

# Perinatality and Childbirth as a factor of Decompensation of Mental Illness: the Case of Depressive States in Newly Delivered Cameroonian Women

Georges Pius Kamsu Moyo\*

Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Yaoundé, Cameroon

\*Corresponding Author: Georges Pius Kamsu Moyo, Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, Yaoundé, Cameroon

Abstract: Decompensation in psychiatry refers to the process by which a previously stable patient or predisposed individual may suddenly manifest symptoms or experience exacerbation of a sickness. This is prompted by factors which may be physiological, pathological, endogenous or exogenous, being responsible for psychic disequilibrium. Perinatality is characterized by multiple hormone variation and stress, which may constitute a risk for mental imbalances. The baby blues is a precocious and transient depressive state of the postpartum, which may occur as a borderline, signalling psychic decompensation. This study aims to investigate the phenomenon in women predisposed to mental disorders, having manifested the baby blues during immediate postpartum. In a case control study conducted in 2015 in two teaching hospitals of Yaoundé, Cameroon over four months, the Kennerley and Gath blues screening permitted to separate the group of "cases" from that of "controls". After various analyses, women with psychological and psychiatric risk factors including: past history of depression (OR=6.8; p<0.001), past history of postpartum blues (OR=2.3; p=0.002), past history of other psychiatric illnesses (OR=10.21; p<0.01), family history of depression (OR=3.58; p<0.001), family history of other psychiatric illnesses (OR=4.39; p<0.001), current chronic diseases (OR=2.33, p-value<0.001), sickness or complication during pregnancy (OR=2.53, pvalue<0.0211) were more susceptible to manifest the baby blues during immediate postpartum. Therefore, women with psychological predispositions, stand a risk of decompensation during the perinatal period including psychiatric disorders of postpartum. Preventive measures such as counselling, keen monitoring and treatment adjustment may help to prevent this phenomenon.

Keywords: Perinatality, childbirth, decompensation, mental illness

## **1. INTRODUCTION**

There exists an increased risk of psychological impairments during the perinatal period as close to one woman out of three in our context may develop postpartum psychic derangements [1]. In theory, this discomfort is partly attributed to the physiological hormone variations that occurs during pregnancy, childbirth and breastfeeding; which may associate with environmental and psychosocial factors occurring during the same period [2, 3]. However, in reality, neonatal and other obstetrical factors than hormone variation may have a considerable influence as well [neonatal factors].

The baby blues may be defined as a mild, transient depressive state that occurs during the early postpartum period, within the first two weeks of the puerperium [2, 3]. It may be considered as a transitional state towards more important mental disorders of the puerperium rather than a pathological condition per se [4]. Nevertheless, the description of an atypically

severe baby blues has been made by a number of researchers and comprises characteristics or signs and symptoms that may correspond to various forms of psychiatric disorders of the postpartum period [5]. This may allow for a "reconsideration theory" of the baby blues as a trigger point from which the other psychic derangements of postpartum emerge [4, 6].The baby blues may thus reflect a mental decompensation process developing in some predisposed women during the perinatal period. This is to say all psychic derangements of the postpartum may develop from a "baby blues" of "relative severity" which may be common or atypical as from its onset [4, 7, and 8].

#### 2. METHODOLOGY

A case-control study was carried out on an overall sample of 321newly delivered women, of which 107 had been diagnosed with the baby blues and were considered as the group of "cases", while the other 214 women who did not manifest emotional instability were considered

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as the "control" group. The study was carried out in two teaching hospitals of Yaoundé, Cameroon: The Yaoundé Gynaeco-Obstetric and Paediatric Hospital, and the Yaoundé Central Hospital which are referral and University teaching hospitals in Cameroon. After approval of the research protocol by the ethical committee, women who delivered at 28 weeks or more of pregnancy were enrolled, after their consent was obtained. A pretested questionnaire was administered and information retrieved from the patients' files. Data collected included socio-demographic characteristics, new borns parameters and the Kennerley and Gath questionnaire. The Kennerley and Gath blues questionnaire is a validated self-rating scale consisting of 28 items concerning the emotional state of newly delivered women. The available answers are "yes" or "no" corresponding respectively to marks of 1 and 0 with a maximum possible score of 28 and a minimum of 0. The scale served as a diagnostic and explorative tool. Women who had an overall score greater than the mean peak score of their group were considered as positive for emotional instability.

The calculated minimal sample size was 41 cases for 82 controls based on the 31.3% prevalence of baby blues among Nigerian women in postpartum, reported by Adewuya

and using Schlesselman's formula with a standardized power of 84%. Statistical analyses were done using CSPro version 4.1 and SPSS version 22.0 software. The difference between variables assessed was statistically significant for P-value < 0.05.

Pearson Chi square and Fisher's exact tests were used to compare proportions. Odds Ratio (OR) and 95% Confidence interval (CI) were calculated to assess the association between variables and emotional instability. Multivariate analysis served for isolating independent predictive factors.

## **3. RESULTS**

Psychiatric and psychological factors with statistically significant association with baby blues were patients with: past history of depression (OR=6.8; p<0.001), past history of postpartum blues (OR=2.3; p=0.002), past history of other psychiatric illnesses (OR=10.21; p<0.01), family history of depression (OR=3.58; p<0.001), family history of other psychiatric illnesses(OR=4.39; p<0.001), current chronic diseases (OR=2.33, p-value<0.001), sickness or complication during pregnancy (OR=2.53, p-value<0.0211).

**Table 1**: Psychiatric and psychological factors inrelationship with the baby blues

PAST HISTORY         (n=107) n (%)         n           Past history of	MEDICAL	Cases	Controls (n=214)	Total	OR [IC 95%]	Р				
HISTORY         n (%)         n (%)         n           Past history of           Depression?           Yes **         20 (18.7)         7 (3.3)         27         6.80 [2.72-16.97]         <0.001	PAST	( <b>n=107</b> )								
Past history of           Depression?            Yes **         20 (18.7)         7 (3.3)         27         6.80 [2.72-16.97]         <0.001           No         87 (81.3)         207 (96.7)         294         0.15[2.70-16.40]            Baby blues?           0.002             Yes **         37 (34.6)         40 (18.7)         77         2.30 [1.36-3.89]         0.002           No         70 (65.4)         174 (81.3)         244         0.4 [0.26-0.72]            Other psychiatric illness?                Yes **         77 (72.0)         43 (20.1)         120         10.21 [5.06-17.49]         <0.001           No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]            Ves **         12 (11.2)         11 (5.1)         23         2.33 [0.99-5.47]         0.047           No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]            Sickness or complication during pregnancy?                Yes **         14 (13.1)         12 (5.6) <th>HISTORY</th> <th>n (%)</th> <th>n (%)</th> <th>n</th> <th></th> <th></th>	HISTORY	n (%)	n (%)	n						
Depression?         Ves **         20 (18.7)         7 (3.3)         27         6.80 [2.72-16.97]         <0.001	Past history of									
Yes **         20 (18.7)         7 (3.3)         27         6.80 [2.72-16.97]         <0.001           No         87 (81.3)         207 (96.7)         294         0.15[2.70-16.40]            Baby blues?         Yes **         37 (34.6)         40 (18.7)         77         2.30 [1.36-3.89]         0.002           No         70 (65.4)         174 (81.3)         244         0.4 [0.26-0.72]         0.002           Other psychiatric illness?         Ves **         77 (72.0)         43 (20.1)         120         10.21 [5.06-17.49]         <0.001           No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]         <0.001           Chronic disease?         Ves **         12 (11.2)         11 (5.1)         23         2.33 [0.99-5.47]         0.047           No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]         0.021           Sickness or complication during pregnancy?         Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         Depression?	<b>Depression</b> ?	Depression?								
No         87 (81.3)         207 (96.7)         294         0.15[2.70-16.40]           Baby blues?           Yes **         37 (34.6)         40 (18.7)         77         2.30 [1.36-3.89]         0.002           No         70 (65.4)         174 (81.3)         244         0.4 [0.26-0.72]         0           Other psychiatric illness?	Yes **	20 (18.7)	7 (3.3)	27	<b>6.80</b> [2.72-16.97]	<0.001				
Baby blues?           Yes **         37 (34.6)         40 (18.7)         77         2.30 [1.36-3.89]         0.002           No         70 (65.4)         174 (81.3)         244         0.4 [0.26-0.72]         0.002           Other psychiatric illness?           Yes **         77 (72.0)         43 (20.1)         120         10.21 [5.06-17.49]         <0.001           No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]         <0.01           Chronic disease:           Yes **         12 (11.2)         11 (5.1)         23         2.33 [0.99-5.47]         0.047           No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]         0.021           Sickness or complication during pregnancy?         Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         0.021           Family history of           Pepression?	No	87 (81.3)	207 (96.7)	294	0.15[2.70-16.40]					
Yes **         37 (34.6)         40 (18.7)         77         2.30 [1.36-3.89]         0.002           No         70 (65.4)         174 (81.3)         244         0.4 [0.26-0.72]         0           Other psychiatric illness? <th<< td=""><td>Baby blues?</td><td></td><td></td><td></td><td></td><td></td></th<<>	Baby blues?									
No         70 (65.4)         174 (81.3)         244         0.4 [0.26-0.72]           Other psychiatric illness?         (0.01)         (0.01)         (0.01)         (0.01)           Yes **         77 (72.0)         43 (20.1)         120         10.21 [5.06-17.49]         <0.001           No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]         <0.001           Chronic disease?         (0.01)         (0.02)         (0.02)         (0.02)         (0.02)           Yes **         12 (11.2)         11 (5.1)         23         2.33 [0.99-5.47]         0.047           No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]         0.047           Sickness or complication during pregnancy?         Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         0.021           Family history of         Depression?         Use State         Use State         Use State         Use State	Yes **	37 (34.6)	40 (18.7)	77	<b>2.30</b> [1.36-3.89]	0.002				
Other psychiatric illness?         Yes **         77 (72.0)         43 (20.1)         120         10.21 [5.06-17.49]         <0.001           No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]             Chronic disease: <th< td=""><td>No</td><td>70 (65.4)</td><td>174 (81.3)</td><td>244</td><td>0.4 [0.26-0.72]</td><td></td></th<>	No	70 (65.4)	174 (81.3)	244	0.4 [0.26-0.72]					
Yes **         77 (72.0)         43 (20.1)         120         10.21 [5.06-17.49]         <0.001           No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]             Chronic disease:	Other psychi	atric illness?								
No         35 (32.7)         171 (79.9)         201         0.10[0.07-0.19]           Chronic disease?	Yes **	77 (72.0)	43 (20.1)	120	<b>10.21</b> [5.06-17.49]	<0.001				
Chronic disease?         23         2.33 [0.99-5.47]         0.047           No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]         0.047           Sickness or complication during pregnancy?         Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         0.021           Family history of         Depression?         Image: Complexity of the second seco	No	35 (32.7)	171 (79.9)	201	0.10[0.07-0.19]					
Yes **         12 (11.2)         11 (5.1)         23         2.33 [0.99-5.47]         0.047           No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]         0.047           Sickness or complication during pregnancy?         Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         0.021           Family history of           Depression?	Chronic disease?									
No         95 (88.8)         203 (64.6)         298         0.42 [0.18-0.99]           Sickness or complication during pregnancy?           Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         0.021           Family history of         Depression?         Image: Complex text in the second sec	Yes **	Yes ** 12 (11.2)		23	2.33 [0.99-5.47]	0.047				
Sickness or complication during pregnancy?           Yes**         14 (13.1)         12 (5.6)         26         2.53 [1.13-5.69]         0.021           No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         Image: Color of the second s	No	95 (88.8)	203 (64.6)	298	0.42 [0.18-0.99]					
Yes**         14 (13.1)         12 (5.6)         26 <b>2.53</b> [1.13-5.69] <b>0.021</b> No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]         Image: Comparison of the second	Sickness or complication during pregnancy?									
No         93 (86.9)         202 (94.4)         295         0.39[0.18-0.87]           Family history of         Depression?	Yes**	14 (13.1)	12 (5.6)	26	<b>2.53</b> [1.13-5.69]	0.021				
Family history of       Depression?	No	93 (86.9)	202 (94.4)	295	0.39[0.18-0.87]					
Depression?	Family history of	of								
	Depression?									
Yes **       24 (22.4)       16 (7.5)       40 <b>3.58</b> [1.81-7.08]       <0.001	Yes **	24 (22.4)	16 (7.5)	40	3.58 [1.81-7.08]	<0.001				
No 83 (77.6) 198 (92.5) 281 0.28 [0.14-0.55]	No	o 83 (77.6) 198		281	0.28 [0.14-0.55]					
Post-partum depression?	Post-partum	depression?								
Yes **         6 (5.6)         9 (4.2)         15         1.35 [0.47-3.91]         0.575	Yes **	6 (5.6)	9 (4.2)	15	1.35 [0.47-3.91]	0.575				
No 101 (10.3) 205 (95.8) 306 0.74 [0.27-2.15]	No	101 (10.3)	205 (95.8)	306	0.74 [0.27-2.15]					

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Baby blues?								
Yes **	46 (43.0)	70 (32.7)	116	1.55 [0.96-2.50]	0.071			
No	61 (57.0)	144 67.3)	205	0.64 [0.67-3.50]				
Other psychiatric illness?								
Yes **	28 (26.2)	16 7.5)	44 <b>4.39</b> [2.25-8.55]		<0.001			
No	79 (36.9)	198 (92.5)	277	0.23[0.12-0.45]				
Hereditary disease?								
Yes **	44 (41.1)	73 (34.1)	117	1.35 [0.84-2.17]	0.219			
No	63 58.9)	141 (65.9)	204	0.74 [0.84-2.16]				

After multivariate analysis by logistic regression, past history of depression persisted as an independent predictive factor

 Table 2: Possible independent predictive risk factors for maternity blues after caesarean section

Independent predictive		Cases(n=107)		Controls(n=214)		Coef	OR [IC 95%]	Р
factors forbaby blues		n(%)		n(%)				
Past history of depression								
	Yes	20	(18.7)	7	(3.3)	1.472	<b>4.36</b> [1.13-16.81]	0.033
	No (Ref)	87	(81.3)	207	(96.7)	-	-	

#### 4. **DISCUSSION**

As already described by Harris and stein in the 1980ies, past history of depressive states including major and milder states such as the baby blues, just as other psychiatric disorders, were all found as risk factors for developing the baby blues in this survey [9, 10]. In effect, these factors may be discussed in terms of the "weakening effect" and hence the equilibrium disruption that they may produce on the mental state of an individual. The baby blues is generally considered as a "trivial" and "fleeting" transitional depressive state often described as a physiological impairment, rather than a true pathology on its own [4, 5]. It may therefore occur in some newly delivered women as an indicator and a signal or a mode of decompensation of a terrain partially weakened psychiatric conditions bv other and predispositions [11, 12]. It could as such reveal the "psycholabile" nature of an individual. This phenomenon may be justified by the relationship existing between the baby blues and postpartum depression, in which the baby blues appears as a psychological impairment, being predictive for postpartum depression [4, 10,13]. This "psychological weakening effect" through which a current situation such as child birth exacerbates signs in some previously balanced individuals with regards to mental state, may be the reason why most researchers exclude women with psychiatric history in similar studies [11-14].

Family history of depression and other psychiatric illnesses equally appeared as risk factors for the onset of the baby blues in this survey. As a hypothetical explanation for these results, a hereditary or genetic predisposition influencing the manifestation of the baby blues by some women may be suggested. This would not be strange, as heredity has been strongly suspected in the genesis of some depressive conditions in psychiatry [15-18]. Perinatality and childbirth in such cases may therefore act as prompting events; facilitating the expression of latent or inexpressive genes.

Sickness and other complications occurring lifeduring pregnancy may constitute threatening emergencies requiring urgent intervention, given that the life of the mother or the fetus may be at stake. These factors appeared as predispositions to the baby blues, and is consistent with similar relationships evoked by some other researchers under different terms indicating the same phenomenon [8, 15-18]. In effect, these conditions occurring in the course of pregnancy and hence the perinatal period may be stressing factors generating anxiety in women and triggering mood disorders during the postnatal period [8, 16, 11].

Chronic diseases may lead to limitations and deterioration of life quality, resounding on the psychological state of an individual. Associations between depressive states, altered life quality and chronic disorders have been established by a number of researcher's worldwide [15-18]. This may explain the manifestation of the baby blues as a mild depressive syndrome of the postpartum period, prompted by perinatality and delivery.

## 5. CONCLUSION

Women with pre-existing psychological or psychiatric conditions or family predispositions

stand a risk of decompensation during the perinatal period including acute psychic manifestations during the postpartum period. Preventive measures such as counselling, keen monitoring and treatment adjustment may help to prevent this phenomenon.

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