Mental health of women who suffer intimate partner violence during pregnancy

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Objective. To identify the relationship between intimate partner violence (IPV) during pregnancy and mental disorders in women in the pregnancy-puerperal cycle. **Method.** A review was conducted of papers published in Portuguese, English and Spanish regarding the study theme. The databases explored were PubMed, CINAHL, LILACS and PsycINFO. **Results.** The 17 included papers studied the relationship between IPV and: pre- and postpartum depression (41%); pregnancy anxiety (23%) and pregnancy posttraumatic stress disorder (12%). None of the studies investigated the association between IPV and suicidal ideation. **Conclusion.** IPV against women during the pregnancy-puerperal cycle causes negative impacts on mental health. Concrete actions shall be proposed regarding the prevention, identification and treatment of women exposed to IPV during their pregnancy period.

Key words: spouse abuse; pregnancy; postpartum period; mental health; nursing.

Salud mental de la mujer víctima de violencia por parte compañero íntimo durante la gestación

Objetivo. Identificar la relacción entre violencia por compañero íntimo (VCI) en la gravidez y los trastornos mentales en mujeres en el ciclo grávido-puerperal. **Metodologia.** Se hizo revisión de los artículos publicados en portugués, inglés y español que trataran este tema. Las bases de datos exploradas fueron PubMed, CINAHL, LILACS y PsycINFO. **Resultados.** De los 17 artículos incluídos, estudiaron la relación de VCI con: depresión pre y posparto (41%); ansiedad gestacional (23%) y transtorno de estrés postraumático gestacional (12%). Ningún estudio investigó la asociación entre VCI e ideación suicida. **Conclusión.** La VCI contra las mujeres en el ciclo grávido-puerperal tiene repercusiones negativas para la salud mental. Deben desarrollarse acciones concretas de prevención, identificación y tratamento de las mujeres en situación de VCI durante el período gestacional.

Palabras clave: maltrato conyugal; embarazo; período de postparto; salud mental; enfermeira.

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Saúde mental da mulher vítima de violência por colega íntimo durante a gestação

Objetivo. Identificar a relação entre violência por colega íntimo (VCI) na gravidez e os transtornos mentais em mulheres no ciclo grávido-puerperal. **Metodologia**. Fez-se revisão dos artigos publicados em português, inglês e espanhol que tratassem o tema de estudo. As bases de dados exploradas foram PubMed, CINAHL, LILACS e PsycINFO. **Resultados**. Dos 17 artigos incluídos estudaram a relação de VCI com: depressão pré e pós-parto (41%); ansiedade gestacional (23%) e transtorno de estresse pós-traumático gestacional (12%). Nenhum estudo pesquisou a associação entre VCI e ideação suicida. **Conclusão**. A VCI contra as mulheres no ciclo grávido-puerperal tem repercussões negativas para a saúde mental. Devem desenvolver-se ações concretas de prevenção, identificação e tratamento das mulheres em situação de VCI durante o período gestacional.

Palavras chave: maus-tratos conjugais; gravidez; período pós-parto; saúde mental; enfermagem.

Introduction

Violence is defined by the World Health Organization as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation".[1] While domestic violence is referred as a series of violent actions occurring in the domestic environment, intimate partner violence (IPV) describes violence in the intimate relation context.[2] It is defined as violence perpetrated by a partner or ex-partner which involves physical and sexual threats and aggressions, psychological/emotional abuse, and/or forced sexual intercourse.[3] The IPV situation is more prevalent among women in their childbearing period,[4] and it may occur during the pregnancy period, which makes it of particular concern due to the adverse events incurring to the mother's, fetus' and, posteriorly, child's health.[5,6]

Pregnancy, frequently seen as a period of emotional well-being, may also represent a moment of stress and changes. Stressful situations are considered to be mental disorder triggers,[7] and such disorders are the most common health problems associated to pregnancy.[8] In this context, IPV is considered to be an stressing factor to many women[9] and significantly contributes to the occurrence of mental disorders during pregnancy,[7] defined as a clinically significant behavioral or psychological pattern or syndrome occurring in a subject and is associated with discomforts, functional incapacities or with a significantly increased risk of death, pain, disability or freedom deprivation.[9] Among the principal mental disorders occurring in women during pregnancy, depressive disorders, suicidal ideation, posttraumatic stress disorder (PTSD) and anxiety disorders were highlighted.[6,10-12]

Although it is known that during the pregnancy-puerperal cycle women become sensitive, both physically and emotionally, and for that reason they may be in a more vulnerable condition, there are evidences that this is the right moment to investigate violence, based on the fact that, for many women, the pregnancy-puerperal cycle is the only opportunity to establish contact and bond with the health facility.[13] Therefore, incorporation of mental health and IPV coping actions to prenatal care by health professionals is needed in order to improve women's health and well-being, as well as their children's.[10,11]

In view of this reality, although most human and financial resources are intended for the immediate approach and/or long-term

consequences of violence, the issue goes by health facilities unnoticed and voiceless, generally due to victims' personal reasons and/or unskillful professionals.[14,15] Such situation is justified as IPV is surrounded by gender-based issues and cultural traditions and conventions which make it a matter of family privacy, individual choice or an inevitable fact of life, and should therefore be veiled behind closed doors.[16,17] Thus, health professionals' awareness with regard to the existence of IPV during pregnancy becomes crucial, given its potential consequences to the mental health of women in the pregnancy-puerperal cycle.[5] In this context, greater visibility of this public health issue may be achieved through evidence-based practice, defined as a search and assessment process, and by applying the scientific evidences to health treatment and management, which permits improving the quality of the care provided to the population and motivates the health professional to search for scientific knowledge by developing research or applying literature results in their daily practice. With this approach, for the decision making process regarding health care, the professional's clinical competence and the client's preferences are also incorporated.[18]

In this study, the method used was a comprehensive literature review, one of the resources of evidence-based practice, which offers support for professionals to make decisions on the daily provision of health services and allows for the identification of specific knowledge gaps that may be addressed in future research.[19] The objective of this study was to identify evidences available in the literature regarding the relationship between IPV during pregnancy and mental disorders in women in the pregnancy-puerperal cycle, highlighting pregnancy depressive disorder, postpartum depression, PTSD, anxiety and suicidal ideation.

Method

In order to reach the objective, a comprehensive literature review was conducted, which gathers and summarizes scientific knowledge produced about a specific theme and contributes to the development of future studies. The comprehensive review summarizes research conducted separately, but investigating identical or similar issues regarding a specific topic, and draws a conclusion. The studies have been systematically analyzed with regard to their objectives, materials, methods and results.[20]

The development of this comprehensive review followed the following stages: i) identification of the theme and selection of the hypothesis or research issue; ii) sampling or search in the literature of the primary studies; iii) definition of the information to be extracted from the selected primary studies; iv) assessment of the primary studies included in the comprehensive review; v. result interpretation; and vi) presentation of the knowledge review/synthesis.[21] The guideline question for such comprehensive review was: which are the evidences available in the literature related to the relationship between IPV during pregnancy and mental disorders in women in the pregnancy-puerperal cycle?

The primary studies have been selected from four electronic databases, as follows: LILACS (*Literatura Latino-Americana e do Caribe em Ciências da Saúde* [Comprehensive Index of Scientific and Technical Literature of Latin America and the Caribbean]), PubMed, PsycINFO e CINAHL (Cumulative Index to Nursing and Allied Health Literature). The adopted inclusion criteria were: papers published in Portuguese, English and Spanish and that described the relationship between IPV during pregnancy and mental disorders in women in the pregnancy-puerperal cycle. The adopted exclusion criteria were: narrative review/traditional, editorial literature or letter-response studies. No period limitation was imposed regarding the publication period of the papers, and all papers published until March 2014 were considered. Non-controlled descriptors (key words) and controlled descriptors were used. These words were used as a filter between the author's appropriate language and the area-specific terminology, acknowledged worldwide.[22,23] To ensure a strict and wide search, the descriptors presented in Table 1 were combined in each database whenever needed.[19]

Table 1. Controlled and non-controlled descriptors established for each database

Databases	Controlled descriptors	Non-controlled descriptors
PubMed (MeSH)	Pregnancy OR Postpartum period	Postnatal period
	Spouse abuse	Intimate partner violence OR Violence against women OR Domestic violence
	Mental health OR Depression OR Depression postpartum OR Anxiety OR Anxiety disorders OR Suicide OR Stress disorders post-traumatic	
CINAHL (CINAHL headings)	Pregnancy OR Postnatal period	Postpartum period
	Domestic violence	Violence against women OR Spouse abuse
	Anxiety OR Anxiety disorders OR Depression OR Mental Health OR Suicide	Violência por parceiro íntimo
LILACS (DeCS)	*Gravidez OR Gestação OR Período pós-parto OR Puerpério*	
	Maus-tratos conjugais OR Violencia contra a mulher OR Violencia domestica AND	
	Saúde mental OR Depressão pós-parto OR Depressão OR Ansiedade OR Transtornos de ansiedade OR Suicídio OR Transtornos de estresse pós-traumáticos	
PsycINFO	Pregnancy OR Postnatal period	Postpartum period
	Spouse abuse OR Intimate partner violence OR Domestic violence	Violence against women
	Mental health OR Depression OR Postpartum depression OR Anxiety OR Anxiety disorders OR Suicide OR Posttraumatic stress disorder	

Basedon the descriptors defined for this comprehensive review, 261 papers were found in the PubMed database; 173 the CINAHL; 06 (six) in LILACS; and 34 in PsycINFO. The primary studies were selected with regard to their title and summary, and selection was guided based on the outlined inclusion and exclusion criteria. After this initial analysis, 401 papers were excluded for reasons described in Table 2. Thus, 73 papers were selected for thorough reading. After exhaustive reading of those 73 papers, 56 were excluded as they did not describe the theme and, therefore, did not relate to the guideline question of this review.

The main reasons for excluding those papers in this phase were related to the undetermined moment of the IPV onset and also to the different concepts of violence used in those studies, which made it difficult to identify the one responsible for perpetrating the violent acts. One study selected from the PubMed database was not fully available electronically or could not be obtained through a Reference Interchanging System (COMUT) and was excluded from the review. Thus, the final sample of this comprehensive review included 17 papers, as presented in Table 2.

For the extraction of the data from the papers included in the review, a previously validated tool was used.[24] Analysis and summary of the primary studies were conducted descriptively, providing the reader with a summary of each included study and allowing for comparisons to emphasize the difference and similarities among studies.[25]

Table 2. Reasons for exclusion of papers found in the databases and description of final sample

Database	Search Total	Excluded			Selected Papers	Final Sample
		Duplicate Papers	Not related to theme	Others*		
PubMed	261	0	152	50	59	**13**
PsycINFO	34	15	9	4	6	**1**
CINAHL	173	58	78	31	6	**3**
LILACS	6	0	2	2	2	**0**
Total	**474**	**73**	**241**	**87**	**73**	**17**

***Others:** Reviews, Editorials, Response Letters, Other Language

Results

The 17 papers included in the comprehensive review were published between the years of 2006 and 2013, with 14 (82.4%) published since 2010. All studies were published in English. Table 3 points out that the countries that have published more papers related to the theme were the United States (29.4%), Bangladesh and Brazil (11.8% each). Studies developed in Brazil were published in international journals. In addition, only one paper (5.9%) mentions the authors' profession, all of them nurses. Regarding the study design, all of them were observational studies, nine (52.9%) cross-sectional and eight (47.1%) longitudinal. As for the study population, eight (47.1%) included pregnant subjects as participants; three (17.6%) included postpartum subjects; and six (35.3%) included both pregnant and postpartum subjects. Table 3 summarizes the primary studies included in the comprehensive review.

Outcomes were as follows: six (35.3%) studies, postpartum depression; four (23.5%) studies, gestational depression; three (17.6%) studies, gestational depression and anxiety; two (11.8%) studies, gestational depression and postpartum depression; one (5.9%) study, gestational PTSD; and one (5.9%) study, gestational depression, anxiety and PTSD. It was noted that none of the studies investigated the association between IPV during pregnancy and suicidal ideation in the pregnancy-puerperal cycle.

Table 4 summarizes the primary studies included in the comprehensive review which investigated the existence of an association between IPV and depressive disorders, both occurring during pregnancy. Based on the results evidenced by the primary studies included in the present comprehensive review, which verified the existence of an association between IPV and depressive disorder/symptoms, both during pregnancy, it was observed that women who suffer physical, psychological and/or sexual violence perpetrated by their intimate partners during pregnancy are more likely to show depressive disorders/symptoms during the prenatal period when compared to those who have not suffered this type of violence.

Table 3. Summary of primary studies included in the comprehensive review

Reference	Type of Study	Country	Sample	Objective(s)
Mahenge et al.[10] (2013)	Observational cross-sectional	Tanzania	N=1 180 pregnant subjects	To determine the prevalence of IPV during pregnancy and its associated mental symptoms.
Ogbonnaya et al.[26] (2013)	Observational longitudinal	United States	N=104 pregnant and postpartum subjects	To investigate the changes in depressive symptoms levels during pregnancy and postpartum period of women undergoing physical IPV during pregnancy. To compare these levels with the levels of women who do not suffer physical IPV during pregnancy.
Almeida et al.[27] (2013)	Observational cross-sectional	Portugal	N=184 pregnant subjects	To understand the influence of violence during pregnancy on women's mental health during this period.
Huth-Bocks *et al.*[28] (2013)	Observational cross-sectional	United States	N=120 pregnant subjects	To examine associations between different forms of IPV and the presence of PTSD in 120 women during pregnancy last trimester.
Budhathoki *et al*.[29] (2013)	Observational cohort	Nepal	N=72 Pregnant and postpartum subjects-	To identify the prevalence of IPV and postpartum depression and the relation between these two variables.
Faisal-Cury *et al*.[30] (2013)	Observational cross-sectional	Brazil	N=701 pregnant and postpartum subjects	To estimate if there is a temporal association between postpartum depression and IPV. To assess the potential role of social support regarding this relation.
Zhang *et al*.[31] (2012)	Observational cross-sectional	China	N=846 pregnant and postpartum subjects	To investigate the prevalence of domestic violence during pregnancy and postpartum depression. To explore the relationship between domestic violence and postpartum depression among Chinese women.
Groves *et al*.[32] (2012)	Observational cross-sectional	South Africa	N=1 500 pregnant subjects	To describe the proportion of South-African women showing depression and anxiety symptoms during pregnancy. To assess if the different types of IPV affect the risk for depression and anxiety differently. To test if the social support changes the relationship between IPV and depression/anxiety.
Miszkurka, Zunzunegui and Goulet[33] (2012)	Observational cross-sectional	Canada	N=5 162 pregnant subjects	To describe the violence phenomenon during pregnancy during pregnancy. To examine the association between violence and the presence of depressive symptoms during pregnancy, taking into account the pregnant subject's immigration status.

Table 3. Summary of primary studies included in the comprehensive review (Cont.)

Reference	Type of Study	Country	Sample	Objective(s)
Flach *et al*.[34] (2011)	Observational Cohort	United Kingdom	N=13 617 pregnant and postpartum subjects	To investigate if domestic violence during pregnancy is associated with a child's adverse development and if it is mediated by maternal mental disorders, especially depressive symptoms.
Nasreen *et al*.[35] (2011)	Observational cross-sectional	Bangladesh	N=720 pregnant subjects	To examine and identify the prevalence of potential factors associated with depression and anxiety symptoms among pregnant women in a rural area in Bangladesh.
Melville *et al.*[36] (2010)	Observational longitudinal	United States	N=1 888 pregnant subjects	To estimate the prevalence of major and minor depression, panic disorder and suicidal ideation during pregnancy. To identify potential risk factors for these depressive disorders.
Ludermir *et al*.[37] (2010)	Observational cohort	Brazil	N=1 133 pregnant and postpartum subjects	To investigate the association between postpartum depression and psychological, physical and sexual IPV during pregnancy.
Hayes *et al*.[38] (2010)	Observational longitudinal	United States	N=7 154 pregnant and postpartum subjects	To analyze postpartum depression among Asian groups and population in the Hawaiian pacific islands, aiming at comparing these projections with other racial and ethnical groups. To assess if the differences are related to demographic characteristics.
Gomez-Beloz[39] (2009)	Observational cross-sectional	Peru	N=2 394 postpartum subjects	To identify the prevalence of IPV during lifetime and during pregnancy. To assess the risk for depressive symptoms in relation to IPV exposure before and during pregnancy in a group of Peruvian women.
Gausia *et al*.[40] (2009)	Observational cross-sectional	Bangladesh	N=95 pregnant subjects	To identify the prevalence and related factors to gestational depression among pregnant women from Bangladesh, who also showed suicidal ideation.
Martin *et al*.[41] (2006)	Observational longitudinal	United States	N=95 pregnant subjects	To verify the existence of associations between IPV situations and depressive symptoms before and during pregnancy.

Table 4. Main results of primary studies included in the comprehensive review which investigated the existence of an association between IPV and depressive disorders both occurring during pregnancy

Reference	Main result(s)
Mahenge *et al*.[10] (2013)	Women who suffered physical and/or sexual IPV during pregnancy were significantly more likely to show depressive symptoms during pregnancy (OR 3.31; CI 2.39-4.59) than women who had not reported this type of violence.
Ogbonnaya *et al*.[26] (2013)	Women who were victims of physical IPV during pregnancy showed a significantly higher level of depressive symptoms during pregnancy than women who had not suffered this type of violence.
Almeida *et al.*[27] (2013)	Gestational depression scores were higher among pregnant women who had been abused by their intimate partner during pregnancy ($p < 0.01$).
Groves *et al.*[32] (2012)	The chance of women showing depression/anxiety during pregnancy increased 1.41 fold (CI=1.26-1.57) for each episode of psychological IPV; and 2.01 fold (CI=1.16-3.77) for each episode of sexual violence.
Miszkurka, Zunzunegui and Goulet[33] (2012)	There was a strong association between IPV occurring during pregnancy and gestational depression (OR 5.81; CI=4.19-8.08).
Flach *et al.*[34] (2011)	There was an association IPV and depressive symptoms both during pregnancy (OR 4.02; CI=3.4-4.8; $p<0.001$).
Nasreen *et al*.[35] (2011)	No evidences have been found on the association between IPV occurring exclusively during pregnancy and pre-natal depression.
Melville *et al.*[36] (2010)	IPV occurring during pregnancy has come up as one of the independent predictors of major depression during the prenatal period (OR 2.20; CI=1.002-4.84).
Gausia *et al*.[40] (2009)	Participants in physical IPV situations during pregnancy showed higher risk for gestational depression (OR 6.75).
Martin *et al.*[41] (2006)	Women who were victims of physical IPV during pregnancy had a median score in the gestational depression scale higher than those who had not been abused ($p = 0.01$). There has been an increase in the gestational depression scale scores with the increase of the type of violence suffered during pregnancy.

Table 5 summarizes the primary studies included in the comprehensive review, which investigated the existence of an association between IPV occurring during pregnancy and postpartum depression. The main results of the studies included in the present comprehensive review, which verified the existence of an association between IPV occurring during pregnancy and postpartum depression, indicated that women in physical, psychological and/or sexual violence situations perpetrated by their intimate partners during pregnancy are more likely to show postpartum depression when compared to those who have not suffered this type of violence.

Table 6 summarizes the primary studies included in the comprehensive review which investigated the existence of an association between IPV and anxiety both occurring during pregnancy. Results of the four studies included in the present comprehensive review, which verified the existence of an association between IPV and anxiety both occurring during pregnancy, showed evidence that women in physical, psychological and/or sexual violence situations perpetrated by their intimate partners during pregnancy are more likely to show anxiety/anxiety symptoms when compared to those who have not suffered this type of violence.

Table 5. Main results of primary studies included in the comprehensive review which investigated the existence of an association between IPV occurring during pregnancy and postpartum depression

Reference	Main result(s)
Ogbonnaya *et al.*[26] (2013)	Women who were victims of physical IPV during pregnancy showed a significant higher level of depressive symptoms in the postpartum period than those women who had not suffered this type of violence.
Budhathoki *et al.*[29] (2013)	No significant statistical relation was found between the different natures of violence during pregnancy and postpartum depression.
Faisal-Cury *et al*.[30] (2013)	No evidences of an association between IPV occurring exclusively during pregnancy and postpartum depression were found.
Zhang *et al*.[31] (2012)	Psychological violence during pregnancy was a risk factor for postpartum depression (OR 4.032; CI=1.698–9.615). Postpartum depression severity was positively correlated with psychological IPV during pregnancy.
Ludermir *et al*.[37] (2010)	Women who reported higher frequencies of psychological IPV during pregnancy were more likely to show postpartum depression, (OR 2.29; CI=1.15-4.57).Women who reported physical or sexual IPV during pregnancy were more likely to develop postpartum depression (OR 3.28; CI= 2.29-4.70).
Hayes *et al.*[38] (2010)	Women who suffered IPV during the prenatal period reported high estimates of postpartum depression symptoms (OR 3.7; CI=2.6-5.5).
Gomez-Beloz[39] (2009)	Women in the postpartum period who suffered physical, sexual and/or psychological IPV during pregnancy showed higher severity levels of depressive symptoms than those women who had not been abused.

Table 6. Main results of primary studies included in the comprehensive review which investigated the existence of an association between IPV and anxiety both occurring during pregnancy

Reference	Main result(s)
Mahenge *et al.*[10] (2013)	Women who suffer physical and/or sexual IPV during pregnancy were significantly more likely to show anxiety symptoms during pregnancy (OR 3.98; CI=2.85-5.57) than those women who have not reported this type of violence.
Almeida *et al*.[27] (2013)	Gestational anxiety scores were higher among pregnant women who had been abused by their intimate partner during pregnancy ($p < 0.01$).
Groves *et al*.[32] (2012)	The chance of women showing depression/anxiety during pregnancy increased 1.41 fold (CI=1.26-1.57) for each episode of psychological IPV; and 2.01 fold (CI=1.16-3.77) for each episode of sexual violence.
Nasreen *et al.*[35] (2011)	The presence of gestational anxiety symptoms was directly associated to physical IPV occurring during pregnancy.

Table 7 presents a summary of the two primary studies included in the comprehensive review which investigated the existence of an association between IPV and PTSD both occurring during pregnancy. The two studies included in the present comprehensive review, which verified the existence of an association between IPV and PTSD both occurring during pregnancy, showed evidence that women in physical, psychological and/or sexual violence situations perpetrated by their intimate partners during pregnancy are more likely to show PTSD when compared to those who have not suffered this type of violence.

Table 7. Main results of primary studies included in the comprehensive review which investigated the existence of an association between IPV and PTSD both occurring during pregnancy

Reference	Main result(s)
Mahenge et al.[10] (2013)	Women who suffer physical and/or sexual IPV during pregnancy were significantly more likely to show moderate PTSD (OR 2.94; CI 1.71-5.06) than those women who have not reported this type of violence.
Huth-Bocks et al.[28] (2013)	The severity of psychological and physical IPV during pregnancy was significantly associated with PTSD symptoms in the prenatal period. Among the IPV nature, the psychological violence was the one mostly associated with PTSD symptoms.

Discussion

In the 17 papers included in the comprehensive review, the outcomes were as follows: ten (58.8%) studies, gestational depressive disorder; seven (41.2%) studies, postpartum depression; four (23.5%) studies, gestational anxiety; two (11.8%) studies, gestational PTSD; and none addressed suicidal ideation.

Of the ten studies included in the review which investigated the association between IPV and depressive disorders both occurring during pregnancy, nine evidenced the existence of the referred association. Depressive symptoms were specifically associated with the psychological and sexual IPV in South Africa;[32] psychological and physical IPV in the United Kingdom;[34] physical IPV in the United States[26,41] and Bangladesh;[40] and physical and sexual IPV in the United States[36] and Tanzania.[10] In addition, violence pattern analysis showed that the depressive symptoms level in pregnant women were higher and more severe in the groups experiencing moderate or severe IPV episodes and/or violent acts of different natures during the pregnancy in course.[10,41] On the other hand, a study developed in Bangladesh,[35] did not find evidences of an association between IPV occurring exclusively during pregnancy and gestational depression. Of note, among the ten studies, one was developed in Tanzania,[10] one in Portugal,[27] one in South Africa,[32] one in Canada,[33] one in the United Kingdom[34], two in Bangladesh,[35,40] and three in the United States.[26,36,41] Six had a Cross-sectional design and four had a longitudinal design.

The presence of depressive disorders/symptoms during the prenatal period is strongly related to the frequency and severity of the violence experienced since the beginning of pregnancy. In this sense, to acknowledge violence as a clinically relevant and identifiable risk factor for gestational depression may be a first step in the prevention of mental health problems,[33] as the severe cases of depression, characterized by suicidal or self-mutilation ideas, are also relatively common during pregnancy.

Thus, these studies results may sensitize researchers, managers and health professionals with regard to the existence of violence in the life of women during pregnancy, highlighting the importance of tracking routine both of the violence episodes and the depressive symptoms. Despite that fact that universal screening for gestational depression and violence is an achievable goal, in many obstetric contexts such screening is not conducted.[36] Professionals who provides care to women who are victims of violence, especially those who work in emergency departments, should ensure that their patients be assessed with regards to the presence of depressive symptoms and other mental health problems, and that the appropriate care in more complex levels is made available to those who may need it. Therefore, mental health specialists should track female patients with regards to the presence of physical, sexual and psychological violence, and refer the victims to the appropriate services. In order for those tracking and reference procedures to succeed, professionals need to be trained and be aware of these problems occurrence during pregnancy.[20,22]

However, when compared to postpartum depression, depression during pregnancy has not received much attention from health professionals. This can be due to a greater concern with the wellbeing of the pregnant woman, putting her mental health to the background.[40]

Regarding the seven studies included in the comprehensive review which analyzed the association between IPV during pregnancy and the occurrence of postpartum depression, four had a longitudinal design, with one developed in the United States,[26] one in Nepal,[29] one in Brazil,[37] and one in Hawai.[38] Additionally, three papers with a cross-sectional design were developed in Brasil,[30] in China[31] and in Peru.[39] Associations between the different levels of postpartum depression (mild, moderate, moderate/severe, severe) and IPV during pregnancy have been found. Specifically, psychological IPV was considered to be an important risk factor to postpartum depression,[31,37] regardless of physical or sexual violence. In addition, self-reported postpartum depression was associated with physical IPV occurring during pregnancy.[38] Investigations conducted in São Paulo – Brazil and in China did not find evidence of an association between IPV during pregnancy and the occurrence of postpartum depression.

These results support the importance and the impact of psychological violence and suggest that the approach of physical and sexual violence during pregnancy may not be enough to reduce the rates of postpartum depression. In this context, prevention of psychological violence and psychological rebounds resulting from physical and sexual violence are considered to be essential, as such aspects may trigger postpartum depression.[37] In addition, women who are found to be in IPV situations should have depression signs and symptoms assessed during pregnancy, and they should be followed during the postpartum period, as they become particularly more likely to develop postpartum depression.[27]

All four studies which investigated the relationship between IPV and anxiety symptoms, both occurring during pregnancy, had a cross-sectional design. These studies were developed in Tanzania,[10] Portugal,[27] Bangladesh[35] and South Africa.[32] The results found revealed the existence of an association between IPV during pregnancy and the occurrence of anxiety symptoms in pregnant women. Such symptoms were specifically associated with the psychological and sexual IPV in South Africa; physical IPV in Bangladesh; physical and sexual IPV in Tanzania; and all natures of this type of violence in Portugal. These results confirm that IPV during pregnancy is an independent factor associated with the occurrence of anxiety in pregnant women.[35]

Based on the fact the women in a psychological IPV situation during pregnancy showed greater risk for the onset of anxiety symptoms, it is important to acknowledge that the different types of violence may differently affect the mental health of women during pregnancy. Therefore, tracking of the women with regard only to

physical or sexual violence may not be enough to improve this population mental health during pregnancy.[32] The two cross-sectional studies developed in Tanzania[10] and in the Unites States[28] which approached the relationship between IPV and PTSD both occurring during pregnancy have evidenced the existence of an association between these two public health problems. Women who suffered physical or sexual IPV during pregnancy were more likely to develop mild and moderate PTSD symptoms in comparison to women who have not suffered such violence.[10] In addition, the severity of the physical and psychological IPV during pregnancy were significantly associated with the occurrence of PTSD symptoms. Curiously, the severity of sexual violence has not been associated with this disorder symptoms.[28]

PTSD is an anxiety disorder characterized by a reaction of intense fear, impotence or horror when a person experiences, witnesses or is confronted by stressing events which involve death, severe injury, threat to physical integrity, a communication of an unexpected or violent death, or a severe life-threatening illness diagnosis. It is not the physiological outcome of another medical condition, medications, drugs or alcohol. Traumatic events include but are not limited to military combats, interpersonal violence, kidnappings, terrorist attacks, tortures, incarceration, natural disasters or disasters caused by man, car accidents, or diagnosis of a severe illness. With this mental disorder, the person relives the traumatic event multiple times when exposed to internal or external evidences that symbolizes or recalls the actual event.[9]

Investigations in this area have become more frequent due to the need to develop strategies and interventions to prevent both abuse obvious physical consequences and rebounds in the mental health of these women. Despite these limitations, PTSD is common enough to become a concern in the obstetric practice, especially because its symptoms may directly or indirectly affect birth and postnatal results.[42] It was noted that none of the studies included in the present comprehensive review investigated the existence of an association between IPV and suicidal ideation both during pregnancy.

However, it was also noted that among the 17 studies, one developed in Bangladesh[40] showed a qualitative analysis of the reasons why study participants showed suicidal thoughts, with IPV being the main reason stated by the women. Nevertheless, the authors did not specify if the violence happened during pregnancy. In this study the majority (89.5%) of the pregnant women who showed suicidal thoughts had a score in the Edinburgh Postpartum Depression Scale indicating gestational depression. In this context, the occurrence of IPV contributed to worsening the women's depression condition, leading to suicidal ideation symptoms among the one who had been abused. Severe depression conditions characterized by suicidal ideation are relatively common in pregnancy, and it is necessary to develop quantitative studies to investigate the existence of an association between IPV and suicidal ideation in this period of a woman's vital cycle.[40]

In view of all results found in this review and the fact that an impaired mental health may lead to multiple negative results to the mother, fetus/child and Family,[32] there is a need to incorporate mental health attention to routine care provided to women in the pregnancy-puerperal cycle, especially during the prenatal period. Health professionals in their global assessment need to pay attention to the presence of symptoms indicating mental disorders in this period of a woman's life, as well as to relevant risk factors. In addition, nurses should adopt strategies and reference mechanisms with the women showing such indicative factors to provide assess and appropriate support in specialized secondary and tertiary facilities, where psychological treatment is offered free of charge. In this sense, the practical support offer to women during pregnancy through groups and the access to health facilities and/or non-governmental organizations are important preventive strategies to be adopted at a local level, and such provide mental health improvement during the prenatal period.[35]

Therefore, it is necessary to train health professionals on the best methods to discuss and approach the physical and psychological components of IPV; to broaden their knowledge with regards to the appropriate reference services. These strategies may help health professionals with the care provided to mothers and their families and reduce maternal-infant morbidity/mortality,[38] as it is ensured that appropriate resources are made available to meet the women's needs.

Currently, the evidences related to interventions that approach violence and the mental disorders during pregnancy are limited, as well as evidences related to educational groups and the offer of non-professional support by women in the community. This should be a priority for future studies.[34] To ensure a qualified and humanized prenatal and puerperal care, it is essential to address these phenomena and maternal-infant health. For that, it is necessary to build a new look on the health-disease process which considers a person a whole, body and mind, and takes into account the social, economic, cultural and physical environment in which this person lives, in addition to establishing a new basis for the relationship of the involved subjects in the production of health, professionals, managers and users.[43]

Additionally, although there are laws that support women considered to be in violent situations, its practical enforcement is limited.[21] Thus, the creation of international policies that allow the early detection of this phenomenon is essential, as the pregnancy period is a moment when women establish a frequent contact with health professionals and, therefore, are more open to reveal a violent situation they may be experiencing and their psychiatric symptoms.[31] Studies as the ones included in the present comprehensive review are the first steps to portray the severity and consequences of IPV against women and may help to reinforce protection laws for women found to be in situations of violence.[39]

Based on the synthesis of the knowledge acquired with this review, it can be concluded that both in emergent and developed countries, the three natures of IPV (physical, sexual and psychological) occur simultaneously during pregnancy and they are associated with mental health adverse effects in women throughout the entire pregnancy-puerperal cycle, highlighting the mental disorders herein investigated. These evidences become stronger as the longitudinal design of some studies allow us to establish a causal relationship between the risk factor (IPV) and the outcomes (mental disorders). In addition, this comprehensive review results strengthen the importance of prevention, early detection and universal tracking of both IPV during pregnancy and mental disorders. In this context, the role of the nurse is highlighted as a professional who is inserted in all levels of care provided to health, while the evidences that were found may support their decision-making process during care delivery to women in the pregnancy-puerperal cycle.

To sum up, among the gaps identified in the present comprehensive review, the need to conduct studies that investigate the existence of an association between IPV and the above mentioned disorders both occurring during pregnancy is emphasized in Latin-American countries, where the perpetration of violence with regard to gender is favored by sociocultural rules that grant man power of sovereignty and domination in public and private environments. In addition, no studies referring to an association between IPV during pregnancy and the occurrence of suicidal ideation in pregnant woman and/or in postpartum women were found. Also, studies need to be developed relating to nursing care for women who are victims of violence during pregnancy, which will contribute to the improvement of nursing care provided to the population.

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