PROMOTING PERINATAL HEALTHCARE BY RAISING AWARENESS OF THE MULTIDIMENSIONAL IMPACTS OF BIRTH TRAUMA: RECOMMENDATIONS FOR FAMILY NURSE PRACTITIONERS

by

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Abstract

***Background*:** One-third of women giving birth every year in Canada perceive they have experienced psychological birth trauma. While health researchers have focused on postnatal depression (PND) and postnatal psychosis, there is a growing recognition of other perinatal mental health conditions such as Post-Traumatic Stress Disorder (PTSD) and Post-Traumatic Stress (PTS) following traumatic childbirth experiences. However, the concept of birth trauma and its impact is still not well understood. This paper aims to raise awareness of birth trauma in primary care providers through education and presentation of screening tools and available interventions to prevent birth trauma and support patients who have experienced birth trauma.

Methods: A literature search was undertaken within the last ten years, limited to manuscripts from Western countries, in English and peer-reviewed. A total of 35 articles were included, with most of the studies being primary source research. A professional poster and infographics were created to disseminate the findings generated from the current literature review.

Findings: Women with pre-existing mental conditions, a history of sexual trauma, fear of childbirth, low perceived support system, and giving birth during the COVID-19 pandemic had an increased risk of perceiving their birth as a traumatic experience. Furthermore, dynamics arising during childbirth such as severe psychological distress, a discrepancy between expectations and reality, insufficient communication with care providers, and feeling ignored by health care providers were identified as contributing factors for birth trauma. PTSD, PTS, breastfeeding and mother-infant interaction difficulties, as well as fear of subsequent childbirth were found to be the principal complications.

Conclusion: Primary care providers are key professionals in screening the population at risk of perceiving their childbirth as traumatic, as well as identifying and providing early interventions

to women with childbirth trauma in order to minimize the potential short and long-term consequences for the mothers and babies.

Key words: childbirth, trauma, psychological trauma, childbirth education, prenatal care, clinical assessment tool, screening, nurse practitioner, primary care provider

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Promoting Perinatal Healthcare by Raising Awareness of the Multidimensional Impacts of Birth Trauma: Recommendations for Family Nurse Practitioners.

Childbirth is often perceived as a happy life event characterized by expectation and an array of feelings such as hope, excitement, trepidation, and fear. However, for some women, childbirth might be anticipated as a threatening event and perceived as a traumatic life experience. The Vancouver Birth Trauma Organization (2011) states that out of approximately 30,000 women who give birth every year in the Greater Vancouver Area, one-third perceive their childbirth experience as a traumatic experience and between 2% and 6% develop an associated psychological condition such as Post-Traumatic Stress Disorder (PTSD) and Post-Traumatic Stress (PTS).

To date, health care concerns about mental health issues have mainly focused on postnatal depression (PND) and postnatal psychosis (Bastos et al., 2015). However, there is an increased recognition of other conditions such as PTSD following traumatic childbirth. According to the Canadian Perinatal Mental Health Collaborative (CPMHC):

- 95.8% of Canadian health care providers believe that perinatal mental health services in Canada are insufficiently resourced.
- 87% of health care practitioners do not have mandated screening programs for perinatal illness.
- 57.3% of practitioners do not have specialized training in perinatal mental illness.
- 87% of health care providers believe that persons from diverse backgrounds face language, cultural, and cost barriers limiting access to perinatal services.

As a result, the CPMHC highlights the strong need for a national perinatal strategy to address gaps in screening and treatment (CPMHC, 2021).

Primary care providers such as Family Nurse Practitioners (FNPs) play a vital role in screening the population at risk of perceiving their childbirth as traumatic, as well as identifying and providing early interventions to women with childbirth trauma to minimize the potential short and long-term consequences.

The purpose of this literature review is to raise awareness of birth trauma among primary care providers, especially nurse practitioners, through education such as identification of the predisposing conditions and risk factors for birth trauma, key features arising during childbirth that women identify as contributing factors for a traumatic experience, and its potential short and long-term health consequences. Furthermore, screening tools and interventions available in primary care to support patients in BC who have experienced birth trauma will be covered in fulfilment of the culminating project.

Research Question

What education is available for NPs and what screening tools and interventions are accessible to them in primary care to enable them to recognize and support birthing parents who have experienced a traumatic childbirth?

Description of the Problem and its Significance

Recognizing childbirth trauma at an early stage is essential to provide adequate support to the affected population and to reduce the potential adverse outcomes such as anxiety disorders and PTSD. Raising awareness of traumatic childbirth and its potential consequences would allow NPs to screen the population at risk of experiencing birth trauma with a more systematic approach and gain a better understanding of the interventions available to support patients who have experienced birth trauma.

Literature Review

Beck & Polit (2012) define the literature review as being a critical summary of research on the topic of interest, often prepared to put the research problem in context. Conducting a thorough review helps determine how best to contribute to the existing evidence by identifying gaps or inconsistencies in a body of research. Furthermore, a literature review facilitates the interpretations of research findings after analyzing the data.

The most important type of information required for writing a literature review includes primary source research reports written by the researchers who conducted the studies. Therefore, this literature review summarizes evidence mostly from primary source research focused on the education, screening tools and interventions available to address birth trauma in a primary care setting. As a result, this literature review will guide the work of primary health care providers. The current literature review follows the methodology framework detailed by Arksey et al. (2005), comprising a set of five steps including: (a) identifying the research question (b) identifying relevant studies (c) selecting the research studies to include (d) charting the data (e) summarizing the results.

Search Strategy

The literature search was conducted using MEDLINE and CINAHL databases. The purpose of the search strategy was to build concept blocks from the PICO questions using Mesh terms and subject headings (MH) and keywords.

The following keywords, in a variety of combinations, were used: “childbirth”, “labour”, “labor”, “deliver”, “birth”, “parturition”, “trauma”, “psychological trauma”, “childbirth education”, “prenatal care”, “childbirth educators”, “diagnostic rating sale”, “clinical assessment tool”, “diagnostic assessment”, “survey”, “questionnaire”, “screening”, “education”, and “teaching”.

Keywords including “nurse practitioner”, “primary care provider”, “general practitioner”, “family physician”, and “primary care physician” were not used while conducting the search on CINAHL and MEDLINE as these keywords significantly limited the number of relevant articles.

The CINAHL and MEDLINE databases search retrieved 618 articles (see Appendices A and B). First, each article’s titles and abstracts were read to retrieve relevant articles based on the PICO question. Then, inclusion criteria were applied, such as empirical studies published within the last ten years, studies applicable to western countries, peer-reviewed articles, studies focused on psychological trauma rather than physical trauma and written in English. After excluding duplicate studies, studies focused on peripartum depression or postpartum depression, and second source articles, 35 studies were selected for this literature review. Despite the inclusion and exclusion criteria previously indicated, a study conducted in Turkish and, also, one published in 2004 were included due to the excellent insight they brought to the literature review. A Cochrane review was also included to shed light on evidence regarding doula support that was also relevant to this study. Finally, three peer-reviewed research articles conducted from the University of British Columbia were selected outside the CINAHL and MEDLINE databases.

Definition of Traumatic Birth

Traumatic birth is defined in the literature as a subjective experience described by the birthing persons who perceive their childbirth as a traumatic experience (Beck, 2004). Over the past two decades, the definition of a traumatic birth has narrowed in focus to the psychological aspect rather than the physical aspect of the birth experience (Greenfield et al., 2016). Therefore, a traumatic birth refers to a birth where at least one of the following factors is present:

· Physical injury to the baby resulting in psychological distress for the mother

· Physical injury to the mother which results in psychological distress

· Fear of physical injury to the mother or baby and associated psychological distress

· Psychological response to the experience of birth, including care received, which causes psychological distress of an enduring nature (Greenfield et al., 2016).

Traumatic birth is a complex, multi-faceted concept. The experience of birth trauma is recognized as a worldwide phenomenon (Simpson & Catling, 2015). Traumatic birth is not yet recognized as a health condition due to the lack of diagnostic tools. It is, however, now widely recognized as a predisposing factor for developing Perinatal Mood and Anxiety Disorders (PMADs) (Leeds and Hargreaves, 2008).

Finally, in order to meet the criteria of a traumatic childbirth, the distress from the trauma must last after the birth.

Risk for and Contributing Factors to Birth Trauma

To better understand what makes a traumatic experience, it is necessary to identify the multiple factors that could contribute to and exacerbate a woman's perception of birth as being traumatic.

Pre-existing mental conditions

The literature demonstrates that pre-existing mental conditions have been increasingly recognized as a risk factor for the perception of a traumatic birth experience. In Boorman et al.'s study (2014), the authors state that pre-existing psychiatric comorbidity such as pre-existing depression, anxiety, stress, and prior traumatic events were predictors of traumatic childbirth. Also, being a first-time mother and both emergency and elective C-section were predictive of traumatic birth (Boorman et al., 2014). This finding correlates with an early prospective observational study of Soet et al. (2004) which identified that a history of sexual trauma, lower social support, anxiety with clinical markers, and lower coping scores were risk factors for

experiencing a traumatic childbirth experience. Soet et al. (2004) and Boorman et al. (2014) also found that cesarean section and more medical interventions during childbirth were predictors of a traumatic birth. Interestingly, Hollander et al. study (2017) suggests that the medical interventions themselves were not the most frequent cause of trauma, rather the interactions around the interventions, such as an absent or inadequate explanation regarding the procedure to be performed, a lack of emotional support or a discrepancy between expectations and the reality of childbirth.

History of Sexual Trauma.

Prior sexual trauma is a significant risk factor that should be noted. Berman et al. (2021) studied the relationship between sexual assault history and obstetrical and birth-related traumatic stress outcomes in a large sample of women following childbirth in the US. Researchers found that women with a sexual assault history have a higher rate of obstetrical complications and unplanned caesareans. Furthermore, women with prior sexual trauma were almost twice as likely to report preterm delivery than women with no sexual trauma history. The women with a history of sexual trauma were also found to have a higher rate of childbirth-related PTSD, suggesting an increased risk of maternal psychiatric morbidity among traumatized women. Therefore, the study indicates that childbirth can trigger re-traumatization in sexual assault survivors through the manifestation of a sense of defeat, loss of control, and objectification that women can experience during childbirth.

Fear of Childbirth

Fear related to the upcoming childbirth has widely been recognized in the current literature as a factor that could trigger traumatic childbirth experiences. A prospective study conducted in 2011 found that a negative experience of childbirth was predicted by psychological

and endocrine stress parameters during pregnancy. Women with a higher level of fear of childbirth were more likely to experience their childbirth as negative than women without fear anticipation (Alder et al., 2011). Researchers found that women with a more pronounced cortisol awakening response at the beginning of the 3rd trimester of pregnancy have an increased risk of perceiving childbirth as a negative experience. Accordingly, the study supports the belief that pre-traumatic stress is predictive of stressful and potentially traumatic experiences during childbirth (Alder et al., 2011). In addition, a Canadian cross-sectional study conducted by a UBC research team investigated the relationship between the Childbirth Fear Questionnaire (CFQ) and demographic and reproductive variables. The researchers found that assisted vaginal delivery and an episiotomy in a previous pregnancy were positively associated with a fear of pain during childbirth. Also, a history of a traumatic vaginal delivery or a traumatic cesarean birth resulted in an increased fear of subsequent childbirth. Finally, nulliparous participants scored higher on the CFQ than multiparous participants, suggesting a higher childbirth-related fear in first-time mothers (Fairbrother et al., 2018).

The aforementioned risk factors are further supported by a French study that shows that fear of childbirth, anticipated labour pain, perceived lack of social support, anxiety, and depressive symptoms were predictors of pre-traumatic stress intensity related to the forthcoming delivery that could lead to CB-PTSD. The study also concludes that childbirth may be experienced as threatening and traumatic with predictor factors that developed way before the delivery (Goutaudier et al., 2019). This is an important insight that suggests that traumatic childbirth experiences can be anticipated in some populations.

COVID-19

The COVID-19 outbreak was declared a global pandemic by the World Health Organization on March 11, 2020. Recent studies have generated increasing evidence indicating that the pandemic could be a risk factor for a negative and sometimes traumatic childbirth experience. A cross-sectional study found that women who gave birth during the pandemic had more clinically significant acute stress responses to childbirth than women with similar background information such as clinical history, demographics, prior trauma history, pre-existing conditions, and mode of delivery who experienced childbirth before the pandemic (Mayopoulos et al., 2020). Furthermore, the researchers found that the stress response related to giving birth during the COVID-19 pandemic could also be associated with post-traumatic stress symptoms and bonding and breastfeeding issues early in the postpartum period, potentially resulting in maternal mental health morbidity and undermining child development. In addition, another Mayopoulos et al. study reveals that 50% of COVID-19 positive women experienced acute traumatic stress symptoms in response to childbirth. Having no visitors during the hospitalization, not being able to room-in with their newborns, experiencing higher levels of pain in delivery, and more infant admission to neonatal intensive care units were suggested to be risk factors for experiencing a traumatic birth in COVID-19 positive women (Mayopoulos et al., 2021). These two studies suggest that giving birth during the COVID-19 pandemic is associated with a higher prevalence of traumatic births, especially in COVID-19 positive women.

Contributing Factors for Trauma Arising During Childbirth

It is crucial to understand that psychological childbirth trauma is subjective to the woman who experiences it. Therefore, it is important to identify the factors during childbirth that could potentially trigger the perception of traumatic experiences**.** In a scoping review, Beck (2015) developed a middle-range theory of traumatic birth using the Morse theoretical

convalescence and identifies five characteristics commonly experienced by women who perceive their birth as a traumatic event. These attributes include*: "*deprived of caring, stripped of her dignity, the feeling of loss of control, neglected communication, and feeling buried and forgotten" (Beck, 2015, p.4). In a cross-sectional study, women who have experienced a traumatic birth most frequently report that a lack of respect and compassion from the medical team was perceived as being a distinct factor in their traumatic birth experience. Some women even use the term "obstetric rape" while addressing the obstetric violence they receive during childbirth (Beck et al., 2018). The researchers' findings in these two studies correlate with those of the researchers in the Hollander et al. (2017) study who identified the common themes contributing to birth trauma amongst 2192 women. The themes were lack and/or loss of control and interactions with caregivers including communication/explanation, listening, emotional and practical support (Hollander et al., 2017*).*

In a cross-sectional internet survey, Ayers & Harris's (2012) identified hot spots to prevent a traumatic birth and to prevent and treat symptoms of PTSD following a traumatic birth. The researchers' findings suggest that another way to determine what makes a birth a traumatic event is to focus on moments of extreme distress or perceived threat during birth, called "hotspots" (Holmes et al., 2005). The largest category of hotspots includes interpersonal difficulties, with the most frequent subcategory being "feeling ignored." Obstetric events such as an emergency C-section and neonatal complications, as well as pain, represented the next most frequent category. Women with hotspots involving interpersonal difficulties reported the highest levels of anger and conflict during the hotspot with associated symptoms such as avoidance, PTSD, distress, and impairment. The researchers concluded that many women report "hotspots" from a traumatic birth. Emotion and cognition experienced during hot spots appeared to be

influenced by the type of event. Interpersonal difficulties and obstetric complications are associated with a higher risk of perceiving the birth as a traumatic event that could lead to PTSD. Interpersonal difficulties during childbirth, such as a feeling of being ignored and abandoned, result in a higher risk of severe psychological distress, potentially leading to long-term psychological conditions such as PTSD.

Finally, in the retrospective study conducted by Hollander et al. (2017), contributing factors to birth trauma reported by the participants were a lack and/or loss of control in the majority of the participants, fear for the baby's life or health, high-intensity pain and discomfort during childbirth and communication issues between families and healthcare providers during childbirth. These researchers' findings further support all the above-mentioned risks and contributing factors for traumatic childbirth experiences.

The Multiple Impacts of Birth Trauma

Childbirth related Post-Traumatic Stress Disorder

Childbirth-related posttraumatic stress disorder (CB-PTSD), also referred to as Postpartum Posttraumatic Stress Disorder (P-PTSD) within the literature, is a serious complication following a traumatic birth experience. Consequently, it is essential to understand the risk factors to screen the population at risk to limit the occurrence of PTSD following childbirth.

The diagnostic and statistical Manual of Mental Disorders V (DSM-5) defines criteria to diagnose PTSD in adults, adolescents, and children older than six years. The following criteria are identified:

- Exposure to actual or threatened serious injury, or sexual violence.

- Presents intrusive symptoms associated with a traumatic event beginning after the traumatic event occurred.
- Persistent avoidance of stimuli associated with the traumatic events, beginning after the traumatic event occurred.
- Negative alterations in cognition and mood associated with a traumatic event, beginning or worsening after the traumatic event occurred.
- Marked alterations in arousal or reactivity associated with a traumatic event, beginning and worsening after the traumatic event occurred.
- Duration of the disturbance is more than one month
- The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- The disturbances not attributable to physiological effects of a substance such as medication or alcohol or another medical condition (American Psychiatric Association & American Psychiatric Association, 2013).

The current literature has widely recognized childbirth as a potential cause of post-traumatic stress disorder (PTSD). In addition, there is increasing evidence from the literature that PTSD symptoms could even be related to antenatal factors (Ayers & Harris, 2012). The pre-partum factors include a pre-existing mental health disorder or emotional problems, previous trauma, fear of birth and labour pain, financial concerns financial concerns related to low socioeconomic status, and socio-demographic factors.

The antenatal factors include obstetric complications and complex pregnancy, and none or low attendance at antenatal education events (Simpson, 2017). In a meta-analysis, specific factors related to pregnancy and childbirth, such as infant and maternal complications as well as

unmanaged pain during delivery, could also contribute acute distress leading to trauma and the development of CB-PTSD symptoms (Grekin & O'Hara, 2014). Subjective factors such as poor social support and interactions with medical staff were also considered potential risk factors of CB-PTSD (Grekin & O'Hara, 2014). Furthermore, the researchers highlight pre-existing maternal psychiatric disorders such as a history of trauma, depression and an anxiety disorder, and prior PTSD were strongly associated with a higher prevalence of CB-PTSD (Grekin & O'Hara, 2014). Goutaudier et al.'s findings (2019) support Grekin & O'Hara (2014) by highlighting that 8.8% of the sample of women who met the diagnostic criteria for PTSD before childbirth perceive the upcoming birth as a forthcoming threatening and traumatic event. Finally, Grekin & O'Hara (2014) make an interesting point that cultural differences regarding pregnancy, type of birth and postpartum experiences and expectations might create differences in prevalence rates and significant risk factors for postpartum PTSD. Furthermore, societal expectation differences across different countries might affect a woman's personal, subjective experience as to whether she views specific childbirth experiences as traumatic.

In a prospective Canadian study in 2012, researchers stressed that a history of sexual trauma and anxiety sensitivity, more negative childbirth experience than expected and a perceived lack of social support could increase the probability of developing PTSD after childbirth (Verreault et al., 2012). The study was the first in Canada where researchers prospectively evaluated the incidence of postpartum PTSD assessing past PTSD using a semi-structured interview during the first six months following childbirth in a sample of 308 women. The study recommends trained staff, such as nurse practitioners, to implement interventions to prevent re-traumatization in women with a history of sexual trauma. Furthermore, the authors suggest that screening women for anxiety sensitivity and discussing childbirth fears during

prenatal visits are important preventative strategies. Moreover, there is a risk that a traumatic childbirth can have a far-reaching impact on the parent-infant dyad and it is the primary care providers including NPs who can mitigate this risk.

The ripple effects of a traumatic childbirth

Post-Traumatic Stress (PTS). Post-traumatic stress symptoms differ from PTSD, as PTS eases with time, whereas PTSD symptoms remain persistent and disruptive in daily life. However, PTS might lead to PTSD over time. Women with PTS have symptoms that overlap with PTSD, but the duration is not long enough to result in a PTSD diagnosis. A PTSD diagnosis requires a symptom duration exceeding one month (APA, 2013; Beck, 2015; Greenfield et al., 2016). Finally, PTSD is a clinical diagnosis based on specific diagnostic criteria (DSM-5), while PTS is not. Four clusters, including re-experiencing, avoidance, negative cognitions and mood, and arousal, might be present in posttraumatic stress.

The manifestation symptoms of PTS could take the form of uncontrollable flashbacks or nightmares, numbing detachment, increased arousal (e.g., seething anger and difficulty breathing), and retreating from the world of motherhood (Beck, 2015). In addition, PTSS might interfere with mother-infant bonding, breastfeeding journey, and decisions regarding subsequent pregnancies.

Breastfeeding. A breastfeeding journey might be negatively impacted following a traumatic childbirth experience. Beck (2015) describes two different paths: one facilitating and one impeding breastfeeding following traumatic childbirth experiences. She states that the three factors that motivate women to breastfeed their infant after birth trauma are the determination and motivation to succeed at something related to motherhood, making up to their infants for the traumatic way they were brought into the world and providing an escape from the distressing

thoughts of their traumatic birth. In contrast, the path that impedes a breastfeeding journey could be explained by the following factors: viewing their breasts as one part of their body that was violated during the birth, perception of insufficient milk supply, intrusive flashbacks of the traumatic birth while breastfeeding, and disturbing detachment from their infant. As a result, women might feel disconnected from their infants leading to mother-infant bonding difficulties (Beck, 2015).

Subsequent Pregnancy Birth Decisions Following Psychological Childbirth Trauma. Women who experienced a traumatic childbirth might be afraid to become pregnant again and therefore, they might decide not to have more children (Beck, 2015). In a qualitative analysis (2021), Beck identifies five metaphors to understand what comes to mind in women who are expecting a child following a traumatic childbirth experience. The five metaphors are:

- "A head buried in the sand" relates to the denial of subsequent pregnancy as a coping mechanism.
- "Mental baggage" refers to intrusive flashbacks and nightmares of a previous traumatic birth.
- "Waves of panic" that hit periodically throughout the pregnancy.
- "Back and forth battle" refers to battles with conflicting feelings that women experience throughout their pregnancy, such as wanting to terminate the pregnancy and wanting to see their future baby.
- "Emotional torture" refers to distressing emotions of fear, terror, depression, dread and helplessness that women experience when contemplating their forthcoming childbirth (Beck, 2015).

Therefore, women who get pregnant again, whether it is a planned or unplanned pregnancy, might be at risk of experiencing another traumatic childbirth. They might have risk factors for a traumatic birth on account of factors including previous trauma, intense fear of childbirth, PTS, and sometimes even PTSD and should be monitored closely by health care providers. Holopainen et al. (2020) investigated women's subsequent birth experiences following a previous traumatic childbirth in a sample of 474 Dutch women. Previous traumatic birth experiences might result in changes in planning and decisions regarding their upcoming birth, such as making a birth plan, choosing a home birth in a high-risk pregnancy against medical advice and having a planned cesarean section (Holopainen et al., 2020).

Post Traumatic Growth

Birth trauma might, in some cases, shake the foundations of a mother's assumptive world, leading to a small degree of posttraumatic growth (Beck et al., 2018). Posttraumatic growth is a positive legacy resulting from a traumatic event. Posttraumatic growth has been reported in people who have experienced traumatic events such as cancer, myocardial infarction, or chronic disease such as diabetes. Beck et al. (2018) conducted a pilot study using a cross-sectional, quantitative design from Tedeschi and Calhoun's posttraumatic growth model as a theoretical framework to determine levels of posttraumatic stress, core beliefs disruption, and posttraumatic growth in women who had a traumatic childbirth experience.

Opening oneself up to a new present, achieving a new level of relationship nakedness, fortifying spiritual mindedness, and forging new paths are the four themes that emerged from the literature to describe the essence of positive changes accompanying posttraumatic growth. The study shows that women who gave birth by cesarean experienced more posttraumatic growth

than women who gave birth vaginally. In addition, the greater the time-lapse since the traumatic birth, the higher the level of posttraumatic growth (Beck et al., 2018).

Screening Patients in Primary Care to Prevent Childbirth Trauma and Guide Early Interventions Following a Traumatic Childbirth Experience.

Many screening tools are available to primary care providers to identify the at-risk population of experiencing birth trauma. These valuable tools might help providers initiate and guide early interventions to support the population at risk of childbirth trauma or individuals who have experienced a traumatic childbirth experience. These instruments are collated in table 1.

Table 1

Screening Instruments

Title of instrument	Author/Date	Number of items	Outcome	Ease of use
The Wijma Delivery Expectancy/ Experience Questionnaire Version A (W-DEQ-A)	K.Wijma, B. Wijma, and M.Zar (1998)	33-items	It is used to measure a construct of fear related to childbirth during pregnancy by asking the birthing parent about the expectancies before childbirth.	Responses are recorded using a six-point Likert scale with a range of 0 to 5 with a low score indicating a low level of fear in respondents pertaining to childbirth, and a higher score indicating a high level of fear. Therefore, items numbers 2, 3, 6, 7, 8, 11, 12, 15, 19, 20, 24, 25, 27, and 31 have to be reversed for the calculation of individual score.
The Childbirth Fear Questionnaire (CFQ) [a] This tool is still under development and is not yet available for use.	Fairbrother et al. (2017)	40-items	This instrument is used to measure the fear of childbirth whereby multiple domains of fear related to childbirth are assessed with individual subscales.	Items are scored on a scale of 0 (no fear) to 4 (extremely fearful), Likert-type scale. CFQ total scores range from 0 to a maximum of 160. A score between 83–104 is considered an indication of a moderate to high level of fear of childbirth and a score above 105 is considered an indication of an extreme fear of childbirth.
The City Birth Trauma Scale (City BiTS)	Ayers et al. (2018)	29-items	This tool is used to measure birth-related PTSD according to DSM-5 criteria and two additional items from DSM-IV, namely "criterion A2" and "emotional numbing."	Items are based on symptoms occurring during the week prior to the assessment. The items are measured according to a 4-point Likert scale (0 = *not at all*, 1 = *once*, 2 = *2–4 times*, or 3 = ≥ *5 times*). However, the two additional items from DSM-IV are scored on a yes/no scale. "Distress, disability and potential physical" items are scored as yes/no with a third response category of "maybe". A higher score indicates greater severity of symptoms of PTSD.

Title of instrument	Author/Date	Number of items	Outcome	Ease of use
The Impact of Event Scale-Revised (IES-R)	Weiss & Marmar (1997)	22-items	This is used to measure subjective distress caused by traumatic events based on 14 of the 17 DSM-IV symptoms of PTSD.	Items are rated on a 5-point Likert scale ranging from 0 ("not at all") to 4 ("extremely"). The IES-R total score might range from 0 to 88. The items are based on symptoms occurring during the past week. There are three subscales, including intrusion (8 items), avoidance (8 items), and hyperarousal (6 items). A higher score indicates a higher likelihood of PTSD. A total IES-R score of 33 or above indicates the likely presence of PTSD.
The Trauma History Questionnaire (THQ)	Green (1993)	24-items	This tool is used to examine events with potentially traumatic experiences such as crime, general disaster, and sexual and physical assault.	For each event, respondents are asked to provide the frequency of the event as well as their age at the time of the event. A yes/no answer is requested in each case and in cases where a yes is recorded, the frequency and age at which event occurred.
The Perinatal Anxiety Screening Scale (PASS)	Somerville et al. (2014)	31-items	This is used to screen for anxiety in antenatal and postpartum women. While the PASS is not a diagnostic tool, it can be used as an indication of the nature of the anxiety symptoms being experienced.	Respondents self-rate each of the four clusters of anxiety symptoms, indicating the frequency of the symptoms over the past month. The items are on a scale ranging from 0 (“not at all”) to 3 (“almost always”). A total PASS score is obtained by adding all of the items on the PASS. A cut-off score of 26 is recommended to differentiate between those at high risk and those at low risk of presenting with an anxiety disorder. Asymptomatic: 0 – 20 Mild-moderate symptoms: 21 – 41 Severe symptoms: 42 – 93

Title of instrument	Author/Date	Number of items	Outcome	Ease of use
The Edinburgh Postnatal Depression Scale (EPDS)	Cox et al. (1987)	10-items	This tool is used for depression during the perinatal period. It has a sensitivity above 59% and a specificity above 49%.	Each question is scored from 0 (normal) to 3 (severe), giving a maximum score of 20 for all ten questions. Cut-off scores are as follow: -probable depression: 15 or above in antenatal women and 13 or above in postpartum women. -possible depression: 13 or above in antenatal women and 10 or above in postpartum women. The EPDS can be administrated anytime during the pregnancy and anytime between 3 days and 2 years postpartum. However, the suggested timeframe is between six and 16 weeks postpartum.
The Mothers Autonomy in Decision Making (MADM) scale	Vedam et al. (2016)	7-items	This is used to assess women's autonomy and their role in decision-making during maternity care.	The scale encompasses seven items rated on a 6-point Likert scale from 1 (completely disagree) to 6 (completely agree). The total scores range between 7 and 42, with a higher score indicating more autonomy and role in decision-making during maternity care. A total score of 24 and below reveals low patient autonomy.
Mothers On Respect index (MOR)	Vedam et al. (2017)	14-items	Measures women's experiences of respect and self-determination when interacting with their maternity care providers. This scale assesses the nature of respectful patient-provider interactions and their impact on a person's senses of comfort, behaviour, and perceptions of discrimination.	Items are scored on a 6-point Likert scale. The range of scores is between 14 and 84, with a higher score understood as an indication of more respectful care. A score of 49 or below is regarded as an indication of a low level of respect experienced by the recipients.
Mistreatment Index	Vedam et al. (2019)	8-items	This is used to identify any experiences of mistreatment during childbirth.	Recipients should select the items related to the events they have experienced, if any, during childbirth.

The Wijma Delivery Expectancy/ Experience Questionnaire Version A (W-DEQ-A)

The W-DEQ-A (see Appendix C) is the most common tool to measure fear of childbirth during pregnancy by asking the woman about her expectancies before childbirth (W-DEQ-A; Wijma, Wijma, & Zar, 1998). The W-DEQ-A is a 33-item questionnaire, with items scored on a six-point Likert type scale with a maximum score of 165. The questionnaire has established psychometric properties. The questionnaire is focused not only on the assessment of fear but also on assessing a wide range of perceptions regarding labour and delivery. The W-DEQ-A does not assess the specific aspects of fear of childbirth. Identifying the degrees and etiologies of fear can result in the implementation of specific interventions to support the population experiencing fear of childbirth. For instance, a woman experiencing fear of having an episiotomy is unlikely to receive the same preventive intervention as someone afraid for the baby's or her own physical safety.

The Childbirth Fear Questionnaire (CFQ)

The CFQ encompasses 40 items covering domains of potential childbirth-related fear with seven subscales, including "fear of:

- Loss of sexual pleasure/attractiveness
- Fear of pain from a vaginal birth
- Medical interventions
- Fear of embarrassment
- Fear of harm to the baby
- Fear of cesarean birth
- Fear of mom or baby dying
- Fear of insufficient pain medication

- Fear of body damage from a vaginal birth" (Fairbrother et al., 2018, p.19).

The CFQ is currently being developed by a team of perinatal researchers, from the fields of psychology, midwifery, and nursing. The CFQ is comprehensive and multidimensional for the assessment of multiple fear domains. Therefore, once the tool will be available to use, primary care providers might use it in order to identify the specific nature of women's childbirth fears resulting in the provision of appropriate interventions such as education or cognitive modification to support women with fear of childbirth and, thereby, limiting the risk of a traumatic childbirth experience.

The City Birth Trauma Scale (City BiTS)

The City BiTS (see Appendix D) assesses PTSD following childbirth. The City Birth Trauma Scale consists of 29 items measuring birth-related PTSD according to DSM-5 criteria, including stressor criteria: (A) symptoms of re-experiencing, (B) avoidance, (C) negative cognitions and mood, (D) and hyperarousal, (E) as well as the duration of symptoms, (F) significant distress or impairment, (G) exclusion criteria or (H) other causes. Also, Ayers et al. (2018) added two additional items which were supported by evidence from the literature, namely criterion A2 that women responded to events during childbirth with intense fear, helplessness or horror and the second additional item was symptoms of "emotional numbing". Results from the Ayers et al. study (2018) show that the City Birth Trauma Scale has excellent reliability with a Cronbach's $\alpha = 0.92$. The City BiTS is widely recognized and has been validated in several languages (Thomson et al., 2021).

It is essential to use a systematic screening procedure in women reporting a traumatic childbirth experience in order to implement appropriate interventions that would limit adverse health outcomes. Verreault et al. (2012) found that the highest incidence of PTSD symptoms

occurs one month after childbirth. This study also shows a decrease in the proportion of women with PTSD between 1 and 3 months postpartum. Therefore, this finding provides excellent insight for primary care providers on the ideal time to screen women for PTSD in primary care.

The Impact of Event Scale-Revised (IES-R)

The IES-R (see Appendix E) is a 22-item scale that assesses traumatic stress symptoms in PTS from three clusters based on DSM-IV, namely intrusion, avoidance, and hyperarousal. Each cluster includes eight items, and all score on a 5-point scale (0- not at all to 4- extremely). The total score might range between 0 and 88, where a higher score relates to higher intensity of symptoms. The internal consistency of Cronbach's α was .94, .87, and .91 for intrusion, avoidance, and hyperarousal, respectively (Nakic Rados et al., 2020).

The Trauma History Questionnaire (THQ)

The THQ (see Appendix F) is an instrument that might be used to determine to what extent women have had prior exposure to potential sources of trauma. It comprises 24 items addressing three areas: crime-related, general-disaster and trauma, and unwanted physical and sexual experiences (Nakic Rados et al., 2020). This instrument has a reliability of above 0.7 with an intraclass correlation coefficient of 0.76 (Center for substance abuse treatment & NCBI, 2014, p.282)

The Perinatal Anxiety Screening Scale (PASS)

The PASS (see Appendix G) is a 31-item scale with four subscales, including general worry and specific fears, perfectionism, control and trauma; social anxiety; and acute anxiety and adjustment over the past month (Somerville et al., 2015). The responses are measured on a scale of 0 to 3 for all 31 items. The higher the final score, the more severe the anxiety. The PASS has excellent reliability with a Cronbach's $\alpha = 0.96$. A total cut-off score of 26 is recommended with a

sensitivity and specificity of 0.7 and 0.3, respectively, to detect perinatal anxiety disorder (Somerville et al., 2015). A pre-existing mental condition such as anxiety has been linked with an increased risk of perceiving childbirth as a traumatic event. Therefore, effective screening for perinatal anxiety could result in the implementation of early interventions such as making an appropriate referral in primary care. Intervention or referral could result in a better health outcome for the mother and prevent later negative outcomes following a perceived traumatic childbirth for mothers, such as PTSD and PTS, and infants, such as decreased bonding/attachment.

The Edinburgh Postnatal Depression Scale (EPDS)

An Irish study using a mixed-method design underscores that many of the risk factors involved in developing birth trauma are similar to those associated with peripartum depression (Byrne et al., 2017). Therefore, since postpartum depression (PPD) and P-PTSD share many of the same symptoms; it is important to screen patients presenting anxiety symptoms for depression in order to avoid a misdiagnosis.

The EPDS (see Appendix H) is the recommended screening tool for depression during the perinatal period in BC. The tool has been validated in the perinatal population. The EPDS is a 10-item self-report questionnaire in which women are asked to rate how they have felt over the past seven days. The cut-off scores supported by the literature are as follow:

- Probable depression: 15 or more in the antenatal period and 13 or more in the postpartum period.
- Possible depression: 13 or more in the antenatal period and 10 or more in the postpartum period.

It is important to note that the perinatal services in the BC guidelines (2014) stress the importance of pursuing further assessment and follow-up for women who record a high score to diagnose depression based on DSM-V criteria. Therefore, a positive screen on the EPDS alone is not sufficient to establish a diagnosis of depression. Women might be screened anytime during the pregnancy and postpartum period. On a side note, perinatal depression might be misdiagnosed due to similar symptoms of a healthy pregnancy, such as fatigue during the first trimester.

The Mothers Autonomy in Decision Making (MADM) scale

The MADM scale (see Appendix I) is a reliable and valid tool that rates the level of agency and autonomy that a person experiences when participating in decision-making conversations with a health care provider during the perinatal period. This tool would be interesting to use to assess the level of decision-making of a birthing person during childbirth. The MADM scale was developed in British Columbia from a community-based participatory research process. The instrument includes seven items related to the experience of decision-making. Cronbach's α for the scale exceeded 0.90 for all samples.

Mothers On Respect index (MOR)

The MOR (see Appendix J) was developed to assess the nature of patient-provider interactions and access person-centered maternity care. The MOR index was developed through a participatory research process and has been administrated in Canada, from different communities across British Columbia, and the U.S. This tool is a reliable and valid measure of respectful maternity care. The instrument is a 14-item scale to rate women's comfort level, impact on their willingness to ask questions, and/or perceptions of racism or discrimination when receiving care. In addition, the MOR index might be used by individual providers such as family

nurse practitioners to evaluate the psychosocial impact of the informed consent process as well as individuals' perceptions of discrimination and poor treatment during childbirth that could trigger a traumatic experience (Vedam et al., 2017).

Mistreatment Index

The Mistreatment Index (see Appendix K) is a set of indicators of mistreatment perceived by patients that focus on seven components described by WHO researchers, namely physical abuse, sexual abuse, verbal abuse, stigma and discrimination, failure to meet professional standards of care, the poor rapport between women and providers, and poor conditions and constraints presented by the health system. In practice, a one-screening question can be used to identify any concern regarding safety during the perinatal period. For instance, the question could be, “Are you presently, have you ever, or are you anticipating a concern for your safety during the perinatal period?”. If the patient answers positively and if there are suspicions of safety concerns directly related to maternity care, the mistreatment index might be used to identify which of the dimensions of mistreatment were experienced during childbirth.

Trauma and Violence-Informed Care (TVIC) Theoretical Framework

The EQUIP intervention was designed to enhance the capacity of primary health care to provide equity-oriented health care, especially for those who experience significant health and social inequities. Trauma and Violence-Informed Care (TVIC), cultural safety care, and harm reduction are the three key dimensions of the EQUIP framework. TVIC recognizes that people impacted by social inequities often experience multiple forms of violence. one of the objectives of TVIC is to minimize the potential re-traumatization for individuals who have previously experienced violence by creating a safe and trusting environment.

Primary health care is often the first point of health care contact for people who have experienced trauma and violence (Levine et al., 2019). As with any other trauma, primary care providers should follow the four TVIC principles while a patient perceives childbirth as a traumatic event. The first principle states that primary care providers should try to understand trauma violence and its impacts on people's lives and behaviour. Accordingly, TVIC training is recommended for primary care providers. Participants from the Levine et al. study (2019) report that TVIC education contributed to increased knowledge, awareness, and confidence in providing care to individuals who experienced trauma and violence. Primary care providers should be mindful of the potential histories and effects and handle disclosure appropriately. It is critical that the client feels her trauma narrative is believed, that she feels validated and affirmed and finally, that appropriate concern for her safety and well-being is expressed.

The second principle recommends creating emotionally and physically safe environments for all clients by adopting a non-judgmental approach, fostering connection and trust with individuals who have experienced trauma, and providing clear information and discussing expectations.

The third principle recommends fostering opportunities for choice, collaboration, and connection by jointly considering and providing choice of care and actively listening and giving privilege to the client's voice.

The final TVIC principle recommends using a strengths-based and capacity-building approach to support clients by recognizing and helping people identify their strengths, acknowledging the effects of historical and cultural conditions and teaching coping skills. Thus, the four TVIC principles can be applied in primary care while supporting women who have experienced a traumatic childbirth.

Description of the Project

The Canadian Institute of Health Research (2020) defines knowledge translation (KT) as "a dynamic and interactive process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, health services delivery and the healthcare system". Knowledge dissemination tools summarize new knowledge and make it understandable and accessible to specific target groups.

Professional Poster

Using a professional poster is an efficient and widely used tool for disseminating current evidence from all types of research (Sawaya, 2017). In addition, thoughtfully designed posters facilitate networking among individuals with similar interests and goals and ultimately improve patients' health outcomes (Astroth & Hain, 2019).

The components of a professional poster might include but are not limited to an eye-catching title, the institutional affiliation and author information, an abstract, the literature review, the research question, methods, results, discussion, limitations, implications, and acknowledgements (Sawaya, 2017).

Sawaya (2017) states that a powerful poster is explicit, colourful, and informative. Similarly, Siedlecki (2017) acknowledges that relevant and aesthetic posters attract the most viewers. Thus, the design and the visual appearance of a poster are fundamental to attracting the audience's attention. Therefore, this culminating project includes a professional poster (see appendix L) that will be presented at future NP conferences in order to raise NPs' awareness regarding traumatic birth.

Infographics

Alternatively, infographics are also recognized as innovative, visually attractive and valuable dissemination tools to summarize new evidence from research (Mc Sween-Cadieux et al., 2021). The purpose of infographics is to catch users' attention and increase their ability to retain and recall information through appealing formats using various designs (Mc Sween-Cadieux et al., 2021).

Martin et al. (2019) investigated differences in reader preference, cognitive load during a summary review, and delayed information retention between infographic article summaries and traditional text-only abstracts in summarizing medical research literature. The authors suggest that whereas no difference was found in delayed information retention, infographics were preferred by readers and were associated with a lower cognitive load. Furthermore, Crick and Hartling (2015) conducted a cross-sectional study in Canada and found that infographics are useful for patients and their caregivers as a means of summarizing the evidence. The authors also conclude that knowledge dissemination and translation tools need to be targeted according to specific audience needs and preferences. Therefore, the project also includes infographics (see appendix M) as an evidence-based knowledge dissemination tool to target a large audience of health care providers.

Discussion

The Multidimensional Management to Prevent Birth Trauma and Support Women after a Traumatic Childbirth Experience by Family Nurse Practitioners

Nurse Practitioners (NPs) autonomously diagnosis, treat and manage acute and chronic physical and mental illnesses within a holistic model of care. Nurse Practitioners work in collaboration with their patients and other health-care providers to deliver high-quality patient-

centred care (BCCNM, 2021; CNO 2010). Therefore, Family Nurse Practitioners (FNP) might manage low risk, singleton pregnancies. However, if there is any underlying pathology or comorbidity or obstetrical high-risk factors, the patient should be referred to an obstetrician or Maternal Fetal Medicine (MFM) department. FNPs as primary care providers routinely perform prenatal and post-partum visits.

The first postpartum visit is usually scheduled within one week of delivery primarily to assess maternal recovery, infant feeding, and infant weight. A second visit is scheduled to take place one month after birth to assess feeding, infant concerns, and family coping skills. At 6 weeks post-partum, another visit is scheduled to take place to perform a full exam of the mother including a pap and UTD in accordance with BCCA cervical cancer guidelines. Therefore, all well-child visits are regularly scheduled at 2 ,4, 6, 9, 12 and 18 months, 2 years old and then annually until 5 years old. FNP are therefore key providers with numerous opportunities to screen women at risk for a traumatic childbirth experience and implement early interventions to prevent or support women following birth trauma.

To date, there are no known Canadian national policies regarding the screening, treatment, and prevention of traumatic birth experiences. However, the Perinatal Services BC guidelines outline interventions for screening and managing perinatal stress disorder including PTSD. Thomson et al. study (2021) reveals that from the European countries which participated in their study only the Netherlands had policies in place regarding the prevention, screening, and treatment of birth trauma.

Screening for Risk and Precipitating Factors of Birth Trauma in Primary Care

Unlike any other trauma, a subjective traumatic experience related to a childbirth event is predictable and therefore screening the at-risk population is critical to limit adverse maternal and pediatric outcomes.

The current evidence from researchers in this literature review shows that risk factors for a traumatic childbirth experience include: pre-existing mental health conditions such as depression and anxiety; first pregnancy; history of sexual trauma; fear of birth or labor pain; low perceived perinatal social support; history of traumatic vaginal or instrumental deliveries (Alder et al., 2011; Berman et al., 2021; Boorman et al., 2014; Fairbrother et al., 2018; Goutaudier et al, 2019). Therefore, the instruments (refer to Table 1) such as the W-DEQ-A questionnaire, the CFQ, the THQ, the PASS, City BiTS and the EPDS could be used during the perinatal period to screen women for anxiety, depression, CB-PTSD, fear of childbirth, and previous trauma. Screening for these risk factors would guide primary care providers to choose interventions to prevent birth trauma and its potential complications. Furthermore, conducting a thorough patient history is essential to gather all potential risk factors that could contribute to a psychologically traumatic birth. Sobel et al. (2018) found that if women disclosed their history of sexual trauma in the prenatal period, they would like it to be communicated in advance to the members of the labor and delivery care team to limit the risk of re-traumatization from obstetric interventions such as cervical examinations or use of language which would trigger reminders of a prior sexual assault. Consequently, primary care providers have the essential role of disclosing, on behalf of their patient and with their consent, prior history of trauma and potential risk of re-traumatization during childbirth. This intervention aligns with one of the Trauma and Violence-Informed Care (TVIC) principles to promote safety and well-being during childbirth (EQUIP, 2015).

The current literature review also provides evidence that precipitating factors occurring during childbirth could trigger birth trauma. These factors include: feeling a lack or loss of control during childbirth; poor interaction with care providers; obstetric violence; emergency obstetric interventions; and women perception of extreme distress or threat during birth (Ayers & Harris, 2012; Beck et al., 2018; Beck, 2015; Hollander et al., 2017).Therefore, tools such as the MADM scale, MOR index, and Mistreatment index could be used by nurse practitioners to identify the level of decision-making that a woman perceived, the quality of patient-provider interactions, and potential mistreatment that occurred during childbirth. These tools could be extremely helpful in guiding the NP's subsequent interventions.

Nurse Practitioner Interventions in Primary Care

Debriefing. Debriefing is an interview during which women can discuss their childbirth experience. Debriefing might guide clinicians to order the best course of interventions addressing women's needs. In Scotland, the NHS routinely offers a debriefing service with a consultant obstetrician for women whose childbirths were considered objectively traumatic when physical trauma arose during childbirth (Thomson et al., 2021). Debriefing is a great way to acknowledge a woman's feelings and perception of the birth she might report as traumatic. Debriefing might occur shortly after childbirth or at the initial prenatal visit for multiparous women. It presents an excellent opportunity to engage in a discussion about previous births (Beck, 2021). In a qualitative study, Sobel et al. (2018) suggest that survivors of sexual trauma might or might not express a willingness to debrief with a health professional about their childbirth experience. In addition, the study suggests that women who exhibit strong PTS symptoms would be more likely to be debriefed regarding their birth experience. This finding correlates with Baxter's study

(2019) that states that women with a high IES score were more likely to talk after giving birth than those with a low IES score.

In BC, when a birth is objectively considered traumatic by the health care provider present during the event, women will most likely be offered a debriefing at a postpartum visit. For instance, most midwives' clinics provide a detailed breakdown of the events that occurred during labour and delivery using the maternity notes relating to the patient. As a result, family nurse practitioners might consider referring their patients according to their wishes, to the appropriate health care provider who was present during their childbirth for a debriefing if they have not yet had such an opportunity.

Cognitive Behavioural Therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR). CBC focuses on reducing symptoms by identifying and modifying the negative modes of thoughts and behaviour. CBT teaches women to (a) identify negative thoughts; (b) understand how those influence their mood and behaviour; (c) challenge negative thoughts with more grounding thought patterns; (d) reduce behaviours that contribute to depression and anxiety; (e) increase behaviours to promote physical and mental wellbeing; and (f) prevent relapse of symptoms and decrease overall symptoms of depression or anxiety (Perinatal Services BC, 2014). The BC Reproductive Mental Health Program states that evidence supports CBT as effective as antidepressant medication for mild to moderate depression. CBT may be offered individually or in groups.

Furthermore, Eye Movement Desensitization and Reprocessing (EMDR) has been reported as an effective means of treating trauma such as CB-PTSD. EMDR encourages a brief focus on trauma memory while simultaneously involving eye movements or tapping, reducing the vividness and emotion associated with memories of childbirth trauma. An audit evaluation

demonstrated that interventions such as CBT and EMDR are highly effective treatments for post-natal women experiencing PTSD following childbirth, with a significant decrease in PTSD symptoms following interventions (Williamson et al., 2021).

Referrals. Psychiatric and reproductive mental health referrals should be considered by FNPs before, during pregnancy or in the post-partum period to assist women with a chronic mental disorder with treatment planning and monitoring of the patient's mental health status (Perinatal Services BC, 2014).

Survivors of sexual assault might consider an elective C-section to avoid re-traumatization from obstetric interventions during childbirth. Therefore, referrals to obstetricians should be considered for this population (Sobel et al., 2018).

Childbirth education. Programs such as mindfulness childbirth education programs might also be considered during pregnancy to facilitate well-being and self-care skills for managing anxiety and pain during pregnancy and labour. Mindfulness refers to the awareness that arises by paying attention purposely to a specific sensation. A one-group pilot-test study design demonstrates that mindfulness childbirth education programs in women with a history of sexual trauma were perceived to be helpful and significantly reduced prenatal anxiety (Price et al., 2019). Also, the program was valuable in teaching interoceptive awareness skills related to the ability to regulate distress by paying attention to body sensations and experiencing one's body as safe and trustworthy was maintained until eight weeks postpartum. This important finding suggests that women could incorporate mindfulness coping strategies in daily life (Price et al., 2019). In another quasi-experimental study, Gozde et al. (2016) show that women who attended antenatal education had greater childbirth self-efficacy, resulting in greater perceived support and control during birth, less fear, and lower PTSD symptoms following childbirth

compared to women in the control group. Interestingly, in the Hollander et al. retrospective survey (2017), the discrepancy between birth expectation and reality was typically greater among women who used education resources such as books or hypnobirthing than in women who did not use these methods for childbirth preparation.

Doula care. "A doula is a trained professional who provides continuous physical, emotional, and informational support to a family, during and shortly after childbirth to help a woman to achieve the healthiest, most satisfying experience possible" (DONA, 2022). Doulas are unregulated birth professionals. A Cochrane review in 2013 summarized 22 trials involving 15,288 women in order to assess the effects of continuous support during childbirth compared with usual care. The review concludes that continuous support during labour from a person from within a woman's social network or from a trained professional such as a doula, enhances the childbirth experience, with meaningful clinical benefits for both women and infants (Hodnett et al, 2013). Support from a doula should be considered when a patient does not have alternative continuous support available or when the patient has already experienced past trauma. In the latter case, the role of a doula providing informed trauma care would be a valuable resource to enhance a childbirth experience (Mosley & Lanning, 2020).

Valuable Community Resources

Pacific Postpartum Support Society. Pacific Postpartum Support Society is a non-profit, charitable organization, well known in BC that provides a variety of free or low-cost programs for families experiencing a difficult pregnancy, or postpartum adjustment that include distress, depression, and anxiety. The organization offers telephone counselling support by trained postpartum counsellors. Women may self-refer, however, many referrals also come from primary care providers. Therefore, FNPs may refer a patient anytime to the organization.

Furthermore, the organization offers weekly support groups across the Lower Mainland as well as an online support group for mothers who are unable to attend in-person support groups. Free on-site childcare is also offered to limit barriers to accessing support. The organization also provides support to partners. This resource should certainly be used by FNPs to promote perinatal mental health and to provide the best support to women who perceive their birth as traumatic (Pacific Post-Partum Support Society, 2022).

Doula Services Association of BC (DSA). DSA is a non-profit association promoting perinatal doula support for families living BC. The organization offers volunteer birth and postpartum doula services to BC families who are experiencing financial hardship on referral from primary care providers. The birth doula support includes a no-cost birth doula who will provide two prenatal appointments, continuous labour support, and one follow-up postpartum appointment. Regarding postpartum doula services, support includes 12 hours of no-cost support from a postpartum doula. Therefore, NPs might submit a referral form online to refer families to this program to enhance their birth experience and thereby reduce the risk of traumatic childbirth experience (DSA, 2022).

The BC Lactation Consultants Association. The BC Lactation Consultants Association is an organization of international Board-Certified Lactation Consultants (IBCLCs) that protect, support, and promote breastfeeding. A lactation consultant is a certified health professional who specializes in breastfeeding issues. The organization provides lactation education to families such as online breastfeeding/ chestfeeding classes and offer educational opportunities to health professionals. Therefore, their website is a valuable resource that FNPs can use to direct their patients experiencing breastfeeding/ chestfeeding difficulties and particularly for individuals who

experience breastfeeding/ chestfeeding difficulties following traumatic childbirth experiences (BCLCA, nd).

PTSD Coach Canada. PTSD Coach Canada is a mobile app that FNPs might suggest to their patients who suffer from PTSD symptoms. PTSD Coach Canada was developed by Veterans Affairs Canada in partnership with the Department of National Defence and the Canadian Mental Health Association to help individuals learn coping strategies to manage PTSD symptoms in their daily life. The app provides reliable and updated information on PTSD and treatments. The app also offers tools to screen and track PTSD symptoms and also there is information on crisis support. Therefore, this resource could also be valuable to suggest to patients suffering from PTSD symptoms following childbirth (Government of Canada, 2019).

Conclusion

Perinatal mental health is a global public health concern due to the potential short and long-term adverse outcomes on women, infants, and families. The Canadian Perinatal Mental Health Collaborative highlights the vital need for a national perinatal strategy to address gaps in screening and treatment of perinatal mental health. Accordingly, this literature review aimed to raise awareness of psychological traumatic childbirth in parents and the role of FNPs in identifying the predisposing and risk factors for birth trauma, key features arising during childbirth that women identify as contributing factors to a traumatic experience, and the short and long-term consequences of a traumatic childbirth. This review includes an array of screening tools and interventions available in primary care to support patients who have experienced birth trauma, in addition to provincial and national resources for parents and practitioners.

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Appendix A

CINAHL search Strategy

Table 1. CINAHL

Search ID #	Search Terms	Number of Articles	Number Chosen
S11	S3 AND S7 AND S10	302	15
S10	S8 OR S9	31,449	0
S9	TI ((childbirth* or labour* or labor* or deliver*) N3 (educat* or teach* or workshop* or training*)) OR AB ((childbirth* or labour* or labor* or deliver*) N3 (educat* or teach* or workshop* or training*))	10,968	0
S8	(MH "Childbirth Education") OR (MH "Prenatal Care") OR (MH "Childbirth Educators")	21,453	0
S7	S4 OR S5 OR S6	136,320	0
S6	TI trauma* OR AB trauma*	129,932	0
S5	(MH "Psychological Trauma")	1,773	0
S4	(MH "Trauma+")	20,736	0
S3	S1 OR S2	415,796	0
S2	TI (childbirth* or labour* or birth* or labor* or deliver*) OR AB (childbirth* or labour* or birth* or labor* or deliver*)	415,264	0
S1	(MH "Childbirth+/PF")	2,246	0

Appendix B

MEDLINE Search Strategy

Table 2. MEDLINE

Search ID#	Search Terms	Number of Articles	Number Chosen
S6	S1 AND S2 AND S5	316	16
S5	S3 OR S4	2721454	0
S4	educ*.mp. or teach*. ti,ab,kf.	1240058	0
S3	("clinical assessment tool*" or "diagnostic assessment*" or "diagnostic rating scale*" or screening* or "psychiatric status rating scale*" or survey* or questionnaire*). ti,ab,kf.	1762711	0
S2	("trauma and stressor related disorders" or adjustment disorders or stress disorders, traumatic or psychological trauma or stress disorders, post-traumatic or stress disorders, traumatic, acute).af.	46270	0
S1	(childbirth* or labour* or birth* or labor* or parturition*).ti,ab,kf.	1135362	0

Appendix C

The Wijma Delivery Expectancy/ Experience Questionnaire Version A (W-DEQ-A)

APPENDIX 1 The Wijma Delivery Expectancy/Experience Questionnaire (W–DEQ) version A

Instruction

This questionnaire is about feelings and thoughts women may have at the prospect of labour and delivery.

The answers to each question appear as a scale from 1 to 6. The outermost answers (1 and 6 respectively) correspond to the opposite extremes of a certain feeling or thought.

Please complete each question by drawing a circle around the number belonging to the answer which most closely corresponds to **how you imagine** your labour and delivery will be.

Please answer **how you imagine** your labour and delivery will be – not the way you hope it will be.

I How do you think your labour and delivery will turn out as a whole?

1	1 Extremely fantastic	2	3	4	5	6 Not at all fantastic
2	1 Extremely frightful	2	3	4	5	6 Not at all frightful

II How do you think you will feel in general during the labour and delivery?

3	1 Extremely lonely	2	3	4	5	6 Not at all lonely
4	1 Extremely strong	2	3	4	5	6 Not at all strong
5	1 Extremely confident	2	3	4	5	6 Not at all confident
6	1 Extremely afraid	2	3	4	5	6 Not at all afraid
7	1 Extremely deserted	2	3	4	5	6 Not at all deserted
8	1 Extremely weak	2	3	4	5	6 Not at all weak
9	1 Extremely safe	2	3	4	5	6 Not at all safe
10	1 Extremely independent	2	3	4	5	6 Not at all independent
11	1 Extremely desolate	2	3	4	5	6 Not at all desolate

12	1 Extremely tense	2	3	4	5	6 Not at all tense
13	1 Extremely glad	2	3	4	5	6 Not at all glad
14	1 Extremely proud	2	3	4	5	6 Not at all proud
15	1 Extremely abandoned	2	3	4	5	6 Not at all abandoned
16	1 Totally composed	2	3	4	5	6 Not at all composed
17	1 Extremely relaxed	2	3	4	5	6 Not at all relaxed
18	1 Extremely happy	2	3	4	5	6 Not at all happy

III How do you think you will feel during the labour and delivery?

19	1 Extreme panic	2	3	4	5	6 No panic at all
20	1 Extreme hopelessness	2	3	4	5	6 No hopeless-ness at all
21	1 Extreme longing for the child	2	3	4	5	6 No longing for the child at all
22	1 Extreme self-confidence	2	3	4	5	6 No self-confidence at all
23	1 Extreme trust	2	3	4	5	6 No trust at all
24	1 Extreme pain	2	3	4	5	6 No pain at all

IV What do you think will happen when labour is most intense?

25	1 I will behave extremely badly	2	3	4	5	6 I will not behave badly at all
26	1 I will dare to totally surrender control to my body	2	3	4	5	6 I will not dare to surrender control to my body at all
27	1 I will totally lose control of myself	2	3	4	5	6 I will not lose control of myself at all

V How do you imagine it will feel the very moment you deliver the baby?

28	1 Extremely funny	2	3	4	5	6 Not at all funny
29	1 Extremely natural	2	3	4	5	6 Not at all natural
30	1 Extremely self-evident	2	3	4	5	6 Not at all self-evident
31	1 Extremely dangerous	2	3	4	5	6 Not at all dangerous

VI Have you, during the last month, had fantasies about the labour and delivery, for example…

32 …fantasies that your child will die during labour/ delivery?

1 Never 2 3 4 5 6 Very often

33 …fantasies that your child will be injured during labour/delivery?

1 Never 2 3 4 5 6 Very often

Would you please now check that you have not forgotten to answer any questions.

Appendix D
The City Birth Trauma Scale (City BiTS)

During the labour, birth and immediately afterwards:	Score 1	Score 0
Q1. Did you believe you or your baby would be seriously injured?	Yes	No
Q2. Did you believe you or your baby would die?	Yes	No

The next questions ask about symptoms you may have experienced. Please indicate how often you have experienced the following symptoms in the last week:

Symptoms about the birth*	NOT AT ALL	ONCE	2 - 4 TIMES	5 OR MORE TIMES
Q3. Recurrent unwanted memories of the birth (or parts of the birth) that you can't control	0	1	2	3
Q4. Bad dreams or nightmares about the birth (or related to the birth)	0	1	2	3
Q5. Flashbacks to the birth and/or reliving the experience	0	1	2	3
Q6. Getting upset when reminded of the birth	0	1	2	3
Q7. Feeling tense or anxious when reminded of the birth	0	1	2	3
Q8. Trying to avoid thinking about the birth	0	1	2	3
Q9. Trying to avoid things that remind me of the birth (e.g. people, places, TV programs)	0	1	2	3
Q10. Not able to remember details of the birth	0	1	2	3
Q11. Blaming myself or others for what happened during the birth	0	1	2	3
Q12. Feeling strong negative emotions about the birth (e.g. fear, anger, shame)	0	1	2	3

Symptoms that began or got worse since the birth	NOT AT ALL	ONCE	2 - 4 TIMES	5 OR MORE TIMES
Q13. Feeling negative about myself or thinking something awful will happen	0	1	2	3
Q14. Lost interest in activities that were important to me	0	1	2	3
Q15. Feeling detached from other people	0	1	2	3
Q16. Not able to feel positive emotions (e.g. happy, excited)	0	1	2	3
Q17. Feeling irritable or aggressive	0	1	2	3
Q18. Feeling self-destructive or acting recklessly	0	1	2	3
Q19. Feeling tense and on edge	0	1	2	3
Q20. Feeling jumpy or easily startled	0	1	2	3
Q21. Problems concentrating	0	1	2	3
Q22. Not sleeping well because of things that are not due to the baby's sleep pattern	0	1	2	3
Q23. Feeling detached or as if you are in a dream	0	1	2	3
Q24. Feeling things are distorted or not real	0	1	2	3

If you have any of these symptoms:

Q25. When did these symptoms start?	
Before the birth	0
In the first 6 months after birth	1
More than 6 months after birth	2
Not applicable (I have no symptoms)	

Q26. How long have these symptoms lasted?	
Less than 1 month	0
1 to 3 months	1
3 months or more	2
Not applicable (I have no symptoms)	

Q27. Do these symptoms cause you a lot of distress?	Yes 2	No 0	Sometimes 1
Q28. Do they prevent you doing things you usually do (e.g. socialising, daily activities)?	Yes 2	No 0	Sometimes 1
Q29. Could any of these symptoms be due to medication, alcohol, drugs, or physical illness?	Yes 2	No 0	Maybe 1

Scoring information

The questionnaire can be used as a measure of PTSD symptoms or diagnostic criteria as follows:

PTSD symptoms

Symptom Subscales

- Re-experiencing symptoms: Q3 + Q4 + Q5 + Q6 + Q7
- Avoidance symptoms: Q8 + Q9
- Negative cognitions and mood: Q10 + Q11 + Q12 + Q13 + Q14 + Q15 + Q16
- Hyperarousal: Q17 + Q18 + Q19 + Q20 + Q21 + Q22

Total PTSD symptoms

- Total score from Q3 to Q22 inclusive. Total range 0 - 60

Dissociative symptoms

- Q23 + Q24

Please note these are not symptoms of PTSD but are for diagnostic purposes or if you are interested in dissociation during birth as a separate phenomenon.

Appendix E

The Impact of Event Scale-Revised (IES-R)

IMPACT OF EVENTS SCALE-Revised (IES-R)

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to _____ _____(event) that occurred on _____(date). How much have you been distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it	0	1	2	3	4
2. I had trouble staying asleep	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6. I thought about it when I didn't mean to	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8. I stayed away from reminders of it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on-guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

Total IES-R Score:_____

INT: 1, 2, 3, 6, 9, 14, 16, 20
AVD: 5, 7, 8, 11, 12, 13, 17, 22
HYP: 4, 10, 15, 18, 19, 21

Appendix F

The Trauma History Questionnaire (THQ)

Crime-Related Events		Circle one		*If you circled yes, please indicate*	
				Number of times	Approximate age(s)
1	Has anyone ever tried to take something directly from you by using force or the threat of force, such as a stick-up or mugging?	No	Yes		
2	Has anyone ever attempted to rob you or actually robbed you (i.e., stolen your personal belongings)?	No	Yes		
3	Has anyone ever attempted to or succeeded in breaking into your home when you were not there?	No	Yes		
4	Has anyone ever attempted to or succeed in breaking into your home while you were there?	No	Yes		
General Disaster and Trauma		Circle one		*If you circled yes, please indicate*	
				Number of times	Approximate age(s)
5	Have you ever had a serious accident at work, in a car, or somewhere else? (If yes, please specify below) _____	No	Yes		
6	Have you ever experienced a natural disaster such as a tornado, hurricane, flood or major earthquake, etc., where you felt you or your loved ones were in danger of death or injury? (If yes, please specify below) _____	No	Yes		

7	Have you ever experienced a "man-made" disaster such as a train crash, building collapse, bank robbery, fire, etc., where you felt you or your loved ones were in danger of death or injury? (**If yes**, please specify below) _____	No	Yes		
8	Have you ever been exposed to dangerous chemicals or radioactivity that might threaten your health?	No	Yes		
9	Have you ever been in any other situation in which you were seriously injured? (**If yes**, please specify below) _____	No	Yes		
10	Have you ever been in any other situation in which you feared you might be killed or seriously injured? (**If yes**, please specify below) _____	No	Yes		
11	Have you ever seen someone seriously injured or killed? (**If yes**, please specify who below) _____	No	Yes		
12	Have you ever seen dead bodies (other than at a funeral) or had to handle dead bodies for any reason? (**If yes**, please specify below) _____	No	Yes		
13	Have you ever had a close friend or family member murdered, or killed by a drunk driver? (**If yes**, please specify relationship [e.g., mother, grandson, etc.] below) _____	No	Yes		
14	Have you ever had a spouse, romantic partner, or child die? (**If yes**, please specify relationship below) _____	No	Yes		
15	Have you ever had a serious or life-threatening illness? (**If yes**, please specify below) _____	No	Yes		
16	Have you ever received news of a serious injury, life-threatening illness, or unexpected death of someone close to you? (**If yes**, please indicate below) _____	No	Yes		

17	Have you ever had to engage in combat while in military service in an official or unofficial war zone? (**If yes**, please indicate where below) _____	No	Yes		
Physical and Sexual Experiences		**Circle one**		***If you circled yes, please indicate***	
				Repeated?	**Approximate age(s) and frequency**
18	Has anyone ever made you have intercourse or oral or anal sex against your will? (**If yes**, please indicate nature of relationship with person [e.g., stranger, friend, relative, parent, sibling] below) _____	No	Yes		
19	Has anyone ever touched private parts of your body, or made you touch theirs, under force or threat? (**If yes**, please indicate nature of relationship with person [e.g., stranger, friend, relative, parent, sibling] below) _____	No	Yes		
20	Other than incidents mentioned in Questions 18 and 19, have there been any other situations in which another person tried to force you to have an unwanted sexual contact?	No	Yes		
21	Has anyone, including family members or friends, ever attacked you with a gun, knife, or some other weapon?	No	Yes		
22	Has anyone, including family members or friends, ever attacked you **without** a weapon and seriously injured you?	No	Yes		
23	Has anyone in your family ever beaten, spanked, or pushed you hard enough to cause injury?	No	Yes		
24	Have you experienced any other extraordinarily stressful situation or event that is not covered above? (**If yes**, please specify below) _____	No	Yes		

Appendix G

The Perinatal Anxiety Screening Scale (PASS)

PERINATAL ANXIETY SCREENING SCALE (PASS)

☐ ANTENATAL Weeks pregnant ( ) ☐ POSTNATAL Baby's age ( ) DATE: _____

OVER THE PAST MONTH, *How often* have you experienced the following? Please tick the response that most closely describes your experience for *every* question.

	Not at all	Some times	Often	Almost Always
1. Worry about the baby/pregnancy	0 ○	1 ○	2 ○	3 ○
2. Fear that harm will come to the baby	0 ○	1 ○	2 ○	3 ○
3. A sense of dread that something bad is going to happen	0 ○	1 ○	2 ○	3 ○
4. Worry about many things	0 ○	1 ○	2 ○	3 ○
5. Worry about the future	0 ○	1 ○	2 ○	3 ○
6. Feeling overwhelmed	0 ○	1 ○	2 ○	3 ○
7. Really strong fears about things, eg needles, blood, birth, pain, etc	0 ○	1 ○	2 ○	3 ○
8. Sudden rushes of extreme fear or discomfort	0 ○	1 ○	2 ○	3 ○
9. Repetitive thoughts that are difficult to stop or control	0 ○	1 ○	2 ○	3 ○
10. Difficulty sleeping even when I have the chance to sleep	0 ○	1 ○	2 ○	3 ○
11. Having to do things in a certain way or order	0 ○	1 ○	2 ○	3 ○
12. Wanting things to be perfect	0 ○	1 ○	2 ○	3 ○
12. Needing to be in control of things	0 ○	1 ○	2 ○	3 ○
14. Difficulty stopping checking or doing things over and over	0 ○	1 ○	2 ○	3 ○
15. Feeling jumpy or easily startled	0 ○	1 ○	2 ○	3 ○
16. Concerns about repeated thoughts	0 ○	1 ○	2 ○	3 ○
17. Being 'on guard' or needing to watch out for things	0 ○	1 ○	2 ○	3 ○
18. Upset about repeated memories, dreams or nightmares	0 ○	1 ○	2 ○	3 ○
	Not at all	Some times	Often	Almost Always

	Not at all	Some times	Often	Almost Always
19. Worry that I will embarrass myself in front of others	0	1	2	3
20. Fear that others will judge me negatively	0	1	2	3
21. Feeling really uneasy in crowds	0	1	2	3
22. Avoiding social activities because I might be nervous	0	1	2	3
23. Avoiding things which concern me	0	1	2	3
24. Feeling detached like you're watching yourself in a movie	0	1	2	3
25. Losing track of time and can't remember what happened	0	1	2	3
26. Difficulty adjusting to recent changes	0	1	2	3
27. Anxiety getting in the way of being able to do things	0	1	2	3
28. Racing thoughts making it hard to concentrate	0	1	2	3
29. Fear of losing control	0	1	2	3
30. Feeling panicky	0	1	2	3
31. Feeling agitated	0	1	2	3
	Not at all	Some times	Often	Almost Always
Global Score					

Appendix H

The Edinburgh Postnatal Depression Scale (EPDS)

Edinburgh Perinatal/Postnatal Depression Scale (EPDS)

For use between **28–32 weeks** in **all** pregnancies and **6–8 weeks** postpartum

Name: _____ Date: _____ Gestation in Weeks: _____

As you are having a baby, we would like to know how you are feeling. Please mark "X" in the box next to the answer which comes closest to how you have felt in the **past 7 days**—not just how you feel today.

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   - 0 ☐ As much as I always could
   - 1 ☐ Not quite so much now
   - 2 ☐ Definitely not so much now
   - 3 ☐ Not at all

2. I have looked forward with enjoyment to things
   - 0 ☐ As much as I ever did
   - 1 ☐ Rather less than I used to
   - 2 ☐ Definitely less than I used to
   - 3 ☐ Hardly at all

3. I have blamed myself unnecessarily when things went wrong
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, some of the time
   - 1 ☐ Not very often
   - 0 ☐ No, never

4. I have been anxious or worried for no good reason
   - 0 ☐ No, not at all
   - 1 ☐ Hardly ever
   - 2 ☐ Yes, sometimes
   - 3 ☐ Yes, very often

5. I have felt scared or panicky for no very good reason
   - 3 ☐ Yes, quite a lot
   - 2 ☐ Yes, sometimes
   - 1 ☐ No, not much
   - 0 ☐ No, not at all

6. Things have been getting on top of me
   - 3 ☐ Yes, most of the time I haven't been able to cope
   - 2 ☐ Yes, sometimes I haven't been coping as well as usual
   - 1 ☐ No, most of the time I have coped quite well
   - 0 ☐ No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, sometimes
   - 1 ☐ Not very often
   - 0 ☐ No, not at all

8. I have felt sad or miserable
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, quite often
   - 1 ☐ Not very often
   - 0 ☐ No, not at all

9. I have been so unhappy that I have been crying
   - 3 ☐ Yes, most of the time
   - 2 ☐ Yes, quite often
   - 1 ☐ Only occasionally
   - 0 ☐ No, never

10. The thought of harming myself has occurred to me
    - 3 ☐ Yes, quite often
    - 2 ☐ Sometimes
    - 1 ☐ Hardly ever
    - 0 ☐ Never

Total Score ☐

Appendix I

The Mothers Autonomy in Decision Making (MADM) scale

MOTHERS AUTONOMY IN DECISION MAKING: THE MADM SCALE

Please tell us about your discussions with your doctor or midwife about your options for care (for example: prenatal testing, starting your labour, medications, where to give birth, newborn care, whether to have a cesarean, etc.)

My answers describe my conversations or experiences with a:

- ☐ Family doctor
- ☐ Obstetrician/OB-GYN doctor
- ☐ Midwife
- ☐ Not applicable, did not have a doctor or midwife

Please describe your experiences with decision making during your pregnancy, labour and/or birth. (select one option for each)

	Completely Disagree	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree	Completely Agree
My doctor or midwife asked me how involved in decision making I wanted to be.	1	2	3	4	5	6
My doctor or midwife told me that there are different options for my maternity care.	1	2	3	4	5	6
My doctor or midwife explained the advantages/ disadvantages of the maternity care options.	1	2	3	4	5	6
My doctor or midwife helped me understand all the information.	1	2	3	4	5	6
I was given enough time to thoroughly consider the different care options.	1	2	3	4	5	6
I was able to choose what I considered to be the best care options.	1	2	3	4	5	6
My doctor or midwife respected my choices.	1	2	3	4	5	6
	SUM OF ALL CIRCLED ITEMS = TOTAL SCORE:					

The range of scores is 7-42, with higher score indicating more opportunities to take an active role and lead decisions.

KEY

Level of Autonomy

(by quartiles)

Total Score	*Indication of Respect*
7 - 15	Very Low Patient Autonomy
16 - 24	Low Patient Autonomy
25 - 33	Moderate Patient Autonomy
34 - 42	High Patient Autonomy

Appendix J

Mothers On Respect index (MOR)

MOR: MOTHERS ON RESPECT INDEX

Please tell us about your discussions with your doctor or midwife about your options for care (for example: prenatal testing, starting your labour, medications, where to give birth, newborn care, whether to have a cesarean, etc.)

My answers describe my conversations or experiences with a:

- ☐ Family doctor
- ☐ Obstetrician/OB-GYN doctor
- ☐ Midwife
- ☐ Not applicable, did not have a doctor or midwife.

A: Overall while making decisions about my pregnancy or birth care: (select or circle one answer for each statement)

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I felt comfortable asking questions	1	2	3	4	5	6
I felt comfortable declining care that was offered	1	2	3	4	5	6
I felt comfortable accepting the options for care that my doctor or midwife recommended	1	2	3	4	5	6
I felt pushed into accepting the options my doctor or midwife suggested	6	5	4	3	2	1
I chose the care options that I received	1	2	3	4	5	6
My personal preferences were respected	1	2	3	4	5	6
My cultural preferences were respected	1	2	3	4	5	6
	SECTION A TOTAL SCORE:					

B: During my pregnancy I felt that I was treated poorly by my doctor or midwife because of: (select or circle one answer for each statement)

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
My race, ethnicity, cultural background or language*	6	5	4	3	2	1
My sexual orientation and / or gender identity*	6	5	4	3	2	1
My type of health insurance or lack of insurance*	6	5	4	3	2	1
A difference of opinion with my caregivers about the right care for myself or my baby*	6	5	4	3	2	1
ADD ALL SCORES IN SECTION B:	SECTION B TOTAL SCORE:					

C: During my pregnancy I held back from asking questions or discussing my concerns because: (select or circle one answer for each statement)

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
My doctor or midwife seemed rushed*	6	5	4	3	2	1
I wanted maternity care that differed from what my doctor or midwife recommended*	6	5	4	3	2	1
I thought my doctor or midwife might think I was being difficult*	6	5	4	3	2	1
ADD ALL SCORES IN SECTION C:	SECTION C TOTAL SCORE:					

Scoring Table	
Enter total score section A	
Enter total score section B	
Enter total score section C	
A + B + C = TOTAL SCORE	

The range of scores is 14-84, with higher score indicating more respectful care.

KEY **Level of Respect Experienced** **(by quartiles)**	
Total Score	***Indication of Respect***
14 - 31	Very Low Respect
32 – 49	Low Respect
50 – 66	Moderate Respect
67 – 84	High Respect

Appendix K

Mistreatment Index

Mistreatment Index

Did you experience any of the following problems or attitudes in your care during pregnancy or birth? (Please select all applicable options)

- ☐ Your private or personal information was shared without your consent
- ☐ Your physical privacy was violated, for example being uncovered or having people in the delivery room without your consent
- ☐ A healthcare provider shouted at or scolded you
- ☐ Healthcare providers withheld treatment or forced you to accept treatment that you did not want
- ☐ Healthcare providers threatened you in any other way
- ☐ Healthcare providers ignored you, refused your request for help or failed to respond to requests for help in a reasonable amount of time
- ☐ You experienced physical abuse, such as aggressive physical contact, inappropriate sexual conduct, a refusal to provide anesthesia for an episiotomy, etc.

- ☐ None of the above

Appendix L

PROMOTING PERINATAL HEALTHCARE BY RAISING AWARENESS OF THE MULTIDIMENSIONAL IMPACTS OF BIRTH TRAUMA: RECOMMENDATIONS FOR FAMILY NURSE PRACTITIONERS

Anaïs Merat-Fournier, RN, MN-NP Candidate ; Suzanne Hetzel Campbell, PhD, RN, IBCLC, CCSNE; Jennifer Krist, DNP, MN, NP (F)
University of British Columbia

BACKGROUND

- One-third of women giving birth every year in Canada perceive they have experienced psychological birth trauma.
- While health researchers have focused on postnatal depression (PND) and postnatal psychosis, there is a growing recognition of other perinatal mental health conditions such as Post-Traumatic Stress Disorder (PTSD) and Post-Traumatic Stress (PTS) following traumatic childbirth experiences.

According to the Canadian Perinatal Mental Health Collaborative (CPMHC, 2021):

- 95.8% of Canadian health care providers believe that perinatal mental health services in Canada are insufficiently resourced.
- 87% of health care practitioners do not have mandated screening programs for perinatal illness.

Primary care providers such as Family Nurse Practitioners (FNPs) play a vital role in screening the population at risk of perceiving their childbirth as traumatic, as well as identifying and providing early interventions to women with childbirth trauma in order to minimize the potential short and long-term consequences.

PURPOSE OF THE LITERATURE REVIEW

- Raising awareness of birth trauma among primary care providers, especially nurse practitioners (NPs), through education such as identification of the predisposing conditions and risk factors for birth trauma, key features arising during childbirth that women identify as contributing factors for a traumatic experience, and its potential short and long-term health consequences.
- Identifying the screening tools and interventions available in primary care to support patients who have experienced birth trauma.

RESEARCH QUESTION

What education is available for NPs and what screening tools and interventions are accessible to them in primary care to enable them to recognize and support birthing parents who have experienced a traumatic childbirth?

SEARCH STRATEGY

- The literature search was conducted using MEDLINE and CINAHL databases.
- Concept blocks from the PICO questions were built using Mesh terms and subject headings (MH), and keywords (refer to tables 1 and 2).
- Inclusion criteria were applied.
- Duplicate studies, those focused on peripartum depression or postpartum depression were excluded.
- A study conducted in Turkish and one published in 2003 were included due to the excellent insight they brought to the literature review.
- A Cochrane review was also included to shed light on evidence regarding doula support that was also relevant to this study.
- Finally, 3 peer-reviewed research articles conducted from the University of British Columbia were selected outside the CINAHL and MEDLINE databases.

Table 1. CINAHL

Search ID #	Search Terms	Number of Articles	Number Chosen
S11	S3 AND S7 AND S10	302	14
S10	S8 OR S9	31,449	0
S9	TI (childbirth* or labour* or labor* or deliver*) N3 (educat* or teach* or workshop* or training*)) OR AB ((childbirth* or labour* or labor* or deliver*) N3 (educat* or teach* or workshop* or training*))	10,968	0
S8	(MH "Childbirth Education") OR (MH "Prenatal Care") OR (MH "Childbirth Educators")	31,463	0
S7	S4 OR S5 OR S6	136,330	0
S6	TI trauma* OR AB trauma*	129,932	0
S5	(MH "Psychological Trauma")	1,773	0
S4	(MH "Trauma+")	20,726	0
S3	S1 OR S2	421,796	0
S2	TI (childbirth* or labour* or birth* or labor* or deliver*) OR AB (childbirth* or labour* or birth* or labor* or deliver*)	415,264	0
S1	(MH "Childbirth+/PT")	2,246	0

Table 2. MEDLINE

Search ID#	Search Terms	Number of Articles	Number Chosen
S6	S1 AND S2 AND S5	316	14
S5	S3 OR S4	2711454	0
S4	educ* or teach*. ti,ab,kf.	1240098	0
S3	("clinical assessment tool*" or "diagnostic assessment" or "diagnostic rating scale*" or screening* or "psychiatric status rating scale*" or survey* or questionnaire*). ti,ab,kf.	1762711	0
S2	("trauma and stressor related disorders" or adjustment disorders or stress disorders, traumatic or psychological trauma or stress disorders, post-traumatic or stress disorders, traumatic, acute).af.	46370	0
S1	(childbirth* or labour* or birth* or labor* or parturition*).ti,ab,kf.	1135362	0

RESULTS

A total 32 articles were selected for this literature review including:

- 14 American studies, 4 Canadian studies, 4 Australian studies, 5 British studies, 2 Dutch studies, 1 Irish study, 1 French study, and 1 Turkish study.
- 17 quantitative studies, 7 qualitative studies, and 1 mixed-methods study design as primary source research.
- 4 literature reviews, 1 Cochrane review, and 1 meta-analysis as secondary source research.

DISCUSSION

Screening for Risk and Precipitating Factors of Birth Trauma in Primary Care

Risk factors for a traumatic childbirth experience include:

- Pre-existing mental health conditions such as depression and anxiety
- First pregnancy
- History of sexual trauma
- Fear of birth or labour pain
- Low perceived perinatal social support
- Covid-19 pandemic
- History of traumatic vaginal or instrumental deliveries (Alder et al., 2011; Berman et al., 2021; Boorman et al., 2014; Fairbrother et al., 2018; Goutaudier et al, 2019; Mayopoulos et al., 2021).

Screening instruments such as **W-DEQ-A questionnaire, the CFQ, the THQ, the PASS, City BiTS and the EPDS** (refer to table 3) could be used during the perinatal period to screen women for anxiety, depression, CB-PTSD, fear of childbirth, and previous trauma.

Precipitating factors occurring during childbirth that could trigger birth trauma include:

- Feeling a lack or loss of control during childbirth
- Poor interaction with care providers
- Obstetric violence
- Emergency obstetric interventions
- Women perception of extreme distress or threat during birth (Harris & Ayers, 2012; Beck et al., 2018; Beck, 2015; Hollander et al., 2017).

Tools such as **the MADM scale, MOR index, and Mistreatment index** (refer to table 1) could be used as needed by FNPs to identify the level of decision-making that a woman perceived, the quality of patient-provider interactions, and potential mistreatment that occurred during childbirth.

Table 3. Screening Instruments

Title of Instrument	Author/Date	Number of Items	Outcome
The Wijma Delivery Expectancy/ Experience Questionnaire Version A (W-DEQ-A)	Wijma et al. (1998)	33-Items	Measures a construct of fear related to childbirth during pregnancy by asking the birthing parent about the expectancies before childbirth.
The Childbirth Fear Questionnaire (CFQ) • This tool is still under development and is not yet available for use.	Fairbrother et al. (2017)	40-Items	Measures the fear of childbirth whereby multiple domains of fear related to childbirth are assessed with individual subscales.
The City Birth Trauma Scale (City BiTS)	Ayers et al. (2016)	29-Items	Measures birth-related PTSD according to DSM-5 criteria and two additional items from DSM-IV, namely "criterion A2" and "emotional numbing."
The Impact of Event Scale-Revised (IES-R)	Weiss & Marmar (1997)	22-Items	Measures subjective distress caused by traumatic events based on 14 of the 17 DSM-IV symptoms of PTSD.
The Trauma History Questionnaire (THQ)	Green (1993)	24-Items	Examines events with potentially traumatic experiences such as crime, general disaster, and sexual and physical assault.
The Perinatal Anxiety Screening Scale (PASS)	Somerville et al. (2014)	31-Items	Screens for anxiety in antenatal and postpartum women. While the PASS is not a diagnostic tool, it can be used as an indication of the nature of the anxiety symptoms being experienced.
The Edinburgh Postnatal Depression Scale (EPDS)	Cox et al. (1987)	10-Items	Screens for depression during the perinatal period. It has a sensitivity above 59% and a specificity above 49%.
The Mothers Autonomy in Decision Making (MADM) scale	Vedam et al. (2016)	7-Items	Assesses women's autonomy and their role in decision-making during maternity care.
Mothers On Respect Index (MOR)	Vedam et al. (2017)	14-Items	Measures women's experiences of respect and self-determination when interacting with their maternity care providers. This scale assesses the nature of respectful patient-provider interactions and their impact on a person's domain of comfort, behaviour, and perceptions of discrimination.
Mistreatment Index	Vedam et al. (2019)	8-Items	Identifies any experiences of mistreatment during childbirth.

Impacts of Birth Trauma

The impacts of traumatic birth include:

- Childbirth-related Posttraumatic Stress Disorder (CB-PTSD), also referred to as Postpartum Posttraumatic Stress Disorder (P-PTSD)
- Post-traumatic stress (PTS)
- Breastfeeding
- Subsequent pregnancy and birth decisions
- Post traumatic growth (APA, 2013; Beck et al., 2018; Beck, 2015; Holopainen et al., 2020)

Nurse Practitioner Interventions in Primary Care

- **Debriefing** after childbirth. Debriefing is an interview during which women can discuss their childbirth experience. Debriefing might guide clinicians to order the best course of interventions addressing women's needs.
- **Cognitive behavioural therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR).** FNPs might consider referring women to trained health care professionals for CBT or EMDR. An audit evaluation demonstrated that CBT and EMDR are effective treatments for post-natal women experiencing PTSD following childbirth, with a significant decrease in PTSD symptoms following interventions (Williamson et al., 2021).
- **Referrals.** Psychiatric and reproductive mental health referrals should be considered by FNPs before, during pregnancy or in the post-partum period to assist women with a chronic mental disorder with treatment planning and monitoring of the patient's mental health status (Perinatal Services BC, 2014).
- **Childbirth Education.** A one-group pilot-test study design demonstrates that **mindfulness childbirth education programs in women with a history of sexual trauma were perceived to be helpful and significantly reduced prenatal anxiety** (Price et al., 2019). Gozde et al. (2016) show that women who attended antenatal education had **greater childbirth self-efficacy**, resulting in greater perceived support and control during birth, less fear, and lower PTSD symptoms following childbirth compared to women in the control group.
- **Continuous support during labour.** Continuous support from a person from within a woman's social network or from a trained professional such as a doula during labour, enhances the childbirth experience, with meaningful clinical benefits for both women and infants (Hodnett et al, 2012).

COMMUNITY RESOURCES

Table 3. Community Resources

Resource	Purpose
Pacific Postpartum Support Society	Non-profit, charitable organization in BC that provides a variety of free or low-cost programs for families experiencing a difficult pregnancy, or postpartum adjustment that include distress, depression, and anxiety.
Doula Services Association of BC (DSA)	Non-profit organization offering volunteer birth and postpartum doula services to BC families who are experiencing financial hardship on referral from primary care providers. FNPs might submit a referral form online to refer families to this program.
The BC Lactation Consultants Association	The organization provides lactation education to families such as online breastfeeding/ chestfeeding classes and offer educational opportunities to health professionals. FNPs can offer this resource to their patients experiencing breastfeeding/ chestfeeding difficulties following traumatic childbirth experiences.
PTSD Coach Canada	PTSD Coach Canada is a mobile app that FNPs might suggest to their patients who suffer from PTSD symptoms. The app provides reliable and updated information on PTSD and treatments. The app also offers tools to screen and track PTSD symptoms and also there is information on crisis support. This resource could also be valuable to suggest to patients suffering from PTSD symptoms following childbirth.

CONCLUSION

- Perinatal mental health is a global public health concern due to the potential short and long-term adverse outcomes on women, infants, and families.
- This literature review aimed to raise awareness of psychological traumatic childbirth in parents and the role of FNPs in identifying the predisposing and risk factors for birth trauma, key features arising during childbirth that women identify as contributing factors to a traumatic experience, and the short and long-term consequences of a traumatic childbirth.
- This review includes an array of screening tools and interventions available in primary care to support patients who have experienced birth trauma, in addition to provincial and national resources for parents and practitioners.

REFERENCES

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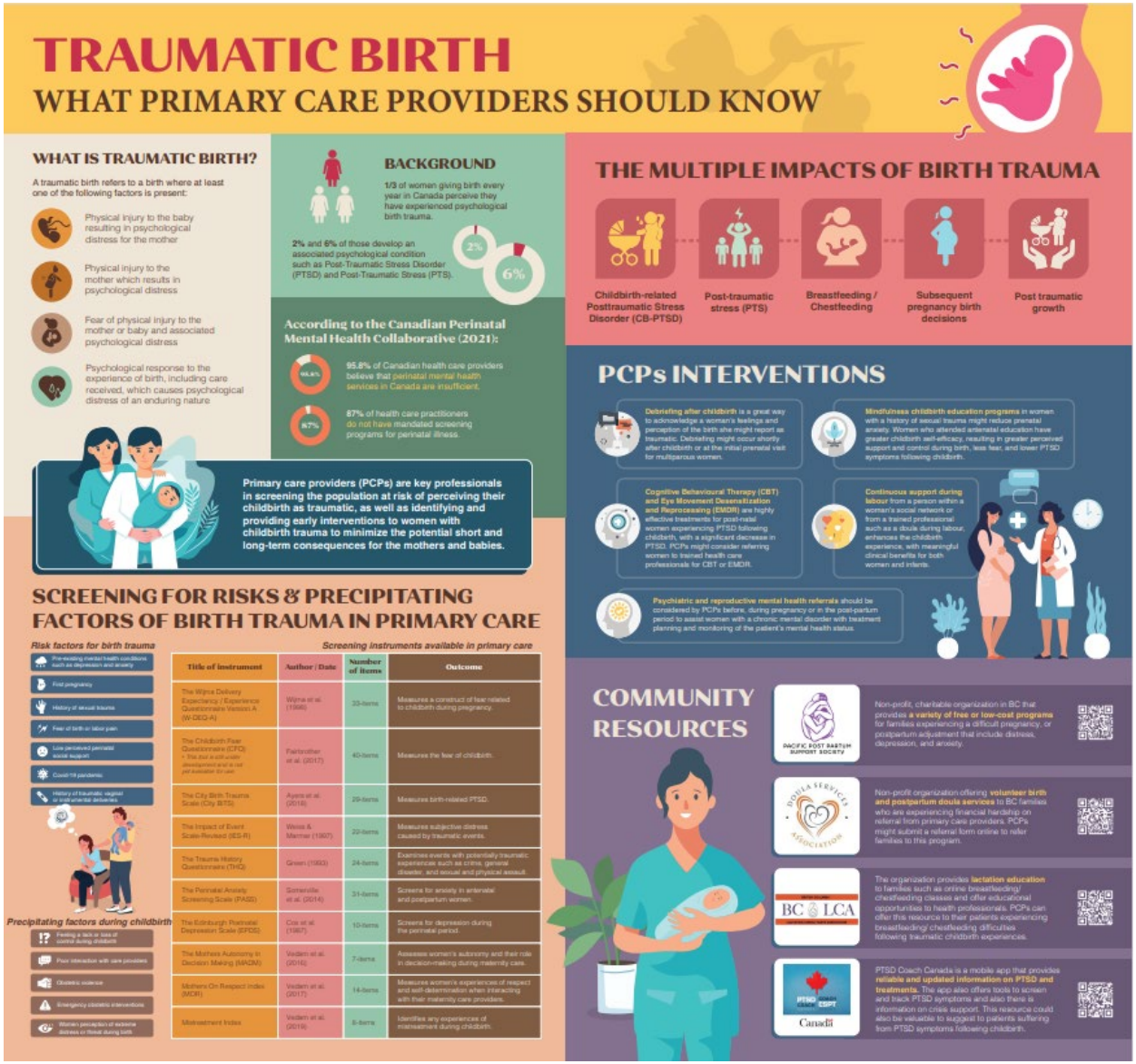
Appendix M


TRAUMATIC BIRTH
WHAT PRIMARY CARE PROVIDERS SHOULD KNOW
WHAT IS TRAUMATIC BIRTH?
A traumatic birth refers to a birth where at least one of the following factors is present:
Physical injury to the baby resulting in psychological distress for the mother
Physical injury to the mother which results in psychological distress
Fear of physical injury to the mother or baby and associated psychological distress
Psychological response to the experience of birth, including care received, which causes psychological distress of an enduring nature
BACKGROUND
1/3 of women giving birth every year in Canada perceive they have experienced psychological birth trauma.
2% and 6% of those develop an associated psychological condition such as Post-Traumatic Stress Disorder (PTSD) and Post-Traumatic Stress (PTS).
2%
6%
According to the Canadian Perinatal Mental Health Collaborative (2021):
95.8% of Canadian health care providers believe that perinatal mental health services in Canada are insufficient.
87% of health care practitioners do not have mandated screening programs for perinatal illness.
87%
Primary care providers (PCPs) are key professionals in screening the population at risk of perceiving their childbirth as traumatic, as well as identifying and providing early interventions to women with childbirth trauma to minimize the potential short and long-term consequences for the mothers and babies.
THE MULTIPLE IMPACTS OF BIRTH TRAUMA
Childbirth-related Posttraumatic Stress Disorder (CB-PTSD)
Post-traumatic stress (PTS)
Breastfeeding / Chestfeeding
Subsequent pregnancy birth decisions
Post traumatic growth
PCPs INTERVENTIONS
Debriefing after childbirth is a great way to acknowledge a woman's feelings and perception of the birth she might report as traumatic. Debriefing might occur shortly after childbirth or at the initial prenatal visit for multiparous women.
Mindfulness childbirth education programs in women with a history of sexual trauma might reduce prenatal anxiety. Women who attended antenatal education have greater childbirth self-efficacy, resulting in greater perceived support and control during birth, less fear, and lower PTSD symptoms following childbirth.
Cognitive Behavioural Therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR) are highly effective treatments for post-natal women experiencing PTSD following childbirth, with a significant decrease in PTSD. PCPs might consider referring women to trained health care professionals for CBT or EMDR.
Continuous support during labour from a person within a woman's social network or from a trained professional such as a doula during labour, enhances the childbirth experience, with meaningful clinical benefits for both women and infants.
Psychiatric and reproductive mental health referrals should be considered by PCPs before, during pregnancy or in the post-partum period to assist women with a chronic mental disorder with treatment planning and monitoring of the patient's mental health status.
SCREENING FOR RISKS & PRECIPITATING FACTORS OF BIRTH TRAUMA IN PRIMARY CARE
Risk factors for birth trauma
Pre-existing mental health conditions such as depression and anxiety
First pregnancy
History of sexual trauma
Fear of birth or labor pain
Low perceived perinatal social support
Covid-19 pandemic
History of traumatic vaginal or instrumental deliveries
Precipitating factors during childbirth
Feeling a lack or loss of control during childbirth
Poor interaction with care providers
Obstetric violence
Emergency obstetric interventions
Women perception of extreme distress or threat during birth
Screening instruments available in primary care
Title of instrument
Author / Date
Number of items
Outcome
The Wijma Delivery Expectancy / Experience Questionnaire Version A (W-DEQ-A)
Wijma et al. (1998)
33-items
Measures a construct of fear related to childbirth during pregnancy.
The Childbirth Fear Questionnaire (CFQ)
• This tool is still under development and is not yet available for use.
Fairbrother et al. (2017)
40-items
Measures the fear of childbirth.
The City Birth Trauma Scale (City BiTS)
Ayers et al. (2018)
29-items
Measures birth-related PTSD.
The Impact of Event Scale-Revised (IES-R)
Weiss & Marmar (1997)
22-items
Measures subjective distress caused by traumatic events.
The Trauma History Questionnaire (THQ)
Green (1993)
24-items
Examines events with potentially traumatic experiences such as crime, general disaster, and sexual and physical assault.
The Perinatal Anxiety Screening Scale (PASS)
Somerville et al. (2014)
31-items
Screens for anxiety in antenatal and postpartum women.
The Edinburgh Postnatal Depression Scale (EPDS)
Cox et al. (1987)
10-items
Screens for depression during the perinatal period.
The Mothers Autonomy in Decision Making (MADM)
Vedam et al. (2018)
7-items
Assesses women's autonomy and their role in decision-making during maternity care.
Mothers On Respect Index (MOR)
Vedam et al. (2017)
14-items
Measures women's experiences of respect and self-determination when interacting with their maternity care providers.
Mistreatment Index
Vedam et al. (2019)
8-items
Identifies any experiences of mistreatment during childbirth.
COMMUNITY RESOURCES
PACIFIC POST PARTUM SUPPORT SOCIETY
Non-profit, charitable organization in BC that provides a variety of free or low-cost programs for families experiencing a difficult pregnancy, or postpartum adjustment that include distress, depression, and anxiety.
DOULA SERVICES ASSOCIATION
Non-profit organization offering volunteer birth and postpartum doula services to BC families who are experiencing financial hardship on referral from primary care providers. PCPs might submit a referral form online to refer families to this program.
BC LCA
The organization provides lactation education to families such as online breastfeeding/ chestfeeding classes and offer educational opportunities to health professionals. PCPs can offer this resource to their patients experiencing breastfeeding/ chestfeeding difficulties following traumatic childbirth experiences.
PTSD Coach Canada
Canadi
PTSD Coach Canada is a mobile app that provides reliable and updated information on PTSD and treatments. The app also offers tools to screen and track PTSD symptoms and also there is information on crisis support. This resource could also be valuable to suggest to patients suffering from PTSD symptoms following childbirth.