



Research Journal of Pharmaceutical, Biological and Chemical Sciences

A Review on Postpartum Depression.

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ABSTRACT

Over 80 percent of women experience grief in the first days after childbirth. In this form of depression, mothers may feel joy at a moment and then feel sorrow. They may feel sad, angry, grief or tired. Such feelings usually last only a few days; however, it may continue until a week or two. Such emotional waves are considered as a natural effect of hormonal changes caused by pregnancy and childbirth. The increased levels of estrogen and progesterone during pregnancy suddenly drop after childbirth and this can affect the mother's mood. The level of these female hormones will be balanced during a week or more. As the hormone level returns to the balanced level, these feelings will spontaneously disappear without medical treatment. A mother who feels she is rejected, life is not worth living, or she thinks about suicide should immediately be visited by a doctor. Postpartum depression may last for several months or even more. With proper care, the patient can return to her normal life. In such a case, treatment may include visiting a counselor, meditation, or both. In addition, proper diet, exercise, rest and social support can be very helpful. The objective of this study is to review the postpartum depression.

Keywords: Postpartum Depression, Treatment, Diagnosis

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INTRODUCTION

Postpartum depression occurs after childbirth due to several reasons especially hormonal changes. During pregnancy, female hormones, including estrogen and progesterone dramatically increase; however, twenty-four hours after childbirth, the secretion of these hormones will greatly reduce and return to the before-pregnancy level [1].

Researches show that this sudden change in the hormone level is one of the main reasons causing postpartum depression. It should be noted that the decrease in the secretion of these hormones after childbirth will be continued before the first cycle. Therefore, psychologists believe that the period between the childbirth and the first menstruation is the most critical mental-emotional condition that women experience after childbirth and the risk of postpartum depression is 5 times [2].

In addition to changes in the secretion of estrogen and progesterone, thyroid hormones are also affected and the secretion of these hormones is also reduced - thyroid is very small gland in front of the neck which is essential in the metabolism. The reduction in the level of thyroid hormones is another cause of depression which is diagnosed by symptoms such as lack of interest in everything and everyone, irritability, severe fatigue, loss of concentration, various problems during sleep, and increased body weight. Therefore, it is required to have blood tests immediately after birth in order to check the thyroid hormone level. [3]

The birth of a child can cause strong changes in the mother's feelings such as excitement, joy, and even fear. It also can cause something you would not expect: depression. Postpartum depressions are different in duration and intensity which can be mild to severe. Many new mothers experience a short-term mild postpartum depression. It is estimated that 70 to 85 percent of women experience this mild postpartum depression to some degree. This includes symptoms such as sadness and anxiety which usually begins in the first days after childbirth and continues for 7 to 10 days.

About 10 percent of new mothers experience a severe form of depression called postpartum depression. Feelings like sadness, anxiety and inquietude can be so severe that disturb daily tasks. Postpartum depression may occur at any time during the first 6 months after childbirth. If it is left untreated, it can last a year or more. In rare cases, a more severe form of depression called postpartum psychosis may occur. Some symptoms of this mental illness are like postpartum depression but more severe. Experiencing the postpartum depression is not a weakness. For many, it is a natural part of birth. The good news is that for many, a combination of medical treatment and personal care can improve the symptoms.

Postpartum Depression

Postpartum depression is an illness affecting in approximately 10 to 15 out of every 100 deliveries. Symptoms are similar to those of an ordinary depression including low mood which last for at least two weeks. Depending on the severity, the mother may face difficulties to take care of herself and her baby and simple tasks may seem difficult to her. Sometimes there is an apparent cause for postpartum depression, but not always. The mother may feel remorse or guilt because it expects to feel happy of having a baby. However, postpartum depression can happen to anyone and it is not a fault of the mother. Never is late to ask for help. You can feel better even if you have long been suffering from depression. The help you need depends on the severity of the disease. Mild postpartum depression can be treated with increased support from family and friends. If you feel worse, you will need a doctor help you. Over 80 percent of women experience grief in the first days after childbirth. In this type of depression, mothers may feel joy at a moment and then feel sorrow. They may feel sad, angry, grief or tired. Such feelings usually last only a few days; however, may continue until a week or two. Such emotional waves are considered as a natural effect of hormonal changes caused by pregnancy and childbirth. The increased levels of estrogen and progesterone during pregnancy suddenly drop after childbirth and this can affect the mother's mood. The level of these female hormones will be balanced during a week or more. As the hormone level returns to the balanced level, these feelings will spontaneously disappear without medical

treatment. Adequate rest, proper nutrition, and being supported are the key factors should be considered in this situation, because fatigue or anxiety can intensify feelings of grief and sadness[4].

Risk of postpartum depression factors: [5, 6]

Anyone who has a child may experience postpartum depression. However, there are certain factors raising the risk of depression. Some women, more than the others, are at risk for this disorder. These factors include:

- Experience of depression or other mental disorders by the person or family members;
- Anxiety attacks during pregnancy;
- Pregnancy without prior planning;
- Lack of partner support;
- Marital problems;
- Financial problems;
- A serious change in the life at the same time of birth such as moving or losing the job;
- Experience of severe premenstrual syndrome;
- Obstetrical complications;
- Experience of severe problems in early childhood, such as sexual assault or the disintegration of the family.

However, remember that these are not solely the reasons for the occurrence of postpartum depression. Many women who have several risk factors never experienced depression, and conversely, those with one or two or even no risk factors experience a severe depression.

How can I tell if I have postpartum depression?

Symptoms are as follows:[7-10]

- Insomnia;
- Tendency to cry or grief that continues all day;
- Loss of interest in many activities;
- Difficulty with concentration;
- Changes in appetite;
- Anxiety;
- Mood disorders and irritability;
- Feelings of guilt;
- Panic attacks (symptoms include increased heart rate, dizziness, confusion, feeling of happening mishaps);
- Suicidal thoughts.

It is important to distinguish between natural variations of emotions due to the child birth and conditions that require further treatment and support. Not just feelings but the intensity, frequency and the duration of the feelings are important. In other words, many new mothers experience sadness and anxiety during the first few months after the birth. However, if they cry all day which takes a few days and they have panic attacks, they should be visited by a doctor[11, 12]

Prevention

Mothers should feel guilty for having complicated feelings about being a mother. Adaption and creation of a natural emotional bond need the mother to be treated[13].



Having frequent outdoor programs, such as walking and short visits to friends and relatives, would help mothers. Such programs help mothers not to feel isolated[13].

Mothers should put the baby to sleep in a separate room, so mothers will rest better.[14]

During the rest time, mothers can get help from family or friends for daily tasks such as taking care of the baby.[15]

If feeling depressed, mothers are better to share their feelings with their partner or a friend who is a good listener. Talking with other mothers let her to take advantage of the others' experiences.

Early actions[16]:

- Accepting that there is a problem;
- Talking to the spouse, a friend or a family member;
- Resting enough;

Enough rest has a significant effect on physical and mental health. During the day time, whenever the baby sleeps, the mother must try to sleep too in order to adjust her rest periods to the baby. When issues that before did not hurt the patient suddenly became unbearable for her, it shows that she need to rest.

- Eating healthy;

Good nutrition during postpartum recovery provides the body what it needs. Several small meals per day may be a better choice than three heavy meals.

Eating vegetables and fruits between meals helps mothers to control weight.

- Exercising;

Light exercise can be helpful. If possible, take a quick walk every day for 30 minutes.

- Meetings.

Pharmacotherapy

Antidepressants can be very effective. Such drugs may be particularly helpful in case the patient experience many physical symptoms of depression such as poor appetite, insomnia and fatigue. [17] It is believed that these drugs are not addictive; however, as with any drug, it is important not to stop using them suddenly. It is important to take the full course, usually at least six months

Psychiatrist may prescribe an antidepressant for the patient .However, if the mother is breast-feeding her baby, the doctor may consider other measures. If necessary, the doctor may also prescribe to stop breastfeeding.[18]

Some people experience side effects such as fatigue and dry mouth. Such symptoms should stop within a few weeks .The use of antidepressants may improve the effectiveness of other therapies such as speech therapy.

Psychological treatments

Research shows that counseling is a very effective treatment for postpartum depression.[19, 20]

Supportive treatments:

Along with other therapies, formal and informal supports can probably be as a complementary for the therapy program[21, 22]

Mild postpartum depression usually disappears quickly with the support of family and friends. If the depression becomes severe, mother may fail to take care of her own and the baby. Rarely, hospitalization may be necessary. In such case, it is recommended that the mother is hospitalized in a center near the house in order to keep a close relationship with the child. Even in severe cases of depression, the depression is usually curable by medications, counseling and family support. Antidepressant medications are often effective when they are used for 3 to 4 weeks. If the mother is breast-feeding, any prescription must carefully consider this. However, usually in case of using antidepressants, breastfeeding should stop [23].

It is important for relatives, especially the spouse to participate in the treatment plan. They also need to understand the symptoms of postpartum depression.

Postpartum depression, like other forms of depression, can be cured and most women get completely healthy.

Here we quote the abstracts of several articles regarding postpartum depression:

“Research is needed to evaluate the efficacy of prevention and treatment for post-partum depression. **METHOD:** Subjects were screened with the Edinburgh Post-natal Depression Scale (EPDS) at the obstetric clinic. Mothers at risk (N = 258) (EPDS scores > or = 9) were randomly assigned to a prevention/treatment group or a control group. The prevention group received one cognitive-behavioural prevention session during hospitalization. At 4 to 6 weeks post-partum, subjects were screened again with the EPDS, after drop-out rates (refusals plus no return of the second EPDS) of 25.4% (33/130) in the intervention group and 10.9% (14/128) in the control group. Mothers with probable depression (EPDS scores > or = 11) were assessed using the Hamilton Depression Rating Scale (HDRS) and the Beck Depression Inventory (BDI). Mothers with major depression continued in the treatment group (N = 18) or in the control group (N = 30). Treated subjects received a cognitive-behavioural programme of between five and eight weekly home-visits. **RESULTS:** Compared with the control group, women in the prevention group had significant reductions in the frequency of probable depression (30.2 % v. 48.2%). Recovery rates based on HDRS scores of < 7 and BDI scores of < 4 were also significantly greater in the treated group than in the control group. **CONCLUSIONS:** The study suggests that this programme for prevention and treatment of post-partum depression is reasonably well-accepted and efficacious.” [24]

“The aim of the authors in this study was to assess the prevalence of postpartum depression and evaluate the association of affective temperaments with emotional disorders in a sample of 92 pregnant women consecutively admitted for delivery between March and December 2009. In the first few days postpartum, women completed the Suicidal History Self-rating Screening Scale, the Beck Hopelessness Scale, the Edinburgh Postnatal Depression Scale, the Temperament Evaluation of the Memphis, Pisa, Paris and San Diego Autoquestionnaire, and the Gotland Male Depression Scale. Fifty percent of the women reported an Edinburgh Postnatal Depression Scale score of 9 or higher, and 23% a score of 13 or higher. Women with a dysphoric-dysregulated temperament had higher mean scores on the Beck Hopelessness Scale ($p < 0.05$), the Gotland Male Depression Scale ($p < 0.001$), the Edinburgh Postnatal Depression Scale ($p < 0.001$), and the Suicidal History Self-Rating Screening Scale ($p < 0.01$) than other women after adjusting for covariates. Multiple logistic regression analysis with the temperament groups as the dependent variable indicated that only the Gotland Male Depression Scale was significantly associated with temperament when controlling for the presence of other variables. Women with a dysphoric-dysregulated temperament were 1.23 times as likely to have higher depressive symptom scores. Future studies should evaluate the effectiveness of psychiatric screening programs in the postpartum period as well as factors associated with depression and suicidality during the same period.” [25]

“One negative outcome of the post-partum period is the occurrence of post-partum depression. While the incidence levels are high in the U.S. for the 'Blues' and the 'moderate level depression disorder', the nature of this phenomenon--as a disease and as an illness--remains unclear. It is suggested that an anthropological perspective incorporating symbolic behavior and biological processes may more effectively address the problem

than isolated biological and psycho-social research. Theories of etiology based strictly in biological mechanisms have resulted in a treatment bias towards pharmacological intervention; this paper suggests that more attention should be given to the impact of the cultural patterning of the post-partum period, e.g. the structure, organization of the family group and role expectations. A review of the anthropological literature on childbirth provides little evidence for post-partum depression. Our own observations and an examination of the cross-cultural literature have identified common elements in the social structuring of the post-partum period. They include: (1) cultural patterning of a distinct post-partum period; (2) protective measures designed to reflect the vulnerability of the new mother; (3) social seclusion; (4) mandated rest; (5) assistance in tasks from relatives and/or midwife; (6) social recognition of new social status through rituals, gifts or other means. A hypothesis is proposed that a relationship exists between post-partum social organization/mobilization and post-partum depression. The experience of 'depression' in the U.S. may represent a culture bound syndrome resulting from the lack of social structuring of the post-partum events, social recognition of the role transition for the new mother and instrumental support and aid for the new mother." [26]

"To compare the psychological health of men with partners who have post-partum depression (PPD; index group) with that of men with partners without PPD (comparison group). METHOD: Using a cross-sectional survey, psychological symptoms and disturbances of index group men (n = 58) and comparison group men (n = 116) were compared. Validated self-report measures were used to assess five key areas of mental health: depression, anxiety, non-specific psychological impairment, aggression and alcohol use. RESULTS: Index group men had more symptoms of depression, aggression and non-specific psychological impairment, and had higher rates of depressive disorder, non-specific psychological problems and problem fatigue than comparison group men. Index group men were also more likely to have three or more comorbid psychological disturbances. There was no difference between the groups on measures of anxiety and alcohol use. CONCLUSIONS: Although many men in the postnatal period experience a variety of mental health problems, those who have a partner with PPD are themselves at increased risk for experiencing psychological symptoms and disturbances. Differentiation of psychological syndromes is important; higher rates of depressive disorder, non-specific psychological problems and problem fatigue were found, but rates of anxiety disorder and hazardous alcohol use did not differ between the groups. More attention from health professionals to men's mental health in the postnatal period may be beneficial to the entire family system." [27]

"This study investigates the role of self-criticism and dependency in inpatient post-partum depressed women (n = 55) and non-depressed controls (n = 37) as well as the relationship between both personality dimensions and severity of depression and anxiety. As expected, mothers with post-partum depression showed not only increased levels of depression but also anxiety compared with non-depressed mothers. Furthermore, they had significantly higher levels of self-criticism, but not of dependency. In the post-partum depressed mothers, both personality dimensions were positively associated with severity of depression. However, in non-depressed mothers, self-criticism was positively associated with depression, while there was an inverse relationship between dependency and severity of depression. In both samples, self-criticism, but not dependency, was related to state anxiety. The cross-sectional nature of this study limits the ability to draw causal conclusions. The study was based on self-report and conducted in relatively small samples." [28]

"Long-term follow-up and risk factors of persistent post-partum depression (PPD) are fairly unknown compared with its prevalence in the developing countries. In this study, we did a follow-up measure of PPD and examined the factors, which were associated with PPD 1-year post-partum. METHOD: Our sample comprised of 34 women. Depressive symptoms were assessed by the Edinburgh post-natal depression scale (EPDS) 6 weeks post-partum, and women with scores >12 on this scale was categorised as depressed. Personality disorders were determined at the same occasion by means of the Structured Clinical Interview for DSM-III-R personality disorders (SCID-II). One year post-partum EPDS was completed. RESULTS: The rate of PPD 1-year post-partum was 32.4%, and it was unrelated to age at assessment, primiparity, number of children, employment status, economical status and educational level. Women depressed 1-year post-partum had significantly higher basal scores of EPDS and more often also a diagnosis of any axis II disorder; and specifically dependent and obsessive-compulsive personality disorders. In our sample, the predictors of 1-year post-partum PPD were having higher basal score of EPDS and the existence of a personality disorder. CONCLUSION: This study suggests that women with PPD, scoring

high in the EPDS scale 6 weeks post-partum and having a personality disorder, run a higher risk for depression at 1-year follow-up.” [29]

“To examine the association between maternal post-natal depression and infant growth. BACKGROUND: Infant growth has recently been shown, in two studies from South Asia, to be adversely affected by maternal depression in the early post-partum period. It is uncertain whether a similar association obtains in developing countries outside Asia. METHOD: A sample of 147 mother-infant dyads was recruited from a peri-urban settlement outside Cape Town and seen at 2 and 18 months post partum. RESULTS: No clear effect of post-partum depression on infant growth was found. Although maternal depression at 2 months was found to be associated with lower infant weight at 18 months, when birthweight was considered this effect disappeared. CONCLUSIONS: Possible explanations for the non-replication of the South Asian findings are considered.” [30]

“Post partum depression (PPD) is relatively common in China but its clinical characteristics and risk factors have not been studied. We set out to investigate whether known risk factors for PPD could be found in Chinese women. METHODS: A case control design was used to determine the impact of known risk factors for PPD in a cohort of 1970 Chinese women with recurrent DSM-IV major depressive disorder (MDD). In a within-case design we examined the risk factors for PPD in patients with recurrent MDD. We compared the clinical features of MDD in cases with PPD to those without MDD. Odds ratios were calculated using logistic and ordinal regression. RESULTS: Lower occupational and educational statuses increased the risk of PPD, as did a history of pre-menstrual symptoms, stressful life events and elevated levels of the personality trait of neuroticism. Patients with PPD and MDD were more likely to experience a comorbid anxiety disorder, had a younger age of onset of MDD, have higher levels of neuroticism and dysthymia. LIMITATIONS: Results obtained in this clinical sample may not be applicable to PPD within the community. Data were obtained retrospectively and we do not know whether the correlations we observe have the same causes as those operating in other populations. CONCLUSIONS: Our results are consistent with the hypothesis that the despite cultural differences between Chinese and Western women, the phenomenology and risk factors for PPD are very similar.”

“Gestational stress (GS) produces profound behavioural impairments in the offspring and may permanently programme hypothalamic-pituitary-adrenal (HPA) axis function. We investigated whether or not GS produced changes in the maternal behaviour of rat dams, and measured depression-like behaviour in the dam, which might contribute to effects in the progeny. We used the Porsolt test, which measures immobility in a forced-swim task, and models depression in rodents, while monitoring maternal care (arched-back nursing, licking/grooming, nesting/grouping pups). Pregnant rats underwent daily restraint stress (1 h/day, days 10-20 of gestation), or were left undisturbed (control). On post-parturition days 3 and 4, dams were placed into a swim tank, and time spent immobile was measured. GS significantly elevated immobility scores by approximately 25% above control values on the second test day. Maternal behaviours, in particular arched-back nursing and nesting/grouping pups, were reduced in GS dams over post-natal days 1-10. Adult offspring showed increased immobility in the Porsolt test, and also hypersecreted ACTH and CORT in response to an acute stress challenge. These data show that GS can alter maternal behaviour in mothers, and this might contribute to alterations in the offspring. GS may be an important factor in maternal post-natal depression, which may in turn detrimentally effect the offspring because depressed mothers do not sufficiently care for their offspring.” [31]

“Post-partum depression, although heterogeneous, is often considered a medical disease when viewed from the biomedical perspective. However, recent reports from the Indian subcontinent have documented psychosocial causal factors. METHOD: This study employed qualitative methodology in a representative sample of women in rural South India. Women in the post-partum period were assessed using the Tamil versions of the Short Explanatory Model Interview, the Edinburgh Postnatal Depression Scale and a semi-structured interview to diagnose ICD 10 depression. Socio-demographic and clinical details were also recorded. RESULTS: Some 137 women were recruited and assessed, of these, 26.3% were diagnosed to have post-partum depression. The following factors were associated with post-partum depression after adjusting for age and education: age less than 20 or over 30 years, schooling less than five years, thoughts of aborting current pregnancy, unhappy marriage, physical abuse during current pregnancy and after childbirth, husband's use of alcohol, girl child delivered in the absence of living boys and a preference for a boy, low birth weight, and a family history of depression. Post-partum

depression was also associated with an increased number of causal models of illness, a number of non-medical models, treatment models and non-medical treatment models. CONCLUSION: Many social and cultural factors have a major impact on post-partum depression. Post-partum depression, when viewed from a biomedical framework, fails to acknowledge the role of context in the production of emotional distress in the post-partum period." [32]

CONCLUSION

All mothers, especially who are experiencing their first birth, are subject to behavior changes such as: the feeling of being limited, feeling of sorrow, crying especially when breastfeeding, loss of appetite, sleep disturbance, feeling of anger and frustration, reduction of irritability threshold, restlessness, anxiety, feel isolation and loneliness. Though these are considerable symptoms, they can be alleviate with a little attention and measures such as resting with the baby; asking help from the spouse, friend or trusted person to take care of the baby; doing household chores with the help of the spouse; talking to women who have a new baby; proper planning and the allocation of a time for recreation, exercise, etc.[33]

Statistics show that out of every 1,000 births, 1 to 2 women may experience "postpartum depression". In many cases, the disease arises in the first six weeks after childbirth. In persons with mental illness such as "schizophrenia" or "bipolar disorder", symptoms appear sooner and more severe. If it is not treated quickly, it may lead to suicide or killing the baby and other children.[34]

Many women having depression, during or after pregnancy, do not talk about their illness because of fear, shame, or fear of failure in life; in fact they deny and hide symptoms. This makes the disease acute and the patient will experience the psychological imbalance. In other hand, the fear of being recognized as an incompetent mother will prevent the mother to talk about her illness, unaware of the fact that this makes the illness more sever. Therefore, psychologists recommend that the mother visits a doctor just after the onset of symptoms and gets treatment.[35]

Researches show that the mother's depression during and after pregnancy has adverse effects on the fetus and infant among which we can name: very low birth weight at birth; preterm birth; birth defects; speech problems such as delays in speech; stuttering; inability to communicate with others, especially after the start of school; behavioral problems; isolation; bed-wetting; nightmares; and so on.[35]

And last but not least, the spouse of a pregnant woman plays the most important role for them. Psychologists believe that many depressed patients, especially pregnant women, suffer from depression due to the negligence and inattention of others especially their spouses.[36]

REFERENCES

- [1] Beck, C.T., Nursing research, 2001. 50(5): 275-285.
- [2] Murray, L. and P.J. Cooper, Psychological medicine, 1997. 27(02): 253-260.
- [3] Lucas, A., et al., Clinical Endocrinology, 2001. 55(6): 809-814.
- [4] Cutrona, C.E. and B.R. Child development, 1986: 1507-1518.
- [5] Robertson, E., et al., General hospital psychiatry, 2004. 26(4): 289-295.
- [6] Righetti-Veltema, M., et al. Journal of affective disorders, 1998. 49(3): 167-180.
- [7] Stewart, D.E., et al., Canadian journal of psychiatry. Revue canadienne de psychiatrie, 2008. 53(2): 121-124.
- [8] Horowitz, J.A. and J. Goodman, 2004. 18(2-3): 149-163.
- [9] Abrams, L.S., K. Dornig, and L. Curran. Qualitative Health Research, 2009. 19(4): 535-551.
- [10] Abrams, L.S. and L. Curran. Psychology of Women Quarterly, 2009. 33(3): 351-362.
- [11] Affonso, D.D., et al., Birth, 1990. 17(3): 121-130.
- [12] Affonso, D., et al., Journal of Psychosomatic Obstetrics & Gynecology, 1991. 12(4): 255-271.
- [13] Wisner, K.L., et al., Prevention, 2004. 161(7).
- [14] Le, H.-N., M.A. Lara, and D.F. Perry, Archives of women's mental health, 2008. 11(2): 159-169.



- [15] Muñoz, R.F., et al., *Cognitive and Behavioral Practice*, 2007. 14(1): 70-83.
- [16] Williams, P. *Theta Tau International's 26th International Nursing Research Congress*. 2015. STTI.
- [17] McDonagh, M.S., et al., *Obstetrics & Gynecology*, 2014. 124(3): 526-534.
- [18] Wachter, K., *Depression, Clinical Psychiatry News*, 2008. 36(9): 23-23.
- [19] Cooper, P.J. and L. Murray. 1997.
- [20] Kopelman, R. and S. Stuart, *Psychiatric Annals*, 2005.
- [21] Glavin, K., et al., 2010. 66(6): 1317-1327.
- [22] Kim, E., et al., *J Korean Clin Nurs Res*, 2009. 15(3): 157-170.
- [23] Fam, J., H. Chen, and J. Wang. *Asia-Pacific Psychiatry*, 2011. 3(2): 61-66.
- [24] Chabrol, H., et al., *Psychol Med*, 2002. 32(6): 1039-47.
- [25] Girardi, P., et al., *Women Health*, 2011. 51(5): 511-24.
- [26] Stern, G. and L. Kruckman, *Soc Sci Med*, 1983. 17(15): 1027-41.
- [27] Roberts, S.L., et al., *Aust N Z J Psychiatry*, 2006. 40(8): 704-11.
- [28] Vliegen, N. and P. Luyten, *Clin Psychol Psychother*, 2009. 16(1): 22-32.
- [29] Uguz, F., et al., *J Psychosom Obstet Gynaecol*, 2009. 30(2): 141-5.
- [30] Tomlinson, M., et al., *Child Care Health Dev*, 2006. 32(1): 81-6.
- [31] Smith, J.W., et al., *Psychoneuroendocrinology*, 2004. 29(2): 227-44.
- [32] Savarimuthu, R.J., et al., *Int J Soc Psychiatry*, 2010. 56(1): 94-102.
- [33] Ruschi, G.E.C., et al. *Revista de Psiquiatria do Rio Grande do Sul*, 2007. 29(3): 274-280.
- [34] Flynn, H.A., *Psychiatric Annals*, 2005. 35(7): 544-555.
- [35] Salinger, M.C. *Dissertation Abstracts International*, 46(4-B), 1984, pp. 1344-1345.
- [36] Alexopoulos, G.S., et al. *American Journal of Psychiatry*, 1993. 150: 1693-1693.