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Psychosocial Impacts of Traumatic Child Birth on Women: A Systematic Review

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Although, a significant proportion of births are uneventful, a proportion of them cause significant distress to mother, midwife and/or child. Traumatic childbirth is often extremely distress for mothers and has been associated with an increased risk of maternal mental health disorders including post-traumatic stress disorder following childbirth. This study explores the factors influencing traumatic births in addition to its impact on both mothers and midwives. It also aims to identify preventive and therapeutic measures to prevent and mitigate traumatic births. This study uses a systematic literature review approach to answer the questions of this research. The SALSA framework and the PRISMA flowchart were used to identify and appraise potential studies. A total of 21 studies were included in the review following implementation of the inclusion and exclusion criteria of this study. This study found that healthcare-related factors, patient-related factors, and difficult deliveries are factors that affect the traumatic childbirths. The impact of traumatic childbirth on mothers and

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midwives were found to be far-reaching and highly detrimental to the healthcare delivery at large. This study found PTSD specific therapies such as EMDR to be useful in the treatment of PTSD following childbirth while strategies such as the magical hour were found to be preventative as well as therapeutic in traumatic births.

Keywords: Traumatic; childbirth; psychological; PTSD.

1. INTRODUCTION

The birth of child is an intense and highly emotional period for many women leading to a deeply personalised and individual perception of the experience. For a huge proportion of women, the birth experience is positive. There are about 140 million new births globally and majority of these birth experiences are described as positive and uneventful (Rodríguez-Almagro et al., 2019). Occasionally, the birthing experience may be adversely eventful and even considered traumatic. Childbirth constitutes a critical period of transition to women, the family unit and healthcare professionals with far-reaching consequences. Women often undergo many physical, physiological and psychological changes that may influence the maternal and child wellbeing during and after delivery (Hollander et al., 2017). The WHO describes a positive birth experience as one that meets or exceeds maternal socio-cultural and psychological expectations conducted in a clinically safe and psychologically acceptable environment surrounded by birth companion(s) and a kind healthcare team resulting in the birth of a healthy child (World Health Organization, 2018). This implies that any deviation in environmental, support or clinician-related factors can result in physical and/or psychological trauma for the woman. Traumatic childbirth may include physical and psychological components. Physical birth trauma is often obvious and objective while psychological birth trauma is often a subjective experience that may not be readily perceptible and may be easily overlooked.

Conversely, traumatic childbirths describe events involving injuries, serious threats to life and even death of either mother or child or both parties. The psychological aspect of traumatic childbirth focuses on the experience of women during the birth process (Leinweber et al., 2022). Authors have reported subjective and objective perspectives to trauma relating to childbirth. The subjective perceptions are considered to be influenced by many psychological and social factors. Psychological birth trauma may present

as symptoms including flashbacks, anger, nightmares, avoidance of birthing reminders, feeling stuck in the past, anxiety and avoidance that arise following the birthing experience (Byrne et al., 2017). The birthing experience can be perceived to exist on a spectrum ranging from positive birth experience to traumatic birth experiences. Post-Traumatic Stress Disorder (PTSD) is recognised as the most severe sequelae of psychological traumatic birth experience on the spectrum (Beck, Watson and Gable, 2018). According to the International Classification of Diseases (ICD-10), PTSD is defined as a protracted response to a stressful event or situation which is exceptionally threatening.

Traumatic childbirths are important due to its impact on maternal mental health. The WHO defines maternal mental health as a “state of wellbeing in which a mother recognises her own abilities, can cope with the normal activities of life, can work productively and fruitfully and is able to make a contribution to her society” (Engle, 2009). Poor maternal mental health has been reported to have significant effects on maternal morbidity following childbirth. Additionally, poor maternal mental health has been associated with poorer outcomes in both mother and child leading to long term disadvantages (Reed, Sharman and Inglis, 2017). Furthermore, traumatic childbirth poses an increased risk for postpartum depression, psychosis, and anxiety (Slade, Murphy and Hayden, 2022).

Although the major focus of traumatic childbirth is the woman and the family unit, studies have highlighted that traumatic childbirths have certain effects on healthcare practitioners especially midwives and obstetricians. They are often considered second victims after the first victims; women involved in childbirth. This view offers considerations to healthcare providers (HCPs) who also witness childbirth trauma and may be involved in causing unintentional trauma which may subsequently lead to feelings of guilt, anger, frustration, and loss of esteem in the HCPs. A study evaluating the effects of traumatic

childbirth on midwives and obstetricians reported that this group reported sleep, depressive, anxiety disorders in addition to burnout (Schröder et al., 2016). In many countries, midwives are responsible for majority of deliveries as many deliveries will be normal and may not require specialist interventions (Khosravi et al., 2022). Therefore, midwives play a strong role in the birth process from developing a birth plan to offering post-partum care. There is often a strong relationship between the midwife, the mother, and the birth process (Schröder et al., 2016). Additionally, the professional standpoint of midwifery is embedded in compassion and care. These expose the midwife acutely to emotions that result from traumatic births, causing significant distress and even secondary traumatic stress disorder (Schröder et al., 2016). Other psychological effects reported include PTSD, vicarious traumatisation and compassion fatigue (Hadjigeorgiou et al., 2023).

Some studies have reported that majority of women who have experienced birth trauma attributed the traumatic experience primarily to communication issues during delivery, lack of control over childbirth experience and the need for more emotional support than provided (Rodríguez-Almagro et al., 2019). Specifically relating to healthcare providers, women reported that prioritising healthcare provider's agenda, lies and threats, disregard for personal knowledge and even violation have been reported as the leading causes of birth trauma (Waller et al., 2022). Therefore, this study seeks to explore the factors associated with traumatic childbirth and its psychological and social impacts on women and healthcare practitioners especially midwives.

Although many childbirth experiences are positive, studies have shown that up to 30% of childbirth may be described as traumatic by women (Schwab, Marth and Bergant, 2012). Furthermore, studies have also found the prevalence of PTSD is around 3-6% at 6 weeks postpartum (Olde et al., 2006). In recent years, this incidence has been found to be increasing (Duval et al., 2022). Additionally, several of the women subsequently develop severe and enduring symptoms including those of PTSD. The WHO reports that about 10% and 13% of pregnant and women who have just given birth experience mental health disorders (WHO, 2019). Furthermore, there is a global prevalence of trauma birth experience involving high, middle and low-income countries, although its prevalence is reportedly higher in LMICs

according to the WHO. Maternal mental health has not gained significant recognition over the years despite its recognised effect on maternal and child health. Poor maternal mental health has been associated with increased prevalence of impaired maternal-infant relationships, learning disabilities and psychiatric diseases in children (Atif, Lovell and Rahman, 2015). Studies have also shown that traumatic childbirths and PTSD following childbirth cause significant social impacts in terms of marital problems, childbearing issues, loss of man hours, work loss which leads to an increase in welfare dependency and affects the economy of a country (Schobinger, Stuijzand and Horsch, 2020). Furthermore, burnout, secondary traumatic stress disorder and PTSD in healthcare workers impacts the mental health of HCPs and the quality of care provided (Kerkman et al., 2019). A study among midwives found a high proportion of respondents who were afraid of births following traumatic childbirths and feeling of being complicit (Toohill et al., 2019).

Traumatic childbirth has been associated with increased risk of post-partum depression, psychosis and anxiety. These diseases are associated with significant disability and morbidity among women (Furuta, Sandall and Bick, 2012). It has also been associated with increased risk of postpartum suicide among populations (Waller et al., 2022). Traumatic childbirth has been reported to have significant impact on the family unit influencing both spousal relationships and mother-child relationships (Atif, Lovell and Rahman, 2015). Furthermore, traumatic childbirth can lead to avoidance of hospital settings for subsequent deliveries, leading to increasing unsupervised deliveries and their attendant complications (Shaban et al., 2013).

2. MATERIALS AND METHODS

2.1 Research Approach

This study uses a deductive approach because it focuses on testing already existing theories about traumatic child births and its sequelae in women and midwives. Therefore, this study collects observation and objective analytic data to disprove or confirm already existing theories.

2.2 Research Setting

The geographical setting of this dissertation is global. It explores all appropriate and relevant

studies from any country globally (World Health Organization, 2018). The rationale for this is that traumatic childbirth and its psychosocial impact on women and midwives is a global problem that affects women, the family unit, health care providers, country health and global health.

2.3 Research Methods

The study uses a systematic review approach to meet the research aims and objectives. The systematic literature review is a research method that collects and analyses data from primary research and other data sources to solve scientific problems (Bearman et al., 2012). Systematic literature reviews are a type of secondary research that must follow a thorough and comprehensive process to ensure the rigour of the research process compared to other forms of literature reviews. Systematic literature reviews are central to research as they can help review, analyse and summarize primary research, which leads to the identification of patterns, trends or gaps in literature (Khan et al., 2003). This can help refine the body of literature in that selected field of study. Additionally, systematic literature reviews can provide current information about a selected subject matter in an easy and resource- efficient manner. This method was selected because the psychological impacts of traumatic childbirth represent a well-researched field. Furthermore, it is considered that a systematic literature review can help summarise the findings from current literature in (Uman, 2011) order to identify target areas for intervention to reduce the occurrence of traumatic births and increase the detection and management of the psychological sequelae.

Research methods may be descriptive or experimental. Although, experimental research is more valuable in the hierarchy of scientific methods (Bolinger et al., 2021), it is expensive, time-intensive and most importantly inappropriate for this study due to its need for secondary rather than primary data. Therefore, this study uses an analytic approach to answer the research questions. In terms of quantitative and qualitative research design, the systematic literature review is a versatile methodology that allows the analysis of both quantitative and qualitative data in the same research (Ahn and Kang, 2018). The studies included in this literature review includes both quantitative and qualitative studies. Qualitative studies in the research are mainly in the form of semi-structure interviews among

women and midwives while quantitative data was mainly in analysis of quantitative surveys.

There are majorly two types of data used in research: primary and secondary data. Primary data describes data that is collected by a researcher for specific research (Hox and Boeije, 2004). Conversely, secondary research describes data collected by other researchers or groups for other research or reasons. Secondary data is useful when there is an abundance of data on a particular phenomenon or area of research as is seen in this case. Over the past decade, there is a wealth of studies evaluating traumatic birth experience, PTSD following childbirth, STS in midwives and other related concepts. Therefore, this study uses secondary data.

2.4 Data Collection

The SALSA research protocol was used in this research. The SALSA framework describes a protocol involving search, appraisal synthesis and analysis of the data. The SALSA protocol useful to ensure methodological accuracy, reproducibility and exhaustiveness of systemic literature reviews (Grant and Booth, 2009).

2.4.1 Research source

The type of data used in this research is secondary. The data sources used in this research were completely digital. The sources explored in this research include databases and search engines containing medical and psychological articles. The databases selected for this study include PubMed, ScienceDirect and PMC articles. The selected search engines are Google Scholar, BASE and CORE. The reason for selection of the abovementioned database is the high quality and volume of journals and publications available on the selected databases.

2.4.2 Search

Articles used in this study were sourced from reputable databases and search engines. The search engines that were used in this study include Google Scholar, CORE and Base. The databases that were used in this study included PubMed, ScienceDirect, PsychInfo and PMC. These search engines and databases were selected because they are widely identified to be good sources high-quality scientific papers which were required to ensure the quality of the

undertaken study. The period of the search extended between 10-23rd June, 2023.

The search words applied included

- Traumatic Childbirth
- PTSD
- STS
- Following childbirth
- Women
- Midwives

The Boolean operator 'and' was applied to the search.

2.4.3 Appraisal

The process of the appraisal used in this study was designed to be rigorous to ensure that only relevant and appropriate studies were included in the review. The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) flowchart was used to summarise the appraisal of the articles used in the research to allow a clear and thorough process (Page et al., 2021). The PRISMA framework is widely adopted in medical research (Liberati et al., 2009). The first stage of the appraisal involved reading only the titles of studies derived from the search. This helped eliminate studies with titles that did not match the requirements of the study. Next, duplicate studies were excluded. This step was then followed by a perusal of the abstract of studies; studies that were considered to unsuitable or irrelevant to the research were removed. The final step of the appraisal process involved reading the whole research text to ensure that the research was suitable. The studies were appraised using the inclusion and exclusion criteria highlighted below.

The inclusion and exclusion criteria were set to ensure that the scientific work reviewed in this paper are of high quality, lacking ambiguity and are highly relevant to the study. Articles that are not in English language were excluded to prevent

the loss of meaning or misrepresentation of findings that may occur while translating the research work. Grey literature was excluded due to lack of peer review and rigour. Studies published before 2015 were excluded from the study to ensure that the review is up to date and reflective of current trends. Finally, secondary surveys were excluded to prevent duplicity and repetition.

2.4.4 Synthesis

This stage focused on the extraction and synthesis of the information obtained after reading the selected articles twice. Data was extracted from the selected studies using a research matrix outlining the title of the research, year of publication, geographical location, methodology of the primary study and a summary of the findings of the study.

2.5 Analysis

The selected studies were then analysed using content analysis. The thematic approach was used in the analysis to highlight the themes identified in the study. The themes used in this research were then matched with the research questions to fully answer the research questions and achieve the aims and objectives of this research

2.6 Ethical Considerations

This study uses secondary data which ensures the anonymity of the participants of the study (Orb, Eisenhauer and Wynaden, 2001). The study poses little to no risk to any group of people in the society. The overall goal of this paper is to contribute to the existing literature on traumatic childbirth and influence current practices positively. Finally, this study ensures justice by ensuring that data collected is used fairly and only for the purpose of research (Smith, 2003).

Table 1. The inclusion and exclusion criteria

Inclusion Criteria	Excusion Criteria
Studies written and/or officially translated in English	Studies written in other language without English versions.
Peer-reviewed journal articles	Grey literature.
Primary surveys	Systematic reviews and other forms of secondary survey.
Studies Published between 2015 and 2023	Studies published before 2015.

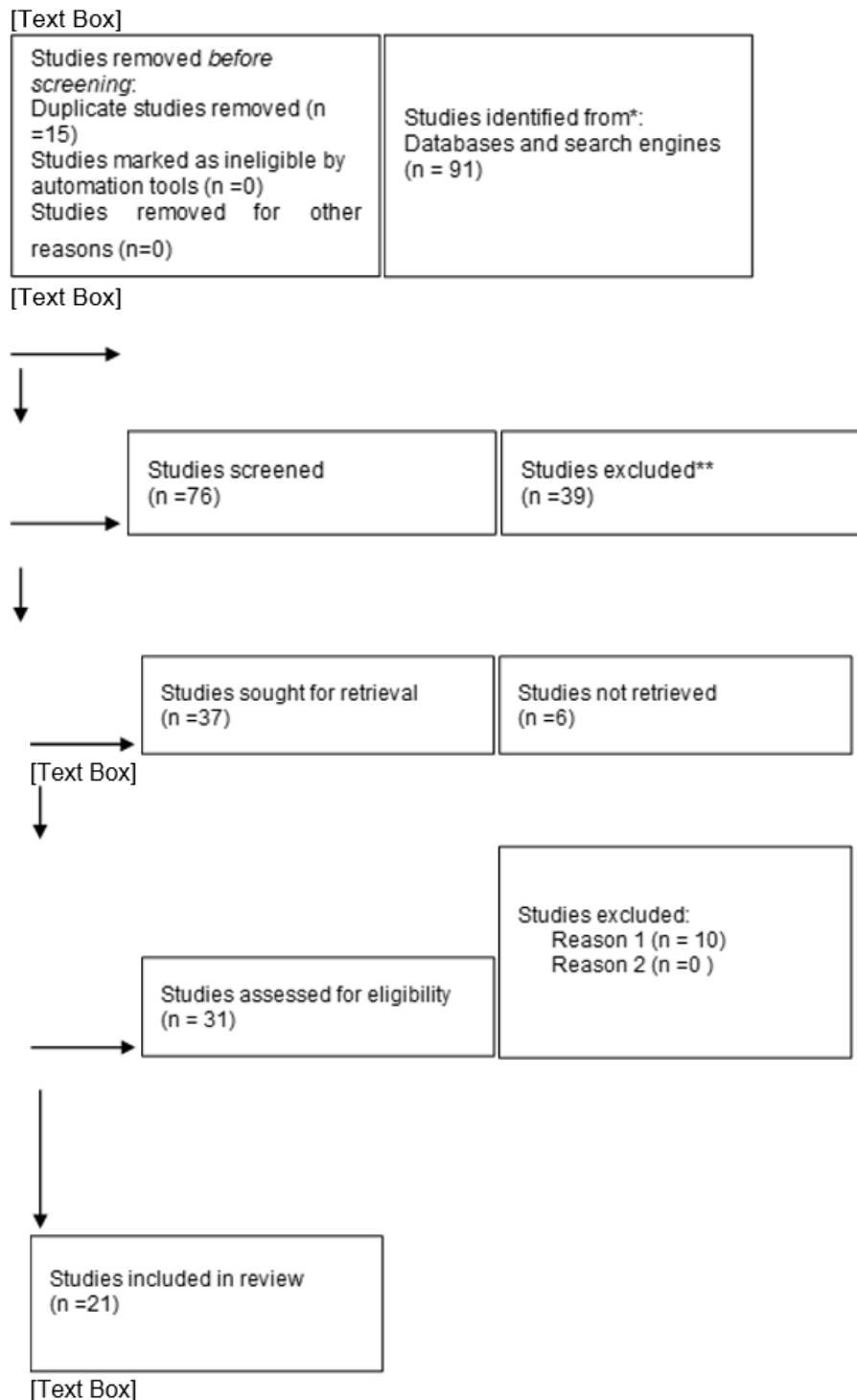


Fig. 1. PRISMA flowchart showing the process of selection of articles

*Reason 1= articles containing secondary data

**Reason 2= pre-print material

3. RESULTS AND DISCUSSION

21 studies were reviewed in this study; Nearly all (67%) of studies included in this study used the

quantitative methodology approach while only about 22% were qualitative and Mixed methodology constituted only 11% of the study were mixed studies.

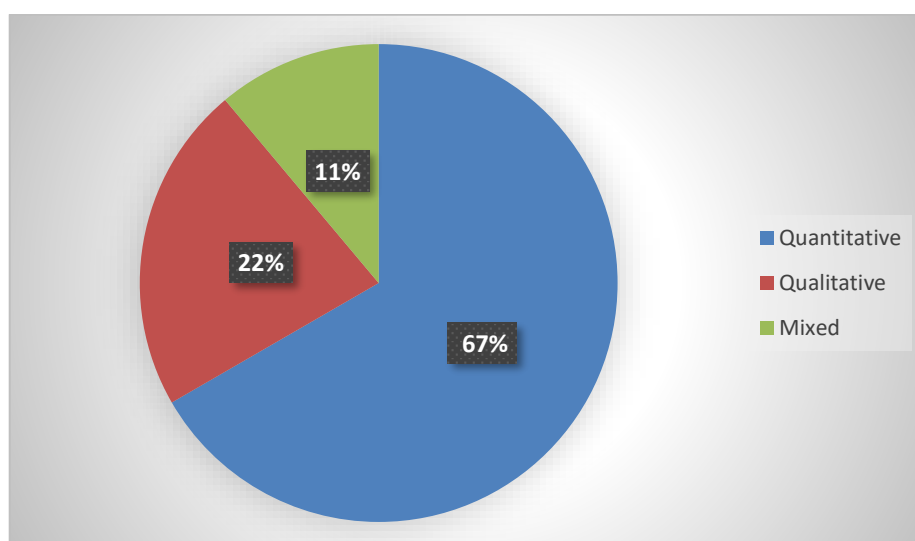


Fig. 2. Methodology approach

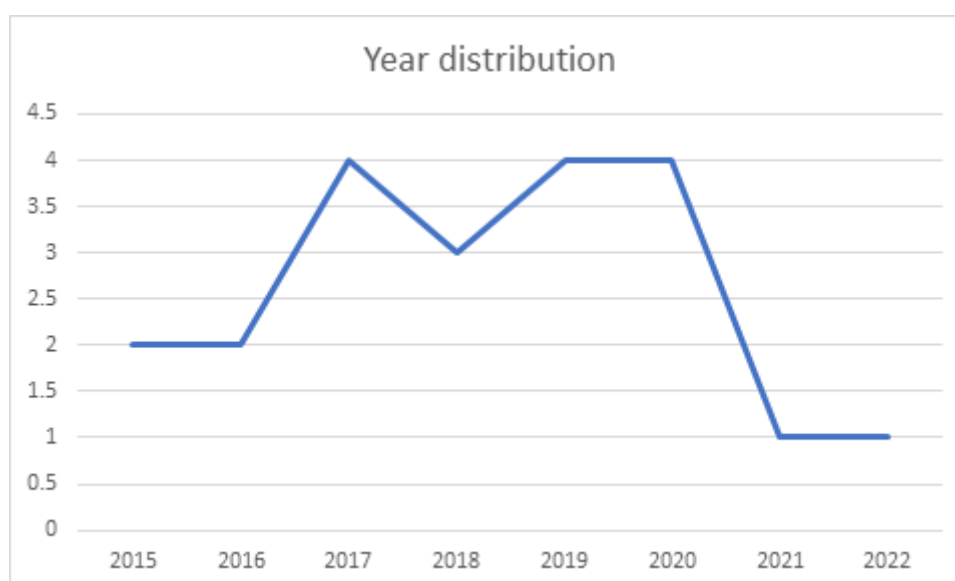


Fig. 3. Graph showing year distribution

All the studies included in the literature review spanned over a period of 2015-2022. The highest frequency of the studies was observed in 2017, 2019 and 2020. This probably reflects a time when mental health advocacy was highest.

Over half of the studies included in this research were conducted in Europe followed by Asia while North America and Australia had the least frequency. Africa and South America did not have any included studies. This may be due to paucity of data in those regions or may be related to the inclusion and exclusion of the study.

This study also observed that nearly half of the studies reviewed in this research were directed toward the factors influencing childbirths while others were focused on the impact of traumatic births on women and Midwives and potential prevention and coping strategies.

3.1 Factors Influencing Traumatic Births and PTSD in Women

In a study conducted among 14 registered midwives, factors identified included were classified into lack of social support, difficult deliveries, excruciating pain and poor outcomes.

Social related factors included low family support, post-partum neglect, lack of support from the medical staff, lack of communication, lack of privacy, poor service and insufficient attention from midwives (Huang et al., 2019). Difficult deliveries included futile second stage and long first stage of about. Poor outcome for both baby and mother were important identified factors. Plan out of proportion with expectations were also related to birth trauma. Psychological factors such as poor coping, threat of harm to mother and/or child and poor social support have also been identified (van Heumen et al., 2018; Koster et al., 2020).

In another study, a significant proportion of respondents (67%) reported that care provider actions and interactions were the commonest factors affecting traumatic childbirth. This included feeling of violation, disregarding mothers wants, lies by care providers and disregarding embodied knowledge (Reed, Sharman and Inglis, 2017).

In a study evaluating, the role factors associated with the development of post-traumatic stress symptoms and at 4-6 weeks and 6months after birth found that antenatal anxiety, fear of childbirth, satisfaction with care providers, social support and concurrent symptoms of depression were associated with the development of PTSD in the 4-6 weeks following childbirth (Dikmen-Yildiz, Ayers and Phillips, 2017). At 6 months post-partum, in addition to the findings at 4-6 weeks, additional trauma and need for psychological support, concurrent features of anxiety and poor social support were identified as predictors of PTSD following childbirth.

In a study among mothers, resilience, recovery, chronic and delayed PTSD were identified as outcomes of traumatic childbirth. Chronic and delayed PTSD was associated with poor satisfaction with healthcare workers and further trauma while resilience was associated with high levels of satisfaction with healthcare providers, social support and reduced need for psychological support (Peeler et al., 2018). Another study identified that the delivery of VLBW preterm infants and the presence of post-natal stress symptoms was strongly correlated with the persistence of PTSD at 5 years postpartum (Barthel et al., 2020). Another qualitative study conducted among women in the UK found that women were more likely to develop PTSD in the presence of preexisting medical condition, poor relationship with the midwife and anticipation for an ideal labour (Dikmen-Yildiz, Ayers and Phillips, 2018).

In a Norwegian study, negative life factors such as physical abuse (0.09) and sexual abuse (0.12), insomnia (0.19), PTSD symptoms (0.60) and neuroticism (0.13) were negatively associated with PTSD at 2 years postpartum. Conversely, social support and conscientiousness was associated with reduced risk of PTSD 2 years postpartum (Garthus-Niegel et al., 2015). Another study evaluating the factors associated with traumatic childbirth and the development of PTSD includes urethral catheterization during child birth, poor psychological adaption, fear of birth postpartum and high outcome and low efficacy expectancy (Gökçe İsbil et al., 2016).

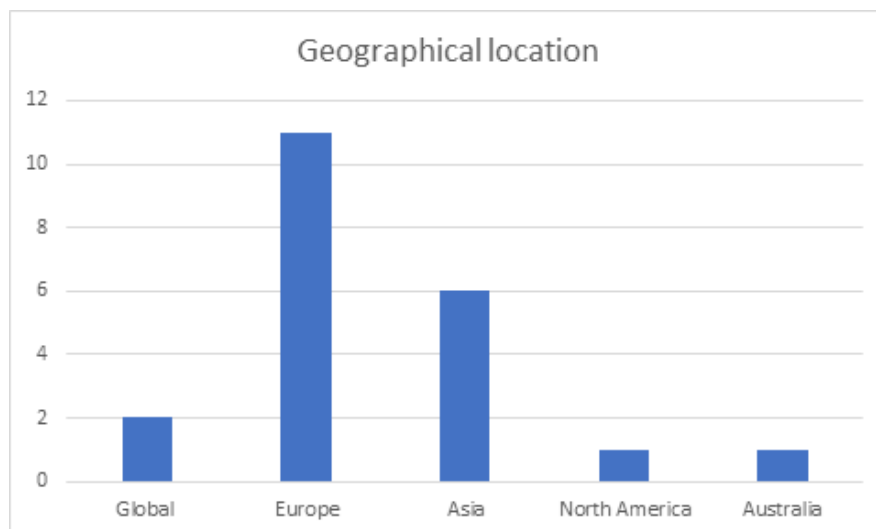


Fig. 4. Graph showing geographical location

3.2 Impact of PTSD: Mothers

One of the effects of traumatic childbirth was identified to be prenatal and postnatal attachment to the child. There was a negative correlation between prenatal and postnatal childbirth and traumatic childbirth. Furthermore, the prenatal attachment directly and indirectly affects postnatal attachment through childbirth as a traumatic event ($B = 0.09$, $p < 0.05$) (Smorti et al., 2020). Ertan et al (2016) reports that a disruption of the mother-child bond as one of the major impacts of traumatic childbirths on the mother in addition to higher risk of peripartum depression.

3.3 Impact of PTSD: Midwives

In a study conducted among Chinese midwives, about 60% of respondents reported a moderate risk of burnout following traumatic childbirths. Conversely, about 62% of respondents reported a low risk of STS. Satisfaction with Midwifery, reduced working hours and fewer numbers of traumatic births, strong social support, work recognition and extroverted personality were associated with reduced compassion fatigue (Qu et al., 2022). Another study evaluating the impact of shoulder dystocia on midwives reported that midwives developed a fear of births after the experience and became more cautious and guarded. Being criticised by other healthcare workers and negative outcomes was reported to affect midwives negatively (Minooee et al., 2021). Midwives reported that the most traumatic births included foetal demise, shoulder dystocia and the need for neonatal resuscitation (Beck, Logiudice and Gable, 2015). One study found that one of the impacts of STS is loss of faith in the midwifery profession. Seniority is reportedly associated with STS and burnout among midwives (Cohen et al., 2017).

3.4 Coping with Traumatic childbirth

In a study among midwives and obstetricians, it was reported that 95% of respondent would rather get support from colleagues than report to their superior colleague and only 44% of the respondents was aware of how to secure emotional support at work (Schröder et al., 2019). Eye-movement Desensitisation and Reprocessing was found to be more effective (79% vs 40%) than current treatment protocols involving psychotherapy only in an intervention study conducted among women who had experience traumatic childbirth at 6 weeks

postpartum (Chiorino et al., 2019). In another study, the magical hour procedure was found to be superior to routine skin-skin contact currently practiced in terms of prevention and treatment of PTSD (Abdollahpour, Khosravi and Bolbolhaghghi, 2016).

3.5 Prevention of PTSD

Another study conducted in Netherlands found preventive factors to include efficient communication, listening to the patient and emotional and physical support and about 30% of persons in the study reported that nothing could have prevented the traumatic birth (Hollander et al., 2017). Another study found that about 85% of respondents would like further training to prevent perineal trauma during the second stage of labour (Carroll et al., 2020).

3.6 Discussion

Traumatic childbirth constitutes a significant problem globally and lead to the development of mental health problems in women birthing mothers and midwives alike. According to Beck (2015), traumatic childbirths have ripple effects on women and may have far-reaching consequences affecting the child and family unit. This study aimed to identify the actors that predispose women to traumatic childbirth and PTSD following childbirth, identify the impact of traumatic childbirths on mothers and midwives as well as to identify potential preventative and coping mechanisms to alleviate the burden of traumatic childbirth and its disastrous consequences.

One of the most important findings of this study is the proportion of studies examining factors predisposing and perpetuating traumatic births and PTSD following childbirth in women with relative paucity of data regarding the impact of traumatic childbirth on women in addition to preventative and coping with traumatic births. These studies are particularly important to fully understand the concept and reduce its impact on women and midwives in the study.

Similar to findings by other studies, the factors influencing the development of traumatic births are multifactorial and can emanate from patient, healthcare, social as well as psychological factors. Factors such as idealising the birth experience which leads to a different image than expectations can lead to the subjective experience of trauma. Studies evaluating the role

of unmet birth expectations and trauma have found that the perception of the birth experience is strongly influenced by the expectations of the mother (Anderson and Akinmade, 2022). It has been reported that unmet birth expectations are associated with birth satisfaction and the development of PTSD following childbirth (Webb et al., 2021). Another identified patient-related factor identified in this study may be the presence of abnormal reactions of the mother to interactions during the birth process leading to a distorted experience. Furthermore, maternal coping mechanism was also reported in this study to be one of the factors predisposing mothers to birth trauma (Meng et al., 2011). This is strongly supported by evidence from existing studies that argue that good coping mechanisms influence the perception of events and protective of mental health disorders. Furthermore, they are also considered to be useful in living with mental health diseases. (Taylor and Stanton, 2007) The presence of pre-existing illness was also found to be associated with traumatic births. According to Simpson and Caitling (2016), women with a prior history of mental health diseases were more likely to experience birth trauma compared to others. This was also supported by other Sun et al (2022) who found that the existence of antecedent illness was associated with a higher risk of birth trauma. The preexisting fear of childbirth is one of the findings of this research. Both primary and secondary tokophobia are associated with a higher risk of birth trauma and PTSD following childbirth (Anderson and Gill, 2014).

Healthcare-related factors were reported in nearly all the studies relating to traumatic childbirth in this study. The factors range from poor communication of findings to dismissing the mother's input. This finding is corroborated by findings from many studies that reported that healthcare providers often do not provide enough support (Huang et al, 2019), communicate the findings and progress of the labour process inadequately, fail to involve patient in the decision-making process and control the entire birth process making the mother feel powerless. This is significant as a close, cordial and bidirectional relationship needs to be formed between mother and midwife to facilitate the birth process. Furthermore, from the onset of labour to delivery of the child, the patient and midwife will rely on each other's cooperation to ensure successful delivery of the child.

Social factors, also, constitutes a significant factor influences birth trauma. The presence of

good social support has been reported to impact the development and duration of birth trauma and its related mental health consequences. Conversely, studies including those included in this review have reported that poor social and familial support is associated with increased risk of birth trauma and PTSD even up to 2 years following child birth (Garthus-Niegel et al., 2015). Social support has been identified as a protective factor in the aetiopathogenesis of mental health diseases and corroborated the findings of this study (Harandi, Taghinasab and Nayeri, 2017).

3.7 Impact of Birth Trauma on Mothers and Midwives

The impacts of birth trauma on mothers found in this study were less than expected and this may be because there may be fewer studies evaluating the impact of birth trauma on women, the family unit and society. This research majorly found disturbance to the maternal-child relationship. The maternal-child relationship is important for appropriate child growth and development; therefore the disruption of this bond may affect the child's physical as well as psychological and cognitive growth. Another impact identified by Ertan et al (2016) is that traumatic births have been related to increased risk to the postpartum mental illness such as postpartum depression. The occurrence of maternal mental illnesses has great impact on the family unit and society at large. This necessitates that more attention is paid to maternal health.

There was a similar negative finding on the impact of traumatic births on midwives leading to increased risk of PTSD, STS, burnout and high attrition. One of the major factors perpetuating the harmful effects of traumatic births on midwives is the potential for criticism by colleagues which is associated with increased stress and reduced job satisfaction. Similar to the factors that predispose to traumatic births, this study found that shoulder dystocia, foetal demise and need for resuscitation pose significant stress to midwives leading to increased burnout and disenchantment with the nursing profession.

3.8 Coping Mechanism and Preventive Measures

Prevention of traumatic births is necessary where possible. This study found training to be one of the important preventative strategies. Training has been identified as a pillar of efficient

healthcare delivery (Rowe et al., 2021). To constantly deliver superior healthcare, studies have identified the need for regular training for employees. This is necessary to ensure that up-to-date services are provided by healthcare staff (Hivert et al., 2017). Further, increase attentiveness and communication has been reported by author to reduce the occurrence of birth trauma among women. Furthermore, allowing increased autonomy and involvement of the mother in the birth process reducing the feeling of loss of control or dismissal of her feelings.

The EMDR which uses a structured 8-stage psychotherapy to help alleviate distress in patients suffering from PTSD. This study found that EMDR is superior to conventional psychotherapy in the treatment of PTSD following childbirth. This is supported by similar literature that report that EMDR is superior to other forms of therapy in the management of PTSD following other causes with severe arousal and intrusion symptoms (Chen et al., 2015; Khan et al., 2018).

Another important strategy identified by this research is the optimisation of the magic hour to facilitate bonding between mother and child and reduce the perception of trauma and the occurrence of post-partum mental health illnesses (Necypor and Holley, 2017). This has been found to improve maternal and foetal outcomes (Abdollahpour, Bolbolhaghghi and Khosravi, 2019).

4. CONCLUSION

Based on the findings of the study, traumatic childbirth is prevalent with significant psychosocial impacts on the mother, midwives, child, family unit and the society at large. Therefore, this study proposes some recommendations to prevent, reduce and effectively manage birth trauma. Continuous training is necessary to prevent birth trauma, therefore, healthcare facilities and midwives should continuously be trained to improve the quality of care delivered and prevent birth trauma in mothers. EMDR has been identified as a useful technique in addressing PTSD following childbirth. More studies should be conducted to ensure the efficacy of the EMDR and should be instituted early to alleviate symptoms.

Communication is extremely important in the birthing process. Constant and regular communication between the mother and her

midwife can lead to reduced perception of birth trauma. Magical hour is a strategy that has been found to improve outcomes in women and their children following birth. Therefore, implementing the magical hour can help reduce and prevent the perception of birth trauma. Shoulder dystocia and foetal demise were identified in this study as common cause of traumatic birth. Therefore, early identification and diagnosis of risk factors of these conditions can help deploy appropriate strategies and reduce traumatic births. Furthermore, clear algorithms should be provided in the case of potentially traumatic births to help mitigate the effects of trauma on the mother and midwives. Social support is crucial to pregnant and birthing women. Therefore, healthcare providers such encourage participation of the family as much as possible to help the woman feel loved and supported. Finally, the provision of early support to women who have had traumatic birth can reduce the progression to PTSD and reduce overall maternal mental disorders.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that they have no known competing financial interests or non-financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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APPENDIX

Table 2. Summary of literature review

S/N	Title	Author(S)	Year	Location	Research Objectives	Methodology
1	Maintaining factors of posttraumatic stress symptoms following childbirth: A population-based, two-year follow-up study	Garthus-Neigel et al.	2015	Norway	To identify factors that maintain PTSD following childbirth	Quantitative
2	Catastrophic thinking: Is it the legacy of traumatic births? Midwives' experiences of shoulder dystocia complicated births	Minooee et al.	2020	Australia	To explore the impact of SD, as a birth trauma, on midwives' orientation towards normal births and on their clinical practice	Qualitative
3	Compassion fatigue and compassion satisfaction among Chinese midwives working in the delivery room: A cross-sectional survey	Qu et al.	2022	China	To examine compassion fatigue and compassion satisfaction levels among Chinese midwives working in the delivery room	Quantitative
4	Women's experiences of living with postnatal PTSD	Piller et al.	2018	UK	To explore how women were affected by the memories of a birth that they perceived as traumatic.	Qualitative
5	Does Birth-Related Trauma Last? Prevalence and Risk Factors for Posttraumatic Stress in Mothers and Fathers of VLBW Preterm and Term Born Children 5 Years After Birth	Barthel et al.	2020	Germany	To examine the prevalence of parental birth-related PTSS and PTSD in a group of parents with VLBW preterm infants compared to parents of full-term infants 5 years after birth and To investigate potential associations with risk factors for parental PTSS at 5 years postpartum	Quantitative
6	The mother-child attachment bond before and after birth: The	Smorti et al.	2020	Italy	To explore the mediating role of the childbirth experience on the	Quantitative

S/N	Title	Author(S)	Year	Location	Research Objectives	Methodology
	role of maternal perception of traumatic childbirth				relationship between prenatal and postnatal attachment	
7	Longitudinal trajectories of post-traumatic stress disorder (PTSD) after birth and associated risk factors	Dikmen-Yildiz, Ayers and Phillips	2018	UK	To identify trajectories of birth-related PTSD; determine factors associated with each trajectory; and identify women more likely to develop birth-related PTSD	Quantitative
8	Factors associated with post-traumatic stress symptoms (PTSS) 4-6 weeks and 6 months after birth: A longitudinal population-based study	Dikmen-Yildiz, Ayers and Phillips	2017	Turkey	This study aimed to determine the pregnancy and postpartum factors associated with PTSS at 4-6 weeks and 6-months postpartum	Quantitative
9	Women's descriptions of childbirth trauma relating to care provider actions and interactions	Reed, Sharman and Inglis	2017	Global	To understand how interpersonal factors influence women's experience of trauma	Qualitative
10	Exploring Contributing Factors to Psychological Traumatic Childbirth from the Perspective of Midwives: A Qualitative Study	Huang et al.	2019	China	To gain understanding of which factors may contribute to psychological traumatic childbirth from the perspective of midwives	Qualitative
11	Psychosocial Predictors of Postpartum Posttraumatic Stress Disorder in Women With a Traumatic Childbirth Experience	Heumen et al.	2018	Netherlands	To analyze the predictive value of antepartum vulnerability factors, such as social support, coping, history of psychiatric disease, and fear of childbirth, and intrapartum events on the development of symptoms of postpartum posttraumatic stress disorder (PP-PTSD) in women with a traumatic childbirth experience	Quantitative
12	The effect of the magical hour	Abdollahpour,	2016	Iran	To investigate the influence of	Quantitative

S/N	Title	Author(S)	Year	Location	Research Objectives	Methodology
	on post-traumatic stress disorder (PTSD) in traumatic childbirth: a clinical trial	Khosravi and Bolbolhaghghi			the magical first hour after birth on post-traumatic stress in traumatic childbirths	
13	Traumatic childbirth experiences: practice-based implications for maternity care professionals from the woman's perspective	Koster et al.	2019	Netherlands	To explore women's traumatic childbirth experiences in order to make maternity care professionals more aware of women's intrapartum care needs.	Qualitative
14	The EMDR Recent Birth Trauma Protocol: a pilot randomised clinical trial after traumatic childbirth	Chiorino et al.	2019	Italy	To evaluate the effectiveness of brief EMDR intervention as compared to treatment-as-usual (TAU) in women with post-partum PTSD symptoms.	Quantitative
15	Post-traumatic stress disorder following childbirth	Ertan et al.	2021	Global	To investigate the risk factors for post-traumatic Stress Disorder Following childbirth	Quantitative
16	Risk factors associated with post-traumatic stress symptoms following childbirth in Turkey	Gocke et al.	2016	Turkey	To identify factors associated with symptoms of post-traumatic stress (PTS) following childbirth in women with normal, low-risk pregnancies in Nigde, Turkey.	Quantitative
17	Exposure to traumatic events at work, posttraumatic symptoms and professional quality of life among midwives	Cohen et al.	2017	Israel	To study midwives' professional quality of life and traumatic experiences	Quantitative
18	A Mixed-Methods Study of Secondary Traumatic Stress in Certified Nurse-Midwives: Shaken Belief in the Birth Process	Tatano-Beck et al.	2015	USA	To determine the prevalence and severity of STS in certified nurse-midwives (CNMs) and to explore their experiences attending traumatic births	Mixed Methodology
19	Perineal management: Midwives' confidence and	Carroll et al.	2020	Ireland	To improve midwives' experiences and expertise in the	Mixed methodology

S/N	Title	Author(S)	Year	Location	Research Objectives	Methodology
	educational needs				prevention of perineal trauma during birth.	
20	Second victims in the labor ward: Are Danish midwives and obstetricians getting the support they need?	Schroder et al.	2019	Denmark	To describe midwives' and obstetricians' experiences on the level of support from colleagues and managers in Danish labor wards following adverse events	Quantitative
21	Preventing traumatic childbirth experiences: 2192 women's perceptions and views	Hollander et al.	2017	Netherlands	To explore and quantify perceptions and experiences of women with a traumatic childbirth experience in order to identify areas for prevention and to help midwives and obstetricians improve woman-centered care	Quantitative

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