

## Creating Healthy Work Environments 2019

### Predictive Factors in Postpartum Depression: Developing a Tool to Aid Nurses in a Preventative Role

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#### ABSTRACT

**PURPOSE:** The purpose of this literature review is to identify risk factors for postpartum depression (PPD) in order to initiate evidence-based research into the nurse's role in preventing undiagnosed or late diagnosed mothers with PPD.

**BACKGROUND:** It is estimated that 10-15% of new mothers will develop PPD, but there is evidence that postpartum depression is largely underdiagnosed and undertreated. The Edinburgh Postpartum Depression Scale (EPDS) has been demonstrated to be an effective screening tool for PPD, although current American College of Obstetricians and Gynecologists (ACOG) recommendations include screening a minimum of one time through the perinatal period. This poses the risk for too few women to get diagnosed with, and therefore treated for, PPD.

**METHODS:** In this review, we identified a variety of psychosocial and biological factors that impact the risk of new mothers developing PPD. The search strategy included articles found in PubMed database that screened with the EPDS between 2013-2018 in English using the search terms of "predictors", "risks", "postpartum depression", and "depression in new mothers."

**RESULTS:** Using secondary analysis of literature, risk factors found include low BMI, history of depression, age greater than 35 years old, age younger than 24 years old, baby born at gestational age less than 32 weeks, instrument assisted birth, cesarean section birth, physical disability of mother, history of partner violence, postpartum complications, and an unwanted or unplanned pregnancy, all which are suggested to increase a mother's risk of developing PPD. Using the relative risk associated with each of these risk factors, a framework for risk factors was produced with the hope of spurring further research into the creation of a screening tool for nurses in order to have an active role in the prevention and treatment of PPD.

**RECOMMENDATIONS:** Next steps include the further development of the evidence-based screening tool, which can then be assessed for validity and reliability and piloted by postpartum nurses in order to identify mothers at higher risk of developing PPD. The tool would apply statistical principles to categorize a woman as low risk, moderate risk, or high risk to ensure that further screening intervals and implementation of protective factors would be utilized.

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#### **Title:**

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#### **Keywords:**

Depression, Postpartum and Risk

#### **References:**

Silverman, M.E., Reichenberg, A., Savitz D. A., Cnattingius, S., Lichtenstein, P., Hultman, C.M., Larsson, H., Sandin, S. (2017). The risk factors for postpartum depression: A population-based study. *Depression and Anxiety*, 34(2):178-187. doi: 10.1002/da.22597

Silverman, M. E., Smith, L., Lichtenstein, P., Reichenberg, A., & Sandin, S. (2018). The association between body mass index and postpartum depression: A population-based study. *Journal of Affective Disorders*, 240, 193-198. doi: 10.1016/j.jad.2018.07.063

Mitra, M., Iezzoni, L. I., Zhang, J., Long-Bellil, L. M., Smeltzer, S. C., & Barton, B. A. (2015). Prevalence and risk factors for postpartum depression symptoms among women with disabilities. *Maternal and child health journal*, 19(2), 362-72. doi: 10.1007/s10995-014-1518-8

Gaillard, A., Strat Y.L., Mandelbrot L., Keïta, H., Dubertret C. (2014). Predictors of postpartum depression: Prospective study of 264 women followed during pregnancy and postpartum. *Psychiatry Research*, 215(2), 341-346. doi: 10.1016/j.psychres.2013.10.003.

Mercier, R. J., Garrett, J., Thorp, J., & Siega-Riz, A. M. (2013). Pregnancy intention and postpartum depression: secondary data analysis from a prospective cohort. *BJOG: an international journal of obstetrics and gynaecology*, 120(9), 1116-22. doi: 10.1111/1471-0528.12255

Zhang J, Yu KF. What's the relative risk? A method of correcting the odds ratio in cohort studies of common outcomes. *JAMA*. 1998 Nov 18;280(19):1690-1.

Norhayati, M.N., Nik Hazlina, N.H., A.R. Asrenee, Emilin, W.M.A. (2015) Magnitude and risk factors for postpartum symptoms: A literature review. *Journal of Affective Disorders*, 175, 34-52. doi: 10.1016/j.jad.2014.12.041.

### **Abstract Summary:**

A literature review was conducted to develop a predictive tool for postpartum depression (PPD), primarily to be used immediately postpartum in the nursing role. A variety of factors were identified as having a significant risk on the development of PPD, and were used to develop a novel instrument.

### **Content Outline:**

Introduction: Postpartum depression (PPD) is prevalent in new mothers, but evidence suggests that it is largely underdiagnosed.

1. 10-15% of new mothers will develop PPD but evidence suggests this number is realistically doubled due to reporting methods.
2. The Edinburgh Postpartum Depression scale has been shown to be widely used, reliable, and valid, though current ACOG recommendations provide a framework in which women are insufficiently screened.

Body: A literature review was conducted to gather evidence towards the construction of a novel, predictive, instrument to be used in conjunction with the current EPDS.

1. Main Point #1: A variety of PPD risk factors were identified using a specific search strategy.
  1. Inclusion factors: EPDS used for analysis, <5 years old, search terms used were "predictors", "risks", "postpartum depression", and "depression in new mothers."
2. Main Point #2: Significant risk factors included low BMI, history of depression, age >35 y/o, age <24 y/o, gestation <32 weeks, instrument assisted birth, cesarean section birth, physical disability of mother, history of partner violence, postpartum complications, and an unplanned pregnancy.
3. Main Point #3: Relative risk of factors was used to construct a predictive tool.

Conclusion: Next steps include assessment of validity and reliability of scale, as well as a pilot study used by postpartum nurses.

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**Professional Experience:** BS in nursing, along with 1 month of clinical rotations in labor and deliver + 1 month of education in Maternal Newborn nursing, as well as 1 year of experience in mental health.

**Author Summary:** Tyler graduated from Regis University's Accelerated Nursing program in December, 2018, and received a Bachelors of Science in Integrative Biology from the University of Colorado prior to that. He has a years worth of experience working in mental health, and is familiar with research, having been published in the Journal of Urology. Additionally, he is an advocate for women's health.

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**Author Summary:** Eleanor obtained her first degree in Public Health from Santa Clara University, then worked for a community health plan and women's community clinic in San Francisco. She has experience in improving access to care, improving patient care, quality improvement, and harm reduction. She then went back to school to obtain a nursing degree at Regis University where she continues to pursue an interest in women's health and community health.