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# POSTPARTUM DEPRESSION

## AMONG WOMEN AFTER GIVING BIRTH IN A MOUNTAINOUS AREA OF VIETNAM


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## Background

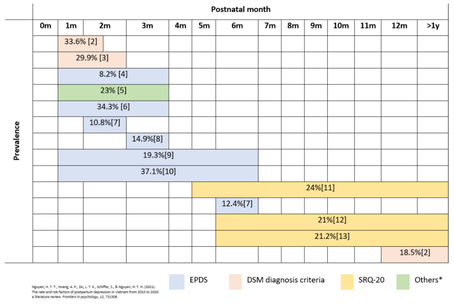
The prevalence of postpartum depression (PPD) worldwide was approximately 17.22% while the prevalence of postpartum depression among new mothers from 1 to 12 months ranged from 8.2% to 37.1% in Vietnam.

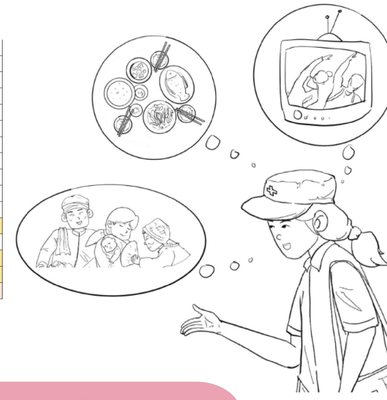
Among Vietnamese women, the risk factors for PPD include personal factors such as level of education, satisfaction about life after birth; family factors such as lack of family support, suffering from sexual violence; and environmental factors such as stressful life events, rural living area or confinement practices. However, there is no evidence of prevalence and predictors of PPD among mountainous mothers.

## Objective

This study aims to identify the prevalence of PPD and the risk factors contributing to PPD among women after giving birth in a mountainous area of Vietnam.

***Figure 1. Prevalence of postpartum common mental disorders against postnatal screening time points reported by published articles in Vietnam from 2010 to 2020***



## Method

A cross-sectional study using convenient sampling method was carried out among women after giving birth in Son La, a province in the northwest region of Vietnam with a diversity of ethnic minorities.

Women who (1) are at least 18-year-old, (2) have delivered their babies within one year, and (3) agree to participate in this study were invited to participate. In total, there were 194 qualified responses from eligible women.

The self-designed questionnaire survey is divided into four parts:

- (I) The general *demographic information* of participants
- (II) *Perception of PPD* including 15 statements about women's perceptions of PPD (Cronbach's alpha was 0.769)
- (III) *Practice for prevention of PPD* consists of 9 questions about the frequency of activities prevent PPD (Cronbach's alpha was 0.825)
- (IV) *Edinburgh Postnatal Depression Scale (EPDS)* as the screening tool for PPD which was translated and validated in Vietnamese.

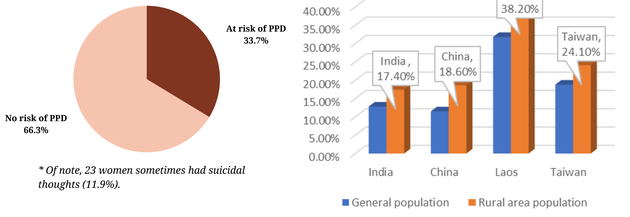
Spearman's correlation analyses were conducted to identify the relations between continuous variables due to the lack of normality of the distribution. A linear regression model was used to determine the relationship between postpartum depression among women after giving birth with other potential variables.

## Results

***Table 1. Characteristics of participants***

| Variables | Categories | Frequency | Percentage |
|---|---|---|---|
| Age (Mean SD) | | 27.2 ± 5.9 | |
| Ethnic groups | Minority | 170 | 87.6% |
| | Kinh | 24 | 12.4% |
| Living area | Urban | 56 | 28.9% |
| | Rural | 138 | 71.1% |
| Highest level of education | Illiterate | 11 | 5.7% |
| | Elementary | 3 | 1.5% |
| | Secondary | 67 | 34.5% |
| | High school | 54 | 27.8% |
| | Higher education | 59 | 30.4% |
| Employment | Unemployment | 21 | 10.8% |
| | Unskilled labour | 131 | 67.5% |
| | Skilled labour | 42 | 21.6% |
| Marital status | Single | 1 | 0.5% |
| | Divorced/Widowed | 1 | 0.5% |
| | Married/Living with partner | 192 | 99.0% |
| Monthly household income per capita | ≤ 2,250,000 VND | 109 | 56.1 |
| | > 2,250,000 VND | 85 | 43.9 |
| Health insurance | Yes | 17 | 8.8 |
| | No | 177 | 91.2 |
| Alcohol drinking | Yes | 26 | 13.4 |
| | No | 168 | 86.6 |
| Periodic health check | Less than three times | 56 | 28.9 |
| | At least three times | 138 | 71.1 |

***Figure 2. Prevalence of postpartum depression among women after giving birth in a mountainous area in Vietnam***




** Of note, 23 women sometimes had suicidal thoughts (11.9%).*

***Table 2. The multiple regression analysis for variables predicting postpartum depression among mountainous women after giving birth***

| Model | Variable | B | SE | Beta | 95% CI | t | p |
|---|---|---|---|---|---|---|---|
| 1 | Living area | 2.518 | 0.994 | 0.193 | 0.56; 4.58 | 2.533 | 0.012 |
| | Monthly household income | -3.477 | 0.899 | -0.292 | -5.25; -1.70 | -3.868 | <0.01 |
| | Periodic Health Examination | -2.746 | 0.827 | -0.211 | -1.15; -4.38 | -3.32 | 0.001 |
| 2 | Living area | 2.518 | 0.906 | 0.193 | 0.73; 4.31 | 2.779 | 0.006 |
| | Monthly household income | -2.401 | 0.83 | -0.202 | -4.04; -0.76 | -2.892 | 0.004 |
| | Periodic Health Examination | -2.331 | 0.763 | -0.179 | -3.84; -0.83 | -3.053 | 0.003 |
| | Drinking alcohol | -2.666 | 1.014 | -0.154 | -4.67; -0.66 | -2.628 | 0.009 |
| | Perceived infant excessively crying | -2.801 | 1.098 | -0.147 | -4.97; -0.64 | -2.552 | 0.012 |
| | Practice | -0.153 | 0.069 | -0.135 | -0.29; -0.02 | -2.223 | 0.027 |
| | Perception | -0.200 | 0.054 | -0.23 | -0.31; -0.09 | -3.68 | <0.01 |
| | Adjusted $R^2$ | | | 0.383 | | | |

## Conclusion

A large-scale quantitative research should be implemented to establish the association with the potential risk factors. Future qualitative or mix-method studies may provide profound insights into the ***barriers and the mental health demands*** among new mothers in remote locations.

Prospective interventions should aim to ***raise the awareness of mountainous mothers*** about postpartum depression, as well as coping strategies while they have depressive symptoms.