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The Intersection of Postpartum Depression and Posttraumatic Stress Disorder

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Introduction

Childbirth is a pivotal and unique experience in a woman's life. The myth of an uninterrupted, joyful transition to motherhood for all women is perpetuated by current society [1-3]. The childbirth experience has changed dramatically over the last fifty years with transference of care from the home setting and to the acute care setting invested in high technology and medical intervention [2-4]. When the myth of a happy, uneventful delivery and postpartum period is disrupted, stress may dominate the childbirth experience and the transition to motherhood can result in the development of postpartum mood and anxiety disorders such as Postpartum Depression (PPD) and Posttraumatic Stress Disorder (PTSD) [5-8]. Until recently, healthcare practitioners have primarily focused on the problem of PPD but are now researching the incidence of and characteristics associated with PTSD following childbirth and in the postpartum period. An important finding in the PTSD research is the co-occurrence of depressive symptoms with post-traumatic stress symptoms in women following labor and delivery of the infant in the postpartum period [9].

Depression after childbirth is diagnosed as a major depressive episode with onset at four weeks postpartum and lasting at least two weeks (DSM-IV, 2000). PPD prevalence rates have been reported to occur in 12% to 41.9% of new mothers based on cross-cultural and international research [1]. Research since the 1980s has examined significant factors associated with the disorder including prevalence rates, moderators such as social support, and risk factors such as a previous history of depression [1] with little effect on current rates even in the presence of interventions such as screening, social support implementation and increased education [1]. The exploration of PTSD following childbirth is relatively new and pioneering studies have suggested PPD is frequently co-morbid with the occurrence of PTSD [10]. The co-occurrence of PPD and PTSD is also of concern given the long-term negative impact for mothers, infants and family members for either disorder. Relatively few studies have specifically investigated the intersection of PPD and PTSD whereas each of the disorders has been studied individually and both disorders are considered to be a separate diagnosis [9-11]. Debate in the literature exists concerning the question of PPD's uniqueness from a major depressive disorder as the only difference in definition is in an onset specifier of time (occurrence at least 4 weeks postpartum) for PPD [12,13].

Controversy continues to occur about the uniqueness of PPD from any other major depressive disorder at other times in women's lives [12,13] and new research complicates the definition by the high occurrence of co-morbidity associated with PTSD following childbirth. Factors associated exclusively with PPD and specific to the postpartum period versus a major depressive disorder include: obstetric complications, satisfaction with the labor and delivery experience, loss of control, and irritability [14-16]. An overlap of such factors has also been found to be associated with PTSD following childbirth and applicable to the symptoms of PTSD including hyper arousal (irritability), avoidance (isolation) and intrusions [17-20] which are common to other populations who experience PTSD such as sexual abuse victims and combat veterans [21]. Such considerable overlap in symptomatology requires further investigation of PPD and PTSD following childbirth to determine if PTSD is different in the postpartum period (related to the childbirth experience, traumatic birth, support, loss of control, and satisfaction with childbirth experience) than at any other time in a woman's life and distinct from PPD. Continued research is needed to expand the knowledge base regarding the co-occurrence of PPD and PTSD as well as exploring the controversies and issues in the

current literature concerning the investigation of PDD and PTSD in women following childbirth which has long-term implications for women's health, infant health, family relationships, and health care policy related to reproductive health.

Limitation of past research include: small sample sizes, use of a variety of different screening measures for determining prevalence rates of PPD and PTSD, controversy surrounding characteristics as well as predictor variables, and vulnerability variables associated with the co-occurrence of PTSD and PPD following childbirth. These inconsistencies have led to uncertainty regarding the clinical prevalence of PPD and PTSD. Few theoretical frameworks have been specified by the current research associated with the phenomenon of PPD and PTSD in childbirth. Further investigation is needed to determine if there is a relationship between posttraumatic stress symptoms and postpartum depressive symptoms. Understanding the relationship between PPD and PTSD is essential before additional research can be undertaken to address the issues of possible benefits of routine screening for posttraumatic stress symptoms in conjunction with PPD. It is also unknown at this time what interventions are needed to prevent or reduce the incidence of PTSD and PPD. Past efforts to reduce the incidence of PPD through screening have been ineffective, indicating perhaps the need to examine maternal care on a systematic and health policy level [2-4].

Literature Review

PTSD has been found to be associated with depression in the postpartum period and raises questions concerning the overlap in symptomatology of PPD and PTSD in women following childbirth [10,18,22]. Proposed rates of prevalence for posttraumatic stress symptoms vary from 1.5% [19] to 14.9% at 6 months postpartum [23] and 12% to 41.9% of women experiencing depressive symptoms postpartally [1]. Few studies have investigated the co-morbidity prevalence for PPD and PTSD. Pioneering research by Lyons [11] reported 3 of 42 participants scored high post traumatic symptoms as well as high scores for depressive symptoms. Lyon's research [11] was conducted in postpartum women 1-month postpartally. White and colleagues [20] conducted a longitudinal study over a 12-month period with a prevalence rate reported to be 2% at 6 weeks, while 10.5% of women experienced partial symptoms in two subscales but did not meet criteria for a diagnosis of PTSD. Symptoms of PTSD remained at approximately 2% at 6-month and 12-month survey [20]. Similar PTSD rates of 1.25% at 3-6 months postpartally were reported by Cigoli and colleagues in an observational study among women following "Normal" delivery [24].

In contrast, recent research by Leeds and Hargreaves [18] retrospectively investigated the experience of women at 6 to 12 months postpartally to determine rates of PPD and PTSD. Results indicated only 3.5 % of women experienced symptoms at clinically significant levels to indicate PTSD while another 19.6% reported subclinical symptoms. A prevalence rate of 21.5% was found for women scoring in the clinical depressive range [18]. Leeds and Hargreaves [18] report 27.2% of women with depressive symptoms also experienced posttraumatic stress symptoms at diagnostic levels. Response rate was only 21% in this retrospective study which had no face to face contact with researchers. Similarly, Edworthy and colleagues [25] in a study of 121 women reported 10 out of 20 women meeting clinical criteria for PPD also met criteria for post-traumatic stress symptoms reaffirming co-morbidity of the disorders among women following childbirth. Discussion of gaps in limitations of existing research examining the intersection of PPD and PTSD limited by a lack of control for pre-partum psychopathology such as information concerning PTSD, anxiety sensitivity and dissociation [5,20], different time points of measurement among longitudinal studies, and the use of a variety of screening instruments to measure outcomes of depressive and posttraumatic stress symptoms.

Instruments

In both PPD and PTSD research there is a heavy reliance on self-survey questionnaires which do not thoroughly address criteria according to the DSM-IV [26] standards which suggest clinical interview as the gold standard for diagnosis of depression and PTSD [27]. Multiple instruments have been used to measure both depression and posttraumatic stress symptoms in women following childbirth which could account for discrepancies in prevalence rates and predictor variables such as support, traumatic birth experience, satisfaction with birth experience, and outcome variables. A need exists for instruments specifically designed to measure PTSD symptoms in postpartum women. Limitations in measurement will increase the degree of error associated with classification of posttraumatic stress symptoms.

Clinical diagnosis for PTSD and PPD is defined by a structured psychiatric interview based on DSM-IV [28] criteria. Few studies have used the psychiatric interview for diagnosis and have used self-report surveys. Numerous studies have contributed to the knowledge base of postpartum depression within the last twenty years. The EPDS and PDSS are appropriate for the measurement of postpartum depression based on previous research [15]. Designed specifically to address depressive symptoms in postpartum women, the EPDS remains the most widely used tool [29]. However, instruments originally designed for other populations are frequently used (Beck Depression Inventory - II for depression, the State-Trait Anxiety Inventory for anxiety). Consistent use of instruments designed to measure both depressive symptoms and posttraumatic stress symptoms following childbirth would limit discrepancies and error in prevalence rates and analysis [30]. A review of the different methodologies may contribute to development of reliable and valid instruments specifically to

investigate PPD and PTSD in childbirth is salient to advancing the knowledge of the phenomenon (Table 1).

Research Sources	Instruments
[15]	(Time 1) Demographic characteristics, STAI, UWIST (Time 2) STAI, UWIST, Perceived control visual analogue scale
[25]	(Time 1) Demographics questionnaire W-DEQ, SOS version A YSQ-S (Time 2) Demographics, Details of birth experience, W-DEQ version B, IES-R, EPDS
[23]	(Time 1) GHQ, STAI, Additional questions (Time 2) GHQ, STAI, Additional questions, Birth experience (Time 3) GHQ, STAI, Additional questions, EPDS, PDS (Time 4) GHQ, STAI, Additional questions, EPDS, PDS
[18]	(Time 1) Clinical, demographic and birth characteristics, history of traumatic events, PPQ, PCL, EPDS, Perceptions of Labour and Delivery Questionnaire
[31]	(Time 1) W-DEQ, ASI (Time 2) PSS- SR, BDI-II (Time1) Birth experience, Background questionnaire (Time 1 - Time 4) PSSR-SR, EPDS, STAI
[20]	(Time 1) Anamnestic schedule, BDI, EFS, STAI Perceived and Desired Support Scale
[24]	(Time 2) BDI, EFS, STAI, Perceived and desired support scale PTSD-Q post-traumatic stress disorder questionnaire

Table 1: Instruments and time points of measurement in PPD and PTSD following childbirth.

Design

Several design strategies have been used to investigate the co-occurrence of PPD and PTSD following childbirth. Most studies have used a prospective longitudinal design over various time points, small sample size, and nonrandom sampling. A between-subjects experimental design with birth story vignettes to manipulate levels of stressful events and support during birth was conducted by Ford and Ayers [22]. The vignettes with outcome surveys were completed by two groups of women: a nulliparous group of women and a group of primiparas who were not pregnant at the time of survey for ethical reasons. A retrospective design by Leeds and Hargreaves [18] was implemented to study the co-occurrence of PPD and PTSD for women 6 - 12 months postpartum by mailed questionnaires. Although experimental design is the strongest, a limitation in the use of vignettes is a lack of representation of real life changes which can occur in the childbirth process [22] and due to lack of face to face contact with researchers in the retrospective study, attrition was high at 79% [18].

Data collection time points range from 34 weeks' gestation to 12 months postpartum among current studies. Women recruited prior to delivery and 6 weeks post-delivery will not meet the 3-month post-event criteria for PTSD (DSM-IV, 2000). Longitudinal designs using increased time for follow up design with surveys initiated at 3 months continued at 6 months and 12 months are needed to provide a clearer representation of symptoms. Sample populations were predominantly married, in professional occupations, and mostly white which decreases generalizability of findings [18,20]. Sample sizes were also small limiting generalizability [18,22]. No differences among the variables of age, occupation, marital status, education may be related to homogeneity of the sample population [25].

Future studies using larger sample sizes would be important identify risk factors indicated for both disorders. Recruitment of a more diverse population to reflect the relationship of PPD and PTSD among vulnerable populations is needed to strengthen the current knowledge base. Recruitment in area churches and support groups may increase sample size as well as offering remuneration for participant time and burden. A longitudinal design implementing data collection points to meet DSM-IV criteria for posttraumatic stress symptoms and PPD would strengthen study findings for

prevalence rate, predictor variables and outcome [30].

Predictor Variables

Although the intersection between PPD and PTSD following childbirth has not been well investigated, prior research findings have found variables of interest specific for each disorder. According to Brink and Woods [30], prior research of a phenomenon allows for the future researcher to examine the relationship between two or more variables. Beck [1,32,33] reports a loss of control as the primary concept related to PPD. Findings from previous research surrounding PPD suggest the variables of social support, self-esteem, life stress, childcare stress, prenatal depression and fatigue are also significant to PPD [1]. Meta-analysis by Beck [1,34] furthered the number of predictor variables for PPD to include history of depression, infant temperament, and low socioeconomic status. Perception of control during the labor and delivery process has also been found to contribute to PTSD symptoms [11,35].

A comparison of known PPD variables related to PTSD variables may be helpful in describing the outcome of the labor and delivery experience for women following childbirth. The "Correlational design examines the relationship between two or more variables when no previous research findings support a prediction of cause and effect" [30] and would be an effective design to examine variables associated with the co-occurrence of PPD and PTSD following childbirth. Important variables to address in examining the co-occurrence of PPD and PTSD include: predisposing history of mental illness, life stress, social support, birth experience and powerlessness [29]. The literature surrounding the co-occurrence of PPD and PTSD has found predictor variables associated with PTSD symptoms to include: supportive care, perceived control, stressful events, [22] traumatic birth, previous history of mental disorder [7,19,36,37], and a history of trauma [19,20,37,38].

Prior Mental Health Issues

A previous history of mental disorder [7,19,36,37] and a history of trauma [19,20,37] have been associated with the co-occurrence of PPD and PTSD. Zaers and colleagues [23] found psychiatric symptoms in late pregnancy, critical life events and the birth experience to be predictors of depressive and post-traumatic stress symptoms in mothers at six months postpartum. The study looked at both depressive symptomatology and posttraumatic stress symptoms with the variable of anxiety in late pregnancy being a significant predictor for both PPD and PTSD symptoms. Consistent with Zaers et al. [23], prenatal anxiety also has been found to be a predictor of PTSD in women postpartally [29]. A previous history of a mental health disorders was also found to be a predictor of PTSD following childbirth by Leeds and Hargreaves [18]. An inconsistent finding in a within subjects, longitudinal design conducted by Edworthy et al. [25] was the lack of a relationship between a previous traumatic event or history of mental health disorder and posttraumatic symptoms in women following childbirth. This inconsistency creates a gap in the literature which could be addressed with future investigation with larger sample sizes, clear definitions of mental health history, and more diverse populations.

Life Stress

Conflicting research that the occurrence of postpartum stress events appears to be more related to stressful life events and depression than related to pregnancy, labor, and delivery of the infant. Another study reported pregnant or postpartum women are not more at risk for developing depressive and/or mental health disorders than those who are not pregnant or have not experienced childbirth [39]. Zaers and colleagues [23] also found critical life events to be predictors of depressive and post-traumatic stress symptoms in mothers at six months postpartum. Literature investigating the co-occurrence of PPD and PTSD also reports conflicting results.

Social Support as a Buffer

Research investigating depressive symptoms and anxiety symptoms in new mothers reported a need for support by family and healthcare providers may result in increased levels of depressive and posttraumatic symptoms in childbirth [24]. A study by Ford and Ayers [22] conducted using birth vignettes with different levels of care provider support and childbirth event stress to assess mood levels. Women were asked to rate the stress, depressive reaction and perceived provider support to each vignette scenario. Provider support during the childbirth stress event was more indicative of emotional outcome than the event itself [22].

Birth Experience

Several studies report the significance of mother's perceptions of the birth event. Birth type, such as operative vaginal delivery and emergent cesarean delivery, has also been found to be a predictor of higher PTSD symptoms in women at 6 weeks postpartum [16]; [8]. Beck [36] defines birth trauma as "An event occurring during labor and delivery process that involves actual or threatened serious injury or death to the mother or her infant (2004, p.28)." Soet and colleagues [40] found the childbirth experience to be traumatic to 34% of participants in a prospective, observational study among 104 women 4 weeks following childbirth.

Factors such as social support and history of sexual trauma were primary predictors of traumatic symptoms and event characteristics such as powerlessness, pain, medical intervention and interaction of medical personnel were found to contribute to traumatic symptoms. Zaers and colleagues [23] found the birth experience to be a predictor of depressive and post-traumatic stress symptoms in mothers at six months postpartum. Additional

studies have indicated posttraumatic stress disorder may arise not only from labor and birth but also from consequences, medical or psychological, related to the birth process [5,6,7,36,38,41]. Perceptions of the birth process are complex and dynamic. Expectations of the birth process play an important role in the perception of a positive and negative birth experience [29]. Unexpected medical problems (as emergent cesarean section, induction, augmentation of labor, and medically fragile infants), social issues (unwanted pregnancy, lack of partner support), labor factors (pain, lack of control) and caregivers (antenatal and intrapartal) have contributed to a negative childbirth experience [24,42].

Conversely research that the occurrence of postpartum stress events appears to be more related to stressful life events and depression than related to pregnancy, labor, and delivery of the infant. Ford and Ayers [22] found the stressful events in research vignettes were not significant to the development of stress or depressive symptoms following completing of childbirth vignettes with social support having a greater effect on emotional outcomes than stressful events. Leeds and Hargreaves [18] found women experiencing PPD and PTSD symptoms increased when mothers reported more unexpected birth related procedures and perception of the childbirth event. "What a mother perceives as trauma may be seen quite differently through the eyes of obstetric providers, who may see it as a routine delivery and just another day at the hospital [36]." Further investigation into the role of obstetric care in the development of PPD and PTSD is needed as women feel the need for such help and support is not being met by their care providers [22,24,41]. Future studies using a correlational design would provide more insight into the role of healthcare providers as a moderating factor in the perception of the childbirth experience and outcomes of PPD and PTSD among new mothers [18,22,40].

Brink and Wood [30] suggest the "Correlational design is appropriate when one is searching for 'possible causative variables or for a particular outcome.' Although the names variables may be assumed to be independent or dependent based on their temporal occurrence, their actual relationship can only be determined through correlational data analysis (p. 14)". An investigation of the type of delivery experienced, the perceive trauma associated with the childbirth, and the perceived support of the health care providers has broad implications for healthcare policy and providers around reproductive care for women.

Powerlessness

The phenomenon of distress following childbirth needs to be viewed in a broader context than simply postpartum depression to avoid a misdiagnosis of PPD in women with PTSD or both disorders [20-23,25]. It is important to recognize that vulnerability and risk factors may vary among women [9,25,43] and appraisal of the birth event, pain perception, and support from health care providers play a unique role in the development of posttraumatic symptoms following childbirth ([9,10,22,37,44]. The unique variable of schema in relationship to the prevalence of PTSD symptomatology indicated women who may have issues with meeting realistic goals particularly related to control and power may be more at risk for development of PTSD symptoms following childbirth [25]. The finding speaks directly to the proverbial societal views that childbirth and motherhood are joyous, happy, uneventful events all women transition through without difficulty.

Conceptual Framework Issues

PTSD has been found to be co-morbid with postpartum depression and it is unclear whether depression develops at the same time or as a consequence of PTSD [38]. The idea of meeting unrealistic social standards for motherhood and the medicalization of childbirth may contribute to the disempowerment of women in what was once a natural process [3,43,45]. Activists propose most current births involve high-technology, low-touch care which has created more obstetrical intervention, more operative births and the morbidity associated with these events [43]. An increase in such interventions creates more opportunity for traumatic events to occur [5,7,36,37] and in turn decreases a mother's voice in the childbirth process creating a sense of powerlessness [43]. Certainly this loss of voice in such a life transforming event predisposes women to the consequences of PTSD such as disempowerment and disconnection. An exploration of the phenomenon based on an adaptation of current theories of PPD and PTSD may provide further insight. Herman [46] proposes that after a traumatic event has occurred, the survivor needs to experience a reconnection and to establish relationships to re-create the psychological factors that were damaged due to the trauma. A traumatic event could be related to a labor, delivery, or postpartum experience in which the woman encountered fear for herself or her child [8,36,37,47]. The survivor must reestablish trust, autonomy, initiative, identity, and intimacy in essence reforming these capabilities which were present before the traumatic event occurred beginning with autonomy [46]. A conceptual framework for future research should include an adaptation of [32,48] PPD theory and [46] PTSD theory model concerning following childbirth to examine the loss of control and restoration of control through empowerment, remembrance, mourning, and reconnection.

Extensive qualitative study has occurred with the phenomenon of PPD since the original grounded theory established by Beck [32,48] who is continuing to build theory related to PTSD symptomatology [6,36,37]. Ayers [5] conducted a qualitative study exploring the experience of PTSD following childbirth. Findings form both studies suggest, perception of the birth experience, uncaring attitudes of care providers, and powerlessness in the birth process contributes to stress. A conceptual framework to explore stress appraisal and coping process among women experiencing

PPD and PTSD adapted to Beck's theory may provide insight into the overlap of these two disorders. According to Lazarus [49] three major areas to consider when individuals respond to stressful situations are an individual's appraisal of the event, their choice of responses including coping options, and the emotions that result. Given that women report that the transition to motherhood is stressful [1], and even traumatic [5] this framework provides a useful theoretical model through which to understand women's causal antecedents, mediating processes and immediate as well as long term effects in PPD and PTSD. In the context of women experiencing PPD, stressors include loss of identity, loss of control [14] while women experiencing PTSD symptoms following childbirth including birth trauma as well as identity loss and loss of control [5]; [20]. The lack of a conceptual framework to explore PPD and PTSD can be addressed through with grounded theory studies to develop a framework based on women's narratives.

The Medicalization of Childbirth

Powerlessness, lack of support from healthcare providers and partners, birth trauma related to obstetrical interventions, and birth perception have been associated with PPD and PTSD in women following childbirth. There is great concern about the continuing rise in intervention in normal birth [45,50] in developed countries around the world and the "Medicalization" of childbirth and the postpartum process [45,51]. Historical parameters have moved the location of birth from the home to the acute care setting in regional hospitals or hospitals devoted to the delivery of pregnant women since the 1970's until recently when midwife led birthing centers are re-emerging [51]. In today's cost focused healthcare environment one of the most frequently reported outcome measures is quality of care with the outcome of client satisfaction used to assess the quality of care, make organizational decisions about provision of services and maintain a competitive edge among healthcare providers [52,53]. Women's satisfaction with the childbirth experience is relevant to healthcare providers, institutional administrators, and policymakers. Personal control in pregnancy and childbirth has been found to be statistically significant in predicting satisfaction with the overall childbirth experience [53]. Women who experience more personal control report greater satisfaction with caregivers who were supportive during the childbirth process. The perceptions of loss of control and of poor support by care providers during childbirth have been associated with women experiencing PPD and PTSD in the postpartum period [1,22]. Implications include a need for health care providers including nurses, midwives, and physicians to focus on supportive interventions, facilitating a woman's sense of control during pregnancy and childbirth.

Policy to Practice Implications

Activists cite the need for change in the current framework of mothering with an emphasis on policy and practice changes [2-4]. Among issues salient to policy change: real workplace flextime with compensation, six months paid family leave, quality childcare and a major reconstruction of the current birthing industry. Given the evidence that many women experience resolution of partial posttraumatic stress and depressive symptoms in the six months' postpartum time period reaffirms the need for mothers to be given paid leave until the six-month milestone in which psychological and physical transition are complete compared to the six week now followed based on the medical model. Flextime and leave time address the need for support transitioning to motherhood [3].

The largest policy change for mothers and most difficult to navigate will be the reconstruction of the current birthing industry. Midwife managed birth centers should be increased as women have significantly higher rates of normal vaginal delivery, lower rates of induction of labor, use of forceps or vacuum, episiotomy or elective cesarean section. Home birth should be considered. Few home births occur but women choosing home birth with midwives as their healthcare provider have reported several advantages including: use less pharmacological support, spend less financially, are much more satisfied with their care, and are more satisfied with the overall birth experience [51]. Important policy change is disclosure of obstetrical intervention, morbidity, and mortality statistics by physicians and hospitals so mothers are informed when choosing a provider [4]. The medical model has been the framework for birth in the USA for the last fifty years with significant financial compensation associated with prenatal, intrapartal, and postpartum care with engagement by health insurance companies, Medicare and Medicaid. A move toward a national health care system would mean all pregnant women would receive services and provider services would be monitored for quality. Ramifications are exponential considering the political lobbyists for healthcare organizations and insurance companies [4]. A "Feminist Motherhood" movement is needed to advance the rights in birth and reproductive issues to be taken seriously beginning with information about choices [3].

Empowerment to provide women with the knowledge, support, and autonomy to make decisions based on accurate information is needed to change the current medicalization of motherhood to a more humanized birth framework [3,45]. Powerlessness has been defining as a predictor of PPD and PTSD following childbirth. Allowing women to make decisions about not only childbirth but reproductive health in where they give birth, who attends the birth so that she is in control and makes all the decisions (not nurses or doctors or anyone else) provides empowerment for women. Policy change to ensure choice in childbirth (home birth, midwife assisted birth or hospital birth without undesired intervention) should begin as a coalition of mother, fathers, partners, and caregivers.

Conclusion

Too few studies have addressed the occurrence of

posttraumatic stress disorder in relation to childbirth. Postpartum depression has been widely explored with little consistency in screening items and little success in conventional treatment options. The possibility of postpartum depression co-occurring as a traumatic effect of a traumatic childbirth has received minimal recognition whereas co-morbidity of PPD and PTSD has growing recognition in the literature [10,19,20,41]. A majority of women experiencing a clinical event (type of birth) perceived as traumatic will not experience PTSD. The event may be related to powerlessness or the perception of a lack of support from healthcare providers [22,41]. However, the potential to feel the threat of death to self or child, irreversible illness and harm exist in any childbirth [4]. Many women have support systems, coping skills, and personality to resolve issues just as many soldiers, abuse and assault victims implement these resources to resolve the trauma [45]. However, for those women who are unable to resolve the issues of a traumatic childbirth, the devastation is as real as that experienced by the soldier or abuse victim [37].

A component not seen in other populations who experience PTSD is the irreversible interruption in or lack of attachment for mother and infant which has implications for long term negative outcomes for both mother and child [29]. Future research needs to explore the role of coping in women experiencing PPD and PTSD following childbirth [29]. The medical model has been the primary framework used to describe the experience of PPD and PTSD following childbirth with interventions based on the same model. The medical model framework provides little insight into the complexity of PPD and PTSD following childbirth. Research using a theoretical framework to address the phenomenon of childbirth will provide insight into the effects of a traumatic childbirth experience and the relationship of postpartum depressive symptoms and posttraumatic stress disorder. A correlational design examining maternal characteristics, the birth experience, appraisal of stress and coping may expand healthcare provider's knowledge on the intersection of PPD and PTSD following childbirth. Further research is needed to explore ways mothers can be treated with care and concern during delivery, to decrease the incidence of birth trauma, and ways to facilitate collaboration between the mother and health care providers to keep the mother empowered during the childbirth process [7].

Trauma is defined not only by objective data but subjective data as well [5]. The definition of trauma can be based on individual perception, personality, resilience, and degree of social support which influence whether or not an event is traumatic [37]. Revisiting the issues of power and control by placing birth back into the hands of the women who experience the phenomenon instead of treating it as a disease process may decrease the rates of PPD and PTSD thereby improving outcomes for the mother, attachment to the infant and solidifying relationships between mother and partner. Implications for further research should also include exploration of the differences between health care providers' interpretation of the childbirth process and the women experiencing the process. Currently healthcare providers believe the outcome of any birth is positive with a live, healthy baby as an outcome. The maternal perception of a positive childbirth experience appears to be more complex than healthcare providers' perceptions.

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