases that tend to have the name of hallucinatory confusion ascribed to them, in my opinion, really belong to maniacal depressive or catatonic insanity" (p.33). He elaborated that the attacks of manic-depressive insanity with accompanying clouding of consciousness and vivid hallucinations be regarded as amentia. Kraepelin considered amentia as a rare illness as he diagnosed only six cases out of about 1500 patients he had seen in recent years.

In most cases, the illness begins one to two weeks after delivery. The usual prodromal symptoms include insomnia, a feeling of unrest and anxiety, forgetfulness, forebodings of death, difficulty collecting one's thoughts, and complaints of numbness and confusion. In a course of a few days, the illness evolves to include feelings of de-realization, flight of ideas, difficulties of perception in spite of existing attentiveness, hallucinations in various sensory modalities and delusions full of "contradictions and confused as in a dream". Patients are unable to focus attention, "...the most commonplace things appear to the patient mysterious, incomprehensible and uncanny; he feels completely at a loss, and

this is in most cases expressed very plainly in his whole behavior" (p.29). The resulting thought disturbance leads to confusion, which is the characteristic symptom of the illness.

Kraepelin (1899a) described the mood during amentia as variable and constantly changing, "...short periods of sudden cheerfulness with sexual excitement, laughing and singing or outbreaks of angry irritability develop on the basis of a slight, anxious feeling of uneasiness and mistrust" (p.30). Behavior is dominated by motor restlessness but patients' "...actions are not carried out very rapidly or with great vigor, they are planless, disconnected; agitation occurs in fits, between which total calm may prevail" (p.30).

The symptoms reach a climax within the first two weeks of onset. Fluctuating symptomatology, lucid intervals and a tendency toward emergence of symptoms after improvement marks the further illness course. Recovery occurs gradually and tends not to exceed three to four months. The emergence of mood symptoms during the recovery process highlights the bipolar nature of amentia, "...the return of full presence of mind is often outlasted for a short time, a few weeks by a simple, slightly maniacal or depressive psychosis which according to circumstances expresses itself in bustling activity, much talking, elevated self-awareness or in mistrust, despondence, anxiety, thoughts of death, perhaps also in great irritability" (p.31). Death as the outcome of amentia occurred rarely. Causes of death included severe agitation, accompanying physical morbidity and suicide.

#### *Amentia and related disorders-historical perspective*

Hippocrates provided the first clinical description of postpartum illness in the fourth century, B.C. (Jones, 1923). In the 3<sup>rd</sup> book of Epidemics, he described the case of a woman who immediately after giving birth to twins developed insomnia and restlessness, followed by delirium on the eleventh day and died on the seventeenth day. There was not much interest in the study of postpartum disorders until the nineteenth century. Esquirol (1838) in 1838 and most of all Louis Victor Marcé (1858) in his treatise on 'Insanity during pregnancy, childbirth, the postpartum and during lactation' in 1858 wrote a detailed and thoughtful textbook on this topic. Marcé (1858) considered insanity during childbirth to be of mostly genetic origin, for him the physiological changes during those times happen on a predisposed basis.

Olshausen (1891) proposed a division of postpartum psychosis into infectious psychosis, idiopathic psychosis, and psychosis of intoxication. Before Kraepelin, Fuerstner (1875) had drawn attention to the similarity between postpartum and epileptic psychoses due to their acute onset, spontaneous remission, fluctuating symptoms, bipolar illness course and accompaniment of symptoms including hallucinations, anxiety or excitement.

Kraepelin's description of 'amentia' is similar to the disorder originally called 'degeneration psychosis' by Wernicke (1906), later 'cycloid' (Leonhard, 1986) and now 'acute polymorphic psychosis' (Perris, 1974). The literature supporting the association of these disorders with the puerperium is summarized by Brockington (1996) in *Motherhood and Mental Health*. Symptomatic delirium was expounded by Chaslin in the last

decade of the nineteenth century (Chaslin, 1895), and by Bonhöffer in 1910 (Bonhöffer, 1910, 1917), both of whom distinguished between delirium and mania.

#### *Epidemiology and causes*

The reported prevalence of amentia of 0.4% is remarkably similar to the contemporary accounts of the prevalence of postpartum psychosis, considering that amentia also included non-postpartum cases such as rheumatism, erysipelas, typhoid fever, loss of blood and shift-work. Amentia was more common in females than in males. Genetic factors were thought to play more of a role in amentia as compared to collapse delirium (Kraepelin, 1899a).

#### *Differential diagnosis*

Kraepelin (1899a) distinguished amentia from mania and catatonia). In amentia, confusion persists long after disappearance of motor restlessness, whereas patients with mania are able to comprehend those around them even when they are restless and agitated. Moreover, in amentia the agitation develops more gradually and randomly than the motor restlessness of mania. Compared with catatonia, orientation and perception are seriously disturbed in the presence of attentiveness. Kraepelin (1921) supported Schmid's conclusion that "...those states of confusion, even when they present all kinds of 'catatonic' symptoms represent forms of manic-depressive insanity for more often than is usually assumed". Additionally, there is absence of catatonic symptoms in amentia. Patients with catatonia are aware of their surroundings even in the midst of excitation.

#### *Treatment*

Pacification in the form of bed rest, continuous baths, proper dietary intake, administration of hypnotics and alcohol were recommended as treatments (Kraepelin, 1899a).

### **3.13 Mental diseases of the lactation period**

These disorders accounted for 4.9% of all women admitted to mental hospitals. Physical exhaustion, breastfeeding, and local diseases of the genital organs were considered as causal factors in addition to the role of biological predisposition. The lactation period was considered as a high-risk time for the occurrence of various psychiatric disorders including amentia, manic-depressive illness and schizophrenia. Kraepelin (1899b) also observed "true forms of melancholia occur in the period of lactation" (p.47).

## **Discussion**

It should be noted that Kraepelin relied heavily on others for data on childbirth-related psychiatric disorders. For example, he mentions Fuerstner (1875) and Rippling (1877) as sources for the information that pregnancy, delivery, and lactation accounted for 14% of all the psychiatric diagnoses in women

admitted to psychiatric hospitals. Similarly, he gives Hansen as the source in support of the data that 6.8% of all women admitted to mental hospitals suffered from insanity as a consequence of childbirth.

Kraepelin described pregnancy as having a varied impact, including a protective effect against depression in some patients. He stressed the importance of childbirth as a potent trigger for mood episodes in women with manic-depressive illness. By including parturition as a causative factor for manic-depressive illness, he highlighted the powerful impact childbirth has on the onset or exacerbation of mood episodes in the context of bipolar disorder and also its effect on the subsequent illness course. He commented on the prodromal symptoms, prior to the onset of mood and psychotic symptoms in patients with puerperal psychosis; and stressed the importance of sleep loss as a ubiquitous and early feature of the illness.

Contemporary studies have confirmed Kraepelin's observations regarding the effect of pregnancy and postpartum on the course of manic depressive illness. For example, pregnancy has been shown to have a positive effect on the course of bipolar disorder (Sharma and Persad, 1995; Grof et al., 2000) with studies reporting a reduced risk for psychiatric admission (Kendell et al., 1987) and a lower risk for suicide (Appleby, 1991; Marzuk et al., 1997). The postpartum period is generally considered a time of heightened vulnerability for recurrence of mood and psychotic episodes in the context of bipolar disorder (Viguera et al., 2007; Freeman et al., 2002). It has been suggested that a variety of factors including a precipitous drop in plasma estrogen, progesterone and corticotrophin releasing hormone (Kammerer et al., 2006), sleep loss (Sharma and Mazmanian, 2003) and genetic factors (Munk-Olsen et al., 2007; Jones and Craddock, 2007) may influence vulnerability to triggering of postpartum mood episodes

Unfortunately, Kraepelin's contribution regarding the effect of pregnancy and delivery on the course of manic-depressive illness has been overlooked. This is astonishing, given his inclusion of amentia under the rubric of manic-depressive illness. Like many of his other astute clinical observations, his views on the diagnostic status of psychosis following delivery are in conformity with the current thinking on the subject. Even though there has been a long-standing controversy as to whether postpartum psychosis is distinct from other types of psychoses, it is increasingly being considered as an episode of bipolar disorder with psychotic features (Chaudron and Pies, 2003, Brockington et al., 1981). Kraepelin emphasized that postpartum psychoses are not different from the non-puerperal psychoses, and do not deserve a separate nosological status (Lanczik et al., 2006). His proposal to consider at least some cases of amentia as belonging to the manic-depressive illness rather than according them a separate diagnostic entity is enshrined in the DSM-IV-TR (American Psychiatric Association, 1994).

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