

Violence and depression among pregnant women in Egypt

Hanan M. Ghoneim

Suez Canal University Faculty of Medicine

Mohamed Elprince (✉ prince.ma939@yahoo.com)

Suez Canal University Faculty of Medicine <https://orcid.org/0000-0002-9742-9799>

Tamer Yehia M. Ali

Suez Canal University Faculty of Medicine

Waleed Gharieb

Suez Canal University Faculty of Medicine

Amal Ahmed

Suez Canal University Faculty of Medicine

Research article

Keywords: Antepartum, Depression, Violence

Posted Date: December 16th, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-44295/v2>

License:  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Version of Record: A version of this preprint was published at BMC Pregnancy and Childbirth on July 12th, 2021. See the published version at <https://doi.org/10.1186/s12884-021-03932-0>.

Abstract

Background: Depression is a serious mental health disorder that might affect women in the childbearing period. Incidences increase during pregnancy as well as after delivery. Its association with intimate partner violence has been reported in many countries. Data about this sensitive issue are lacking in Egypt. The aim of the study was to determine the relation between intimate partner violence and depression during pregnancy.

Methods: This was a case control study conducted at the the outpatient clinics in Suez Canal University hospitals, from January 2019 to March 2020. The study included two groups, the study group included women exposed to violence during the current pregnancy and a control one included women with no history of violence. Women were asked to complete the Arabic validated NorVold Domestic Abuse Questionnaire. Depression was evaluated using the Arabic validated form of the Edinburgh Postnatal Depression Scale. The main outcome measure was to assess the association between intimate partner violence and depression.

Results: Both groups were matched in their demographic characters. Emotional violence was the most common reported pattern among women exposed to intimate partner violence 87.9% (139/158). There was a significant difference between women exposed to violence and those who were not exposed to violence in the total depression scores (13.63 ± 5.47 and 10.65 ± 5.44 , respectively with a p value <0.001). Emotional and sexual violence had significant roles as risk factors for depression during pregnancy in single regression or after control of other confounders.

Conclusion: There was a strong association between intimate partner violence and depression during pregnancy with variable rates that differ according to the economic state of the countries.

Background

Depression, anxiety, and somatoform disorders affect women during pregnancy (1) with depression the most serious one (2). It has a wide range of risk factors including poverty, illiteracy, unemployment, social deprivation, and intimate partner violence (IPV) (3, 4). IPV has numerous unwanted effects on physical and mental health (5). According to WHO estimates, about one- third of women are exposed to one form of violence (physical or sexual) during their lifetime, while emotional violence predominated significantly (5). IPV is the most common type of violence practiced against women worldwide (6). Recent studies demonstrated the relation between IPV and postpartum depression (PPD) (7), while depression is the most common psychiatric disorder during pregnancy (8). It has a significant cargo during pregnancy, with higher prevalence than PPD (9). Besides, it is considered a major risk factor for PPD, with about 41.5% of PPD being developed during pregnancy (10).

There are no studies evaluating the relation between IPV and depression during pregnancy, especially in Egypt. Early detection of depression, would lead to early intervention and the avoidance of disease

progression (11). The aim of this study was to determine the relationship between different forms of violence and depression during pregnancy among Egyptian women.

Methods

This was a case control study conducted in the outpatient clinics in Suez Canal University hospitals. We recruited women attending for routine antenatal care. We allocated women into two groups. The study group included women exposed to IPV during the current pregnancy and a control one included women with no history of IPV. Women were recruited according to the following inclusion criteria: a) women aged 18-45 years, b) continuous marital relationship, c) no history of depression in previous pregnancies, and d) singleton pregnancy. Women who refused to participate in our research were excluded.

Patients were evaluated regarding their demographic parameters. These data were selected after literature review to determine possible factors contributing to maternal exposure to IPV (12, 13). These included age, level of education, occupation, parity, residency, and duration of marriage. Partners' data included age, level of education, occupation, and socioeconomic level (14). Women were asked to complete the Arabic validated NorVold Domestic Abuse Questionnaire (NORAQ). The NORAQ measures four types of abuse: emotional, physical, sexual, and violence in the health care system, the last one being excluded. The NORAQ-Arabic version evaluated measurements of the three kinds of lifetime abuse – emotional (12 items), physical (11 items), and sexual abuse (12 items). The content of the questions ranged from mild to severe lifetime abuse. Women who reported more than one degree of a specific kind of abuse were categorized according to the most severe abusive act. Emotional, physical, and sexual abuses were defined by an affirmative answer to one or several of the three or four questions about each kind of violence in NORAQ (15).

Depression was evaluated using the Arabic validated form of the Edinburgh Postnatal Depression Scale (EPDS). The scale comprises 10 questions that represent patients' feelings in the last seven days. Each question has multiple choices for answering it. Questions 1, 2, and 4 are scored 0, 1, 2, or 3 with the top choice scored as 0 while the last one as 3. Questions 3, 5- 10 are reverse scored with the top choice scored as 3 while the last one as 0. The maximum score is 30. Scores were interpreted as follows: a score less than 8 as depression was not likely, a score of 9- 11 as depression was possible, a score of 12- 13 as fairly high possibility of depression, and a score ≥ 14 as possible depression (positive screen). A positive score for question 10 meant suicidality risk. Each situation was dealt with according to the recommendations of the reproductive health program (16, 17).

Data collection was done by one of the study researchers, who had the interviews with each patient. Women were interviewed in a private room. An informed written consent was obtained from each participant before completing the questionnaire. The questionnaires were anonymous and without address, to ensure confidentiality. The available researcher provided help and clarification for patients when needed. The average time for filling the questionnaire was 20- 25 minutes.

Statistical analysis:

Data were statistically described in terms of mean and standard deviation, frequencies (number of cases) and percentages when appropriate. P values less than 0.05 were considered statistically significant. All statistical calculations were done using computer program SPSS (Statistical Package for the Social Science; SPSS Inc. 2013, Chicago, IL, USA) release 22 for Microsoft Windows. Parametric tests were used for variables with a normal distribution. Non-normally distributed data were tested using non-parametric tests. For the construction of logistic regression models for the prediction of antenatal depression, the dependent variable was the presence or absence of depression. This was put against all of the variables that it depended upon; hence, there were multiple simple logistic models each with a significant factor. These significant factors were put in a model and factors were removed one by one to produce a best-fit multiple logistic model. A p-value ≤ 0.05 was considered statistically significant.

Results

Both groups were matched in their demographic characters (**Table 1**).

Table 1: Descriptive statistics of the sociodemographic variables of the study groups:

Group		No IPV (158)	IPV (158)	p-value
Wife's age (years) (mean ± sd)		28.58 ± 5.61	28.34 ± 5.17	0.799
Wife's education N (%)	Illiterate	42 (26.58)	47 (29.75)	0.822
	Middle	75 (47.47)	72 (45.57)	
	High	41 (25.95)	39 (24.68)	
Wife's occupation N (%)	Housewife	113 (71.52)	103 (65.19)	0.407
	Worker	10 (6.33)	15 (9.49)	
	Employee	35 (22.15)	40 (25.32)	
Husband's age (years) (mean ± sd)		32.54 ± 5.81	32.82 ± 5.28	0.705
Husband's education N (%)	Illiterate	48 (30.38)	51 (32.28)	0.347
	Middle	66 (41.77)	74 (46.84)	
	High	44 (27.85)	33 (20.89)	
Husband's occupation N (%)	Unemployed	33 (20.89)	26 (16.46)	0.417
	Worker	50 (31.65)	46 (29.11)	
	Employee	75 (47.47)	86 (54.43)	
Total duration of marriage (years) (mean ± sd)		6.0 ± 3.78	6.1 ± 4.76	0.686
Socioeconomic status N (%)	Low	64 (40.51)	59 (37.34)	0.726
	Moderate	55 (34.81)	54 (34.18)	
	High	39 (24.68)	45 (28.48)	
Residence N (%)	Rural	60 (37.97)	54 (34.18)	0.482
	Urban	98 (62.03)	104 (65.82)	
Age difference (mean ± sd)		4.18 ± 3.65	4.58 ± 3.65	0.582
Body mass index (kg/m ²) (mean ± sd)		27.47 ± 4.06	27.94 ± 4.63	0.193
Parity (mean ± sd)		1.95 ± 1.5	1.8 ± 1.58	0.204
Gestational age (weeks) (mean ± sd)		30.03 ± 8.02	29.1 ± 9.2	0.06

Emotional violence was the most common reported pattern among women exposed to IPV 87.9% (139/158). However, it was not significantly prominent in depressed women (P value 0.084). Physical and sexual violence were significantly reported among depressed women (P value 0.022 and 0.001, respectively) (**Table 2**).

Table 2: Distribution of different types of violence (emotional, physical, sexual) among study groups

		Not Depressed (156)	Depressed (160)	P value
Emotional	No	95 (60.9)	82 (51.25)	0.084
	Yes	61 (39.1)	78 (48.75)	
Physical	No	129 (82.69)	115 (71.88)	<u>0.022</u>
	Yes	27 (17.31)	45 (28.13)	
Sexual	No	154 (98.72)	145 (90.63)	<0.001
	Yes	2 (1.28)	15 (9.38)	

There was a significant difference between women exposed to violence and those who were not exposed to violence in the total depression scores (13.63 ± 5.47 and 10.65 ± 5.44 , respectively with a p value <0.001). Two out of 158 women exposed to violence committed suicide actually (**Table 3**).

Table 3: Associations between violence and different variables regarding depression among both study groups.

	No IPV	IPV	<i>P value</i>
Depression score (mean ± sd)	10.65 ± 5.44	13.63 ± 5.47	<0.001
Trial of suicide N (%)	0 (0)	2 (1.27)	0.156
Depression not likely Score < 8	61 (38.6)	25 (15.8)	<0.0001
Depression possible Score 9-11	22 (13.9)	32 (20.3)	0.174
Fairly high possibility of depression Score 12- 13	26 (16.5)	19 (12)	0.297
Probable depression Score ≥ 14	49 (31)	82 (51.9)	0.004
Positive score on question 10 (suicidal risk)	49 (31)	53 (33.5)	0.629

Emotional and sexual violence had significant roles as risk factors for depression during pregnancy in single regression or after control of other confounders (**Tables 4 and 5**).

Table 4: Single linear regression for significant factors related to depression. This table was constructed through making depression as a binomial (yes/no) variable as the dependent factor and every other variable as an independent factor. Significant factors were listed in this table.

Models	Variables	Beta	p-value	95% CI
1	Age (years)	0.177	<u>0.003</u>	0.063 - 0.292
2	Husband's age (years)	0.204	<u><0.001</u>	0.093 - 0.315
3	Husband's Education	0.917	<u>0.032</u>	0.081 - 1.754
4	Psychological violence- mild	2.105	<u>0.001</u>	0.825 - 3.385
5	Psychological violence- moderate	4.664	<u><0.001</u>	3.184 - 6.143
6	Psychological violence- severe	5.716	<u><0.001</u>	3.527 - 7.904
7	Physical violence- mild	3.117	<u><0.001</u>	1.608 - 4.627
8	Physical violence- moderate	5.137	<u><0.001</u>	2.421 - 7.853
9	Physical violence- severe	13.905	<u>0.014</u>	2.864 - 24.945
10	Sexual violence- mild 1	5.72	<u><0.001</u>	3.572 - 7.868
11	Sexual violence- moderate	6.005	<u><0.001</u>	2.798 - 9.213
12	Sexual violence- severe	8.014	<u><0.001</u>	4.55 - 11.479
13	Parity	0.477	<u>0.021</u>	0.073 - 0.882
14	Gestational age (weeks)	-0.021	<u><0.001</u>	-0.031 - -0.011
15	Duration of marriage (years)	0.017	<u>0.006</u>	0.005 - 0.029

Table 5: Multiple linear regression for significant factors related to depression. This best fitting model was constructed by putting all of the significant factors obtained from table 4 above and then by step-by-step exclusion of non-significant factors in the model.

Model	Variable	Beta	p-value	95% CI
Best fitting model	Age (years)	0.210	<u><0.001</u>	0.101 - 0.32
	Husband's Education	1.072	<u>0.005</u>	0.318 - 1.825
	Psychological violence- severe	4.799	<u><0.001</u>	2.347 - 7.251
	Sexual violence- mild abuse, no genital contact	31.246	<u>0.026</u>	3.721 - 58.772
	Sexual violence- severe	5.999	<u>0.002</u>	2.168 - 9.829
	Total gestational age (weeks)	-0.018	<u><0.001</u>	-0.027 - -0.008

Discussion

This was the first study conducted in Egypt to evaluate the association between IPV and depression during pregnancy. A previous study evaluated the effect of enabling resources and childhood adverse events on anxiety associated with IPV among Egyptian women (18). In addition, a recent one was conducted to evaluate the association between mental disorders (anxiety and/or depression) with domestic violence (19). Other studies were conducted among non-pregnant women (20, 21).

The main age for the studied population was 28.58 ± 5.61 and 28.34 ± 5.17 for those not exposed or exposed to IPV, respectively. Both groups were matched in their demographic characters. Close results were reported by previous studies (22, 23, and 24).

About one third of Egyptian women experienced some form of IPV (25), while another study reported that about 44.1% of Egyptian pregnant women were exposed to IPV (12). Emotional violence was the most common reported pattern among women exposed to IPV 87.9% (139/158). This was followed by physical violence (46.2%) and sexual violence (18.9%). These results are higher than a previous research in Vietnam in which emotional violence was reported by 32.3% of the participants (22). This would be rendered to the larger sample recruited by them. Also, emotional violence was reported as the most common pattern of violence experienced by women in different countries (23, 24). Similar results were

reported by a systematic review that included studies conducted from 72 countries about IPV during pregnancy (26). The incidence of IPV differ according to the economic state of the countries with lower incidences were reported in high income countries, however; emotional violence remained the most common pattern of violence experienced by women (64.38%) (27).

The overall incidence of depression with variable severity during pregnancy was 72.8% (230/316), with 84.2% (133/158) were reported among women exposed to IPV. Probable and high possibilities of depression were reported in 47.5% of the studied population. A meta- analysis reported that rates of antepartum depression ranged from 15- 65% (28), with the current study reporting average results. This was higher than reported results in Egypt where they documented that depression affected 10.4% of participants only while both depression and anxiety were documented in up to 60% of patients (19). This would be rendered to the different tools used for screening for mental disorders and IPV during pregnancy. Besides, they recruited women with criteria suggestive of social disadvantages which might be a source of bias. Also, they used the Hospital Anxiety and Depression Scale (HADS) questionnaire which lacked validity testing in Egypt.

Lower results were reported in a Brazilian and Vietnamese populations (14.2% and 5%, respectively) (9, 22). This would be rendered to the use of diagnostic criteria for depression in the former study while we depended on a screening tool that needs further confirmation as the latter one. Also, different samples recruited would explain the difference. Besides, both studies reported on postpartum depression rates. Higher rates were reported by a previous study that used the same screening tool used in the current study (37.8%) (29). Another study conducted in Japan, reported that 9.5% of recruited women had scores ≥ 9 using EPDS when screened for PPD (30).

There was a significant difference between women exposed to violence and those who were not exposed to violence in the total depression scores (13.63 ± 5.47 and 10.65 ± 5.44 , respectively with a p value <0.001). Two out of 158 women exposed to violence committed suicide actually, while suicide ideation was present in 33.5% of women. Only two studies from Zimbabwe and Pakistan reported on the association between IPV and suicidal ideations or attempts. They concluded that women exposed to violence were at risk of suicidal ideation 5 times than those not exposed to violence (31, 32), while the current study revealed no significant difference in suicide ideation among both groups. A systematic review reported rates of suicidal ideation of 5- 11% during pregnancy (28).

Emotional and sexual violence had significant roles as risk factors for depression during pregnancy in single regression or after control of other confounders. In a study performed among Brazilian women, emotional or physical abuse increased the odds ratio of current major depressive disorder significantly (p value < 0.001). Also, casual employment was significantly associated with depression during pregnancy (9). This was evident in the current study but for employment. We reported that husbands' age and education influenced the development of depression significantly. Recent studies reported that psychological abuse was significantly associated with antenatal depression (27, 28), however; one study reported violence among low income women which limits the validity of their results (28).

Another study reported that physical violence was a powerful determinant for postpartum depression (OR=5.08; 95%CI: 2.58-10.02), followed by sexual and emotional violence (OR=1.92; 95%CI: 1.10-3.35 and OR=1.60; 95%CI: 1.07-2.41, respectively). Also, after control of confounders, they reported that physical and sexual violence remained significantly associated with postpartum depression (22) with no data available about depression during pregnancy. Multiple studies confirmed the association between IPV and postpartum depression (33, 34, and 35). This was explained by the relationship between violent behavior and poor mental health (36, 37). Another study demonstrated that emotional abuse has a damaging effect as physical abuse (38). This would be explained by the presence of common features between violence and depression such as humiliation and entrapment. Also, depression in women develops as a result of sense of loss which may be provoked by violence (19).

Strength and limitations of the study: We addressed a very sensitive issue that could be underestimated as women might be ashamed to disclose their actual experiences. We recruited a control group who were not exposed to violence. The study was conducted as a cross sectional study, which cannot determine a causal relationship. This was a hospital based study which limits the generalizability of the results. We did not evaluate the recruited women for evidence of postpartum depression.

Research implications: Conducting community based studies would be recommended. Evaluating the effect of IPV on depression during pregnancy with continuing follow up after delivery would be more informative. Also, its impact on perinatal outcome would be evaluated.

Conclusion

There was a strong association between IPV and depression during pregnancy. Other factors contributed significantly to antepartum depression as husbands' age and education. Depression occurred at a variable incidence among studies that might be rendered to different screening tools and economic status of countries.

List Of Abbreviations

IVP	Intimate partner violence
WHO	World health organization
PPD	Postpartum depression
NORAQ	NorVold Domestic Abuse Questionnaire
EPDS	Edinburgh Postnatal Depression Scale
HADS	Hospital Anxiety and Depression Scale

Declarations

Ethical approval and consent to participate: This study was conducted after approval of the research ethics committee of the faculty of medicine, Suez Canal University, in January 2019 with a number of 4012. All procedures performed in the study were following the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or

comparable ethical standards. This article does not contain any studies with animals performed by any of the authors. Informed written consent was obtained from all participants before enrollment in the study.

Consent for publication: not applicable.

Availability of data and materials: The datasets used and/or analyzed during the current study available from the corresponding author on reasonable request. All data generated or analyzed during this study are included in this published article

Competing interest: None

Funding: self-funded research

Authors' contributions: **WFG:** Protocol/project development, Data collection and management, manuscript writing/editing. **ME:** Data collection and analysis. **AAA:** Data collection and management, Manuscript writing/editing. **HMG:** Data collection and management, Data analysis, Manuscript writing/editing. **TYMA:** Data collection and management, Manuscript writing/editing. **All authors have read and approved the manuscript.**

Acknowledgment: not applicable

References

1. **Gureje O, Stein DJ.** Disorders, Diagnosis, and Classification. In V. Patel, H. Minas, A. Cohen, & M. J. Prince (Eds.). *Global Mental Health: Principles and Practice* (pp. 27–40), 2014. United States of America: Oxford University Press.
2. **Gavin NI et al.,** Perinatal depression: a systematic review of prevalence and incidence. *Obstetrics & Gynecology*, vol. 106, no. (5, Part 1), pp. 1071–1083, 2005.
3. **Klainin P, Arthur DG.** Postpartum depression in Asian cultures: A literature review," *International Journal of Nursing Studies*, vol. 46, no. 10, pp. 1355–1373, 2009.
4. **Desmarais SL, Pritchard A, Lowder EM, Janssen PA.** Intimate partner abuse before and during pregnancy as risk factors for postpartum mental health problems. *BMC Pregnancy Childbirth* (2014) 14:132. doi:10.1186/1471-2393-14-132
5. **Garcia-Moreno C et al.,** *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence*, World Health Organization, Geneva, Switzerland, 2013.
6. **Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts CH.** (2006). Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *Lancet*, 368, 1260–1269.

7. **White ME, Satyen L**, “Cross-cultural differences in intimate partner violence and depression: A systematic review,” *Aggression and Violent Behavior*, vol. 24, pp. 120–130, 2015.
8. **Bennett HA, Einarson A, Koren G, Einarson TR**. Prevalence of depression during pregnancy: systematic review. *Obstet Gynecol* 2004; 103:698-709.
9. **Pereira PK, Lovisi GM, Pilowsky DL, Lima LA, Legay LF**. Depression during pregnancy: prevalence and risk factors among women attending a public health clinic in Rio de Janeiro, Brazil. *Cad. Saúde Pública*, Rio de Janeiro, 25(12):2725-2736, dez, 2009.
10. **Heron J, O’Connor TG, Evans J, Golding J, Glover V; ALSPAC Study Team**. The course of anxiety and depression through pregnancy and the postpartum in a community sample. *J Affect Disord* 2004; 80:65-73.
11. **Fisher J, Tran TD, Biggs B, Dang TH, Nguyen TT, Tran T**. “Intimate partner violence and perinatal common mental disorders among women in rural Vietnam,” *International Health*, vol. 5, no. 1, pp. 29–37, 2013.
12. **Ibrahim ZM, Sayed Ahmed WA, El-Hamid SA, Hagraas AM**. Intimate partner violence among Egyptian pregnant women: incidence, risk factors, and adverse maternal and fetal outcomes. *Exp. Obstet. Gynecol.* n. 2, 2015. doi: 10.12891/ceog1829.2015
13. **Yount K, Li L**. Domestic violence and obesity in Egyptian women. *Journal of Biosocial Science*, 2011; 43(1), 85-99. doi:10.1017/S0021932010000441
14. **El-Gilany A-H, El-Wehady A, El-Wasify M**. Updating and validation of the socioeconomic status scale for health research in Egypt. *East Mediterranean Health J* 2012;18:962–8
15. **Haddad LG, Shotar A, Younger JB, Alzyoud S, Bouhaidar CM**. Screening for domestic violence in Jordan: validation of an Arabic version of a domestic violence against women questionnaire. *International Journal of Women’sHealth* 2011;3 79–86.
16. **Cox JL, Holden JM, Sagovsky R**. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *The British Journal of Psychiatry*. 1987; 150(6):782-786.
17. **BC Reproductive Mental Health Program and Perinatal Services BC. (2014)**, Best Practice Guidelines for Mental Health Disorders in the Perinatal Period. Available at: <http://tiny.cc/MHGuidelines>.
18. **Shaikh AK, Pearce B, Yount KM**. Effect of Enabling Resources and Risk Factors on the Relationship between Intimate Partner Violence And Anxiety in Ever-Married Women in Minya, Egypt. *Fam Viol* (2017) 32:13–23. DOI 10.1007/s10896-016-9848-5
19. **Abdelhai R, Mosleh H**. Screening for antepartum anxiety and depression and their association with domestic violence among Egyptian pregnant Women. *J Egypt Public Health Assoc* 90:101–108 & 2015 Egyptian Public Health Association 0013-2446
20. **Vizcarra B, Hassan F, Hunter WM, Munoz SR, Ramiro L, De Paula CS**. Partner violence as a risk factor for mental health among women from communities in Philippines, Egypt, Chile, and India. *Inj Control Saf Promot* 2004; 11:125–129.
21. **Habib SR, Abdel Azim EK, Fawzy IA, Kamal NN, El Sherbini AM**. Prevalence and effects of violence against women in a rural community in Minia governorate, Egypt. *J Forensic Sci* 2011; 56:1521–

1527.

22. **Nhi TT, Hanh NTT, Hinh ND, Toan NV, Gammeltoft T, Rasch V, Meyrowitsch DW.** Intimate Partner Violence among Pregnant Women and Postpartum Depression in Vietnam: A Longitudinal Study. *BioMed Research International* Volume 2019, Article ID 4717485, 9 pages.
<https://doi.org/10.1155/2019/4717485>.
23. **Jackson CL, Ciciolla L, Cmic KA, Luecken L JA, Gonzales NAA, Coonrod DVA.** “Intimate partner violence before and during pregnancy: Related demographic and psychosocial factors and postpartum depressive symptoms among mexican american women,” *Journal of Interpersonal Violence*, vol. 30, no. 4, pp. 659–679, 2015.
24. **Groves AK, Kagee A, Maman S, Moodley D, Rouse P.** “Associations between intimate partner violence and emotional distress among pregnant women in Durban, South Africa,” *Journal of Interpersonal Violence*, vol. 27, no. 7, pp. 1341–1356, 2012.
25. **Yaya S, Hudani A, Buh A, Bishwajit G.** Prevalence and Predictors of Intimate Partner Violence Among Married Women in Egypt. *Journal of Interpersonal Violence* 1– 19; 2019.
<https://doi.org/10.1177/0886260519888196>.
26. **Lafaurie MMV.** “Violencia de la pareja íntima contra las mujeres en el embarazo: una lectura crítica con perspectiva de género,” *Revista Colombiana de Enfermería*, vol. 10, no. 10, pp. 64–77, 2015.
27. **Yu H, Jiang X, Bao W, Xu G, Yang R, Shen M.** Association of intimate partner violence during pregnancy, prenatal depression, and adverse birth outcomes in Wuhan, China. *BMC Pregnancy and Childbirth* (2018) 18:469. <https://doi.org/10.1186/s12884-018-2113-6>
28. **Kastello JC, Jacobsen KH, Gaffney KF, Kodadek MP, Sharps PW, Bullock LC.** Predictors of Depression Symptoms Among Low-Income Women Exposed to Perinatal Intimate Partner Violence (IPV). *Community Ment Health J* (2016) 52:683–690. DOI 10.1007/s10597-015-9977-y
29. **Halima N, Bearda J, Mesicb A, Patel d A, Hendersonc D, Hibberda P.** Intimate partner violence during pregnancy and perinatal mental disorders in low and lower middle income countries: A systematic review of literature, 1990–2017. *Clinical Psychology Review* (2017),
<https://doi.org/10.1016/j.cpr.2017.11.004>
30. **Silva VA, Moraes-Santos AR, Carvalho MS, Martins MLP, Teixeira NA.** Prenatal and postnatal depression among low income Brazilian women. *Braz J Med Biol Res* 1998; 31:799-804.
31. **Miura A, Fujiwara T.** Intimate partner violence during pregnancy and postpartum depression in Japan: A cross sectional study. *Frontiers in public health*. 5:81. published: 24 April 2017 doi: 10.3389/fpubh.2017.00081
32. **Asad N, Karmaliani R, Sullaiman N. Bann CM, McClure EM, Pasha O, Goldenberg RL** (2010). Prevalence of suicidal thoughts and attempts among pregnant Pakistani women. *Acta Obstetrica et Gynecologica Scandinavica*, 89, 1545–1551.
33. **Shamu S, Zarowsky C, Roelens K, Temmerman M, Abrahams N.** (2016). High frequency intimate partner violence during pregnancy, postnatal depression and suicidal tendencies in Harare, Zimbabwe. *General Hospital Psychiatry*, 38, 109–114.

34. **Ludermir AB, Lewis G, Valongueiro SA, De Araújo TVB, Araya R.** "Violence against women by their intimate partner during pregnancy and postnatal depression: A prospective cohort study," *The Lancet*, vol. 376, no. 9744, pp. 903–910, 2010.
35. **Bonomi AE, Anderson ML, Reid RJ, Rivara FP, Carrell D, Thompson RS.** "Medical and psychosocial diagnoses in women with a history of intimate partner violence," *JAMA Internal Medicine*, vol. 169, no. 18, pp. 1692–1697, 2009.
36. **Varma D, Chandra PS, Thomas T, Carey MP.** "Intimate partner violence and sexual coercion among pregnant women in India: Relationship with depression and post-traumatic stress disorder," *Journal of Affective Disorders*, vol. 102, no. 1-3, pp. 227–235, 2007.
37. **Yount, K. M., Dijkerman, S., Zureick-Brown, S., VanderEnde, K. E.** (2014). Women's empowerment and generalized anxiety in Minya, Egypt. *Social Science & Medicine*, 106, 185–193. doi:10.1016/j.socscimed.2014.01.022.
38. **Marshall LL.** Development of the severity of violence against women scales. *J Fam Violence* (1992) 7(2):103–21. doi:10.1007/BF00979027