

**PSYCHOLOGICAL CONSEQUENCES OF CHILDBIRTH-RELATED TRAUMA  
AMONG POSTPARTUM MOTHERS AT THYOLO DISTRICT HOSPITAL,  
MALAWI**

**ELIZABETH AGNES MWANGALA**

**MASTER OF SCIENCE IN MENTAL HEALTH (MENTAL HEALTH NURSING)**

**UNIVERSITY OF MALAWI  
KAMUZU COLLEGE OF NURSING**

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AMONG POSTPARTUM MOTHERS AT THYOLO DISTRICT HOSPITAL,  
MALAWI**

**By**

**Elizabeth Agnes Mwangala**

**A dissertation submitted to the School of Nursing in partial fulfilment of the  
requirement for the Award of Master of Science in Mental Health (Mental Health  
Nursing)**

**November, 2024**

## **Declaration**

I, Elizabeth Agnes Mwangala declare that the thesis titled “**Psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo District Hospital, Malawi**” is my own original work, and that all the sources that I have used or quoted have been indicated and acknowledged utilising complete references and that this work has not been submitted before for any other degree at any other degree at any other institution.

ELIZABETH AGNES MWANGALA

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**Full Legal Name**



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**Signature**

5<sup>th</sup> November 2024

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**Date**

## Certificate of Approval

We hereby declare that this thesis is the student's original work and where any additional information has been used, this has been duly acknowledged. It is therefore submitted with our approval.

**Signature:** 

**Date:** 5<sup>th</sup> November 2024

Genesis Chorwe-Sungani, Ph.D (Associate Professor in Mental Health)

Main Supervisor

**Signature:** 

**Date:** 5<sup>th</sup> November 2024

Ditress Nyirongo, MSc.

Second Supervisor

## **Dedication**

To “my beloved mama” Mrs. Lucy Waya-Mwangala and my beloved father (late), Mr. Robertson Stanely Mwangala, the most wonderful gift God gave me; thank you for trusting me, I dedicate this work to you. I will always glorify the name of God because this work would not have been accomplished without His unfailing grace. God’s grace is sufficient for me.

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- Professor Genesis Chorwe-Sungani, my supervisor, thank you. You are an inspirational researcher, teacher, and supervisor. I am very grateful for your unwavering support and tireless guidance, all my requests and questions were responded to religiously throughout my research process. My gratitude to Mrs. Ditress Nyirongo, a co-supervisor, you encouraged and supported me throughout my research. To both supervisors, apart from your guidance, instruction, and encouragement in my research activities, you also took part in the evaluation and examination of my progress, performance, and navigation through the requirements of my academic program, with the goal of ensuring that I am successful. I will forever be grateful, may God reward you abundantly according to “Phillipians 4:19”;
- Thyolo District Hospital for granting me permission to conduct this study at the institution;
- Postpartum mothers, classmates and friends thank you so much, stay blessed,

God Almighty, Thank you. Just like (Psalms 8:4), the Psalmist, David, did not doubt that “God was mindful of man,” so do I share his assured confidence that God, You are mindful of me; YOU think of me and consider what I do. ***God over Everything!***

## Abstract

Childbirth-related trauma occurs during labor and delivery, could cause psychological distress and increases the risk of post-traumatic stress disorder (PTSD). Etiological factors includes methods of birth. The prevalence is unrecognized in maternity in Malawi. This study aimed to assess psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital.

A cross-sectional study of 250 randomly selected 6–12 weeks postpartum mothers. The City Birth Trauma Scale (City BiTS) determined the prevalence of childbirth-related trauma and PTSD. Data were analyzed using the IBM SPSS version 22. Pearson’s chi-square test, and binary logistic regression was used to examine factors associated with childbirth-related PTSD

Prevalence of childbirth-related PTSD was 23.2% (95% CI 17.3% – 28.7%,  $n = 58$ ). Etiological factors: “vaginal birth” [OR = 3.70 (1.77–7.75),  $p < 0.001$ ]; “complications” [OR = 8.12 (1.23–33.30),  $p = 0.02$ ]; “virtually scathed” [OR = 7.18 (1.08–47.62),  $p = 0.04$ ]; “excessively long labor” [OR = 12.84(2.84–57.99),  $p < 0.001$ ]; “feeling anxious” [OR = 5.24 (1.49–18.44),  $p = 0.01$ ]; “feeling out of control” [OR = 8.83 (2.09–37.22),  $p = 0.003$ ], protective factor “ well communicated” [OR = 0.13 (0.03–0.52),  $p = 0.004$ ].

This study confirmed the high prevalence of childbirth-related trauma and PTSD. Excessively long labor was the strongest predictor of childbirth-related PTSD.

## Table of contents

Declaration .....	i
Certificate of Approval .....	ii
Dedication .....	iii
Acknowledgements .....	iv
Abstract .....	v
Table of Contents .....	vi
List of Figures .....	xi
List of Tables .....	xii
Abbreviations and Acronyms .....	xiii
Operational definition of terms .....	xv
Chapter 1 .....	1
Introduction and Background .....	1
1.1 Introduction .....	1
1.2 Background .....	3
1.3 Statement of the problem .....	5

1.4 Significance of the study .....	6
1.5 Objectives of the study .....	8
1.5.1 Broad objective of the study.....	8
1.5.2 Specific objectives of the study .....	8
1.6 Research frameworks .....	8
1.6.1 The Diathesis-stress model of the tiology of birth-related PTSD .....	8
1.6.2 Conceptual framework of Diathesis-stress, childbirth-related trauma and PTSD and health outcomes in postpartum mothers .....	10
1.6.3 Adaptation of Diathesis-stress Model.....	13
1.6.4 Application of the model to the study .....	13
Chapter 2.....	15
Literature review .....	15
2.1 Introduction .....	15
2.2 Prevalence of childbirth-related trauma and PTSD.....	16
2.2.1 Prevalence of childbirth-related trauma .....	16
2.2.2 Prevalence of childbirth-related PTSD.....	17
2.3 Burden of childbirth-related PTSD on mother .....	18
2.4 Symptom presentation of childbirth-related PTSD.....	19
2.4.1 Symptom cluster examination of childbirth-related PTSD .....	19
2.5 Etiology of childbirth-related and PTSD symptoms .....	20
2.5.1 Prenatal risk factors and childbirth-related PTSD .....	20
2.5.2 Risk factors in labor/delivery and childbirth-related PTSD .....	22
2.5.3 Postnatal risk factors and childbirth-related PTSD .....	24

Chapter 3.....	26
Methodology.....	26
3.1 Introduction.....	26
3.2 Study design.....	27
3.3 Study setting.....	27
3.4 Study population.....	28
3.4.1 Inclusion criteria.....	28
3.4.2 Exclusion criteria.....	28
3.5 Sample size determination.....	29
3.6 Sampling technique.....	30
3.7 Data collection instrument.....	30
3.7.1 Screening instruments.....	31
3.7.2 Validity and reliability of data collection instrument.....	34
3.7.3 Translation of data collection instrument.....	34
3.7.4 Pre-testing of data collection instrument.....	35
3.8 Data collection procedure.....	36
3.9 Data management.....	38
3.10 Data analysis.....	38
3.11 Ethical considerations.....	40
3.12 Dissemination of study results.....	41
Chapter 4.....	43
Presentation of results.....	43
4.1 Introduction.....	43

4.2 Findings of the study .....	43
4.2.1 Demographic characteristics of respondents .....	43
4.2.2 Childbirth-related trauma and PTSD prevalence analysis.....	44
4.2.3 Respondents' presentation of childbirth-related PTSD symptoms.....	46
4.2.4 Impact of childbirth-related PTSD symptoms on respondents.....	48
4.2.5 Demographic characteristics associated with childbirth-related PTSD diagnosis .....	49
4.2.6 Risk factors associated with childbirth-related PTSD diagnosis.....	51
4.2.7 Etiological factors that predicted childbirth related PTSD.....	54
Chapter 5.....	58
Discussion of findings.....	58
5.1 Introduction .....	58
5.2 Discussion of study results .....	58
5.2.1 Prevalence of childbirth-related trauma and PTSD.....	58
5.2.2 Symptom presentation of childbirth-related PTSD .....	60
5.2.3 Etiological factors associated with childbirth-related PTSD.....	61
5.3 Strengths and limitations of the study .....	71
5.3.1 Strengths of the study .....	71
5.3.2 Limitations of the study .....	72
5.4 Conclusions of the study .....	73
5.5 Recommendations of the study .....	73
5.5.1 Clinical practice.....	73
5.5.2 Nursing and Midwifery education.....	74

5.5.3 Nursing research .....	74
References .....	76
Appendices .....	96
Appendix 1: Data collection tool (English version) .....	96
Appendix 2: Data collection tool (Chichewa version).....	105
Appendix 3: Support letter from head of mental health nursing department .....	115
Appendix 4: Ethics approval certificate from COMREC – KUHeS .....	116
Appendix 5: Clearance from Thyolo District Health Office .....	117
Appendix 6: Information sheet (English version).....	118
Appendix 7: Information sheet (Chichewa version).....	120
Appendix 8: Consent form (English version) .....	122
Appendix 9: Consent form (Chichewa version) .....	123
Appendix 10: Parent information sheet (English version).....	124
Appendix 11: Parent information sheet (Chichewa version).....	126
Appendix 12: Parent consent form (English version).....	128
Appendix 13: Parent consent form (Chichewa version).....	129
Appendix 14: Minor assent information sheet (English version) .....	130
Appendix 15: Minor assent information sheet (Chichewa version) .....	132
Appendix 16: Minor assent form (English version) .....	134
Appendix 17: Minor assent form (Chichewa version).....	135

## **List of Figures**

Figure 1: The diathesis-stress model of the etiology of birth-related post-traumatic stress disorder (PTSD) .....	9
Figure 2: Diagrammatic application of the diathesis-stress model of the etiology of birth-related post-traumatic stress disorder (PTSD) to the study .....	14

## List of Tables

Table 1: Demographic characteristics of respondents ( <i>n</i> -250) .....	44
Table 2: Respondents' mean scores on prevalence of childbirth-related trauma and PTSD .....	46
Table 3: Respondents' mean scores on PTSD symptom presentation.....	48
Table 4: Onset and impact of PTSD in women who reported symptoms.....	49
Table 5: Demographic characteristics associated with childbirth-related PTSD ( <i>n</i> -250) .....	50
Table 6: Risk factors linked to childbirth-related PTSD diagnosis .....	52
Table 7: Risk factors (general health) linked to childbirth-related PTSD diagnosis .....	53
Table 8: Etiological factors (demographic characteristics) of childbirth-related PTSD .....	55
Table 9: Etiological factors (general and birth experience) of childbirth-related PTSD .....	56

## Abbreviations and Acronyms

AOR	Adjusted Odds Ratio
BSS	Birth Satisfaction Scale
CB-PTSD	Childbirth-related PTSD
CI	Confidence Interval
CINAHL	Cumulative Index of Nursing and Allied Health Literature
City BiTS	City Birth Trauma Scale
COR	Crude Odds Ratio
COMREC	College of Medicine Research and Ethics Committee
CPD	Continuous Professional Development
C/S	Caesarean section
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders version 4
DSM-V	Diagnostic and Statistical Manual of Mental Disorders version 5
HICs	High income countries
HIMS	Health Information Management System
ICD 10	International Classification of Diseases 10th revision
IBM	International Business Machines
INTERSECT	International Survey of Childbirth-Related Trauma
KCN	Kamuzu College of Nursing
KUHeS	Kamuzu University of Health Sciences
LMICs	Low- and middle-income countries
MOH	Ministry of Health
NSO	National Statistical Office

OR	Odds Ratio
PpM	Postpartum Mother
PTSD	Post-Traumatic Stress Disorder
Pp-PTSD	Postpartum Post-Traumatic Stress Disorder
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
SVD	Spontaneous vertex delivery
WHO	World Health Organisation

## **Operational definition of terms**

**Trauma:** an experience that causes intense physical and psychological stress reactions

**Birth:** a process of bringing forth a child from the uterus or womb

**Experience:** having things happen or personally encountering something

**Postpartum:** the time that begins right after a woman gives birth and lasts about 6 weeks  
extends up to 12 weeks

**Mother:** a woman who has given birth to a child or biological female parent of a child

**Stress:** a state of worry or mental tension caused by a difficult situation

**Psychological consequences:** range of potential mental health problems that may occur as  
a result of trauma

**Disorder:** a clinically significant disturbance in an individual's cognition, emotional  
regulation or behaviour

**Complication:** a medical problem that occurs during a disease

**Vagina delivery:** giving birth through the vagina

**Prevalence:** number of people with some other attributes present during a particular  
interval of time

**Symptom:** something that a person feels or experiences that they have a disease or  
condition

## **Chapter 1**

### **Introduction and Background**

#### **1.1 Introduction**

Childbirth is viewed as a happy event, but can also be a highly stressful experience involving an actual or perceived threat; thus, being pregnant and having a baby is a time of huge physiological, psychological, and social change for women. Therefore, this is a period of rapid transition and adaptation. Childbirth-related trauma is an event that occurs during labor and delivery processes and involve actual or threatened serious injury or death to the mother or infant (Reed et al., 2017). Mothers are exposed to psychological trauma brought about by the experience of a profound threat, which is limited to an acute, transient disturbance (Reed et al., 2017). When the stress response remains, enduring symptoms of PTSD may ensue in reminders of exposure, such as intrusive thoughts, such as hyperarousal and irritability, and deactivation, such as avoidance of trauma-related stimuli (American Psychiatric Association [APA], 2013).

PTSD is an anxiety disorder (psychiatric condition) that may follow an extremely traumatic stressor, precipitated by exposure to a traumatic event, and often implicated in psychological functional impairment (APA, 2013). Women who develop PTSD symptoms are viewed as having abnormal adaptation to the

stressor, and such reactions can be quite unpleasant, for a period extending beyond one month following exposure and provoke minimal psychological functional impairment over time (APA, 2013). As such, identifying postpartum mothers for psychological PTSD symptoms is as important as recognizing the presence of these symptoms, as they will be the target population for assessment and perhaps diagnosis of childbirth-related PTSD. Several factors have been associated with childbirth-related trauma and PTSD. For instance, mode of birth; mothers who delivered through emergency caesarean section or assisted vaginal birth and with birth experiences have been reported to have experienced traumatic birth and report PTSD after birth (Ayers et al., 2016). Additionally, subjective distress during labor and birth and obstetric emergencies include the main risk factors for childbirth-related PTSD, and poor support during birth and complications with the baby (Ertan et al., 2021). It has been reported that women who experience PTSD following childbirth might feel abandonment, guilt, and helplessness; these feelings have a direct impact on mother-child interactions and could cause social isolation. Birth trauma and PTSD have a substantial impact on women and their families.

Most research on childbirth-related trauma and PTSD has been conducted in high-income countries (HIC); however, research in low- or middle-income countries (LMIC) is sparse and remains rarely recognized and treated in routine clinical practice (Milosavljevic et al., 2016). In Malawi, no studies have been conducted on childbirth-related trauma and PTSD among postpartum mothers. Furthermore, it is not routinely screened or assessed. Therefore, this study assessed the psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital in Malawi.

## 1.2 Background

Worldwide, there are more than 130 million births annually (Ritchie & Mathieu, 2019). A prevalence rate of 3% therefore means around 3.9 million women develop postpartum PTSD every year as a result of childbirth (Ayers et al., 2016). However, most studies on childbirth-related trauma and PTSD prevalence have been conducted in high-income countries (HIC) in the UK, Australia, USA, and European countries, with good access to maternity care where delivery is relatively safe, and reported lower prevalence rates of childbirth-related PTSD (Ayers et al., 2016). Furthermore, the correlates of PTSD found in these studies include locus of control, level of social support, and previous traumatic experiences (Ayers et al., 2016), signifying a low prevalence because they were conducted in such good conditions.

Research on childbirth-related PTSD in low- or middle-income countries (LMIC) is sparse, but studies that are available generally find a higher prevalence of childbirth-related PTSD. For instance, in Africa and Nigeria, the prevalence rate of childbirth-related PTSD has been reported to be 6% (Adewuya et al., 2006). Likewise, several other countries in LMICs have reported higher prevalence rates to be 8-12% in Turkey (Bayri Bingol & Demirgoz Bal, 2020) and 20-37% in Iran (Ghanbari-Homayi et al., 2019). The prevalence rates of childbirth-related trauma in LMICs were higher than those in HICs. These rates are higher because women in LMICs and Africa are also those most likely to have less access to maternity care, leading to not using any health services when pregnant, having low literacy levels, higher levels of socio-economic disadvantage and experience health inequalities, and inadequate resources in health facilities that compromise quality maternal and perinatal mental health care (Dahab & Sakellariou, 2020; Kazanga et al.,

2019). Consequently, there may be a cross-cultural difference in the response of African women to traumatic birthing compared to their counterparts from Western culture.

Despite its relatively high prevalence and potential disease burden, postpartum PTSD remains largely unrecognized in maternity services, and unlike depression, PTSD after birth is not routinely screened, so women are unlikely to be identified and treated (Ayers et al., 2018). One of the barriers to this was that until recently there was no validated measure for postpartum PTSD that followed recent DSM-5 diagnostic criteria (APA, 2013). Research in this area typically uses questionnaires developed for use with other groups, such as war veterans, which may not have been appropriate for postpartum women (Ayers et al., 2018). The City BiTS by Ayers et al. (2018) was developed specifically to assess postpartum PTSD according to the DSM-5 diagnostic criteria (APA, 2013). Therefore, it provides a promising method for assessing postpartum PTSD in cross-cultural studies.

Currently, there is scarcity of reliable comprehensive epidemiological statistics regarding the prevalence of childbirth-related trauma and postpartum PTSD in Malawi. However, in Malawi, most studies on common mental health disorders occurring in the perinatal period have been on screening for antenatal depression (Chorwe-Sungani & Chipps, 2018; Ng'oma et al., 2019). Evidence suggests that childbirth-related PTSD is highly comorbid with depression and fear of subsequent birth (Dikmen-Yildiz et al., 2017a). Although the prevalence of childbirth-related trauma, PTSD, and associated risk factors have been extensively studied in other parts of the world, similar studies are scarce in Malawi. These data do not reflect the prevalence and magnitude of childbirth-related trauma and PTSD among postpartum mothers in Malawi.

Postpartum mothers in Malawi are not assessed and screened for childbirth-related trauma and PTSD. Moreover, despite mental health problems contributing a significant percentage to the disease burden in Malawi, there is a scarcity of research in the area of childbirth-related trauma and PTSD. However, the Malawi National Mental Health Policy recommends the integration of mental health services into the general health care delivery system at the policy level in Malawi (Ministry of Health, 2020), so that people could have increased access to mental health services. This means that postpartum mothers should also receive mental health care in maternity services and postnatal care clinics along with the usual postnatal care as needed, where childbirth-related PTSD can be screened for, to determine the true extent of postpartum PTSD among women. This would help to raise awareness and provide appropriate interventions, prevention, and treatment against the public health consequences.

### **1.3 Statement of the problem**

Being pregnant and having a baby is a time of huge physiological, psychological, and social changes for women. Although the birth of a baby is viewed positively, research suggests that between 20% and 40% of women find childbirth psychologically traumatic, and as a result, some of these women go on to develop post-traumatic stress disorder (PTSD) (Ayers et al., 2016). High prevalence rates of childbirth-related PTSD have been found in LMICs, although studies are sparse. It has also been reported that childbirth-related PTSD has an impact on the mother and baby, following feelings of helplessness and low self-esteem as a result of psychological functional impairment (Ayers et al., 2016). Despite their relatively high prevalence and potential disease burden (Ayers et al., 2018); childbirth-related trauma and PTSD are not assessed and screened for in maternity units,

and the extent of burden and prevalence is not known; therefore, women are unlikely to be identified and treated in Thyolo district, Malawi.

Additionally, there is scarcity of literature on childbirth-related trauma and PTSD in Malawi. For instance, Malawi, as other developing countries in sub-Saharan Africa, there is very limited access to timely assessment and services for people with mental health problems (Kokota et al., 2023). However, the Malawi National Mental Health Policy 2020, reported that the prevalence of mental disorders, as established from the World Health Survey, showed that 3% of people are likely to have a severe mental disorder and 10% have a mild to moderate disorder (Ministry of Health, 2020). However, these data do not reflect the prevalence and magnitude of childbirth-related trauma and PTSD among postpartum mothers in Malawi.

#### **1.4 Significance of the study**

Evidence indicates that childbirth had been recognised as an event that could be perceived as traumatic and consequently trigger a PTSD reaction (Ayers et al., 2016). Moreover, Postpartum PTSD is not routinely screened for, so women are unlikely to be identified (Ayers et al., 2018). There are no research findings in maternity services in Malawi on the prevalence and factors that contribute to childbirth-related trauma and PTSD among mothers. Therefore, it was important to conduct this study in order to determine the prevalence, evaluate the PTSD symptom presentation and examine the etiological factors of childbirth-related PTSD among postpartum mothers. This will enable midwives and mental health workers to effectively assess, detect, and manage childbirth-related trauma and PTSD in respective maternity service units, and recommending a referral pathway for

postpartum mothers with childbirth-related PTSD. This would also allow effective collaboration between midwives and mental health specialists, henceforth increasing postpartum mothers' access to mental health care, thereby contributing to the government's agenda of improving the mental health of all Malawians (Ministry of Health, 2020). Consequently, this study contributes to raising awareness and addressing perinatal mental health promotion, prevention, early intervention, and the treatment of common perinatal mental disorders.

Additionally, the findings of this study will provide knowledge to midwives and other health practitioners on the assessment and screening of childbirth-related trauma and PTSD using the City BiTS, based on the DSM-V criteria for PTSD diagnosis. This will also provide nursing and midwifery and medical training institutions with current data on the areas to be focused on assessing childbirth-related trauma and PTSD. The study will also provide valuable data for assessing childbirth-related trauma and PTSD, which are recommended for midwives. This will serve as a foundation for future research that contributes to the scientific literature and reveals areas for future research. Understanding the prevalence, presentation of PTSD symptoms, and etiological factors of childbirth-related trauma and PTSD in this study will make recommendations to researchers and policymakers to balance the cost of prevention and treatment against the public health consequences in Malawi.

## **1.5 Objectives of the study**

### **1.5.1 Broad objective of the study**

The aim of this study was to assess the psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital.

### **1.5.2 Specific objectives of the study**

1. To determine the prevalence of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital.
2. To evaluate the symptom presentation of childbirth-related PTSD among postpartum mothers at Thyolo District Hospital.
3. To examine the etiology of childbirth-related PTSD symptoms among postpartum mothers at Thyolo District Hospital.

## **1.6 Research frameworks**

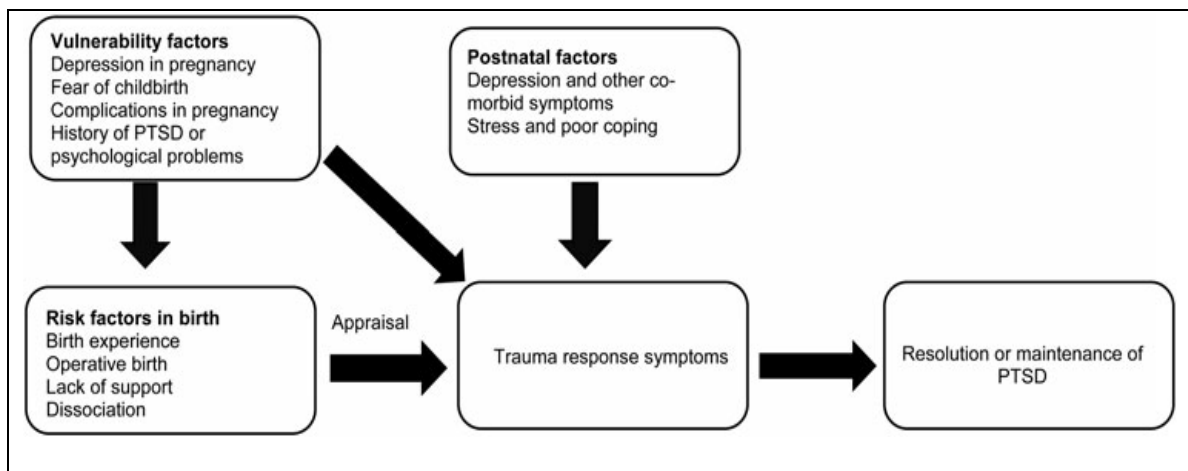
This study used the diathesis-stress model of the etiology of birth-related post-traumatic stress disorder (PTSD) as its predominant research framework, according to Ayers et al. (2016) to guide the study, and the conceptual framework of stress vulnerability among postpartum mothers supported the study.

### **1.6.1 The Diathesis-stress model of the tiology of birth-related PTSD**

The diathesis-stress model suggests that mental disorders and medical conditions are caused by a combination of biological predispositions and stress (Broerman, 2017). This is also known as the vulnerability-stress model (Broerman, 2017). It is a framework

for understanding how existing vulnerabilities and environmental stresses interact to influence mental health conditions (Broerman, 2017).

The theoretical approach represents the diathesis-stress model of the etiology of birth-related post-traumatic stress disorder (PTSD), which was first introduced in 2004 (Ayers, 2004), and was recently updated in 2016 (Ayers et al., 2016). The diathesis-stress model of the etiology of birth-related PTSD incorporates vulnerability factors during pregnancy, risk factors during birth, and maintaining factors after birth in the onset and maintenance of PTSD identified as having the strongest association with postpartum PTSD) (Ayers et al., 2016) see Figure 1.



*Figure 1: The Diathesis-stress model of the etiology of birth-related post-traumatic stress disorder (PTSD)*

**Source:** (Ayers et al., 2016)

### 1.6.1.1 Vulnerability Factors in Pregnancy

The diathesis-stress model of the etiology of birth-related PTSD, proposes that vulnerability factors in pregnancy are specified as a history of PTSD or previous

psychological problems, a history of trauma or sexual abuse, complications in pregnancy, anxiety, and having a first baby (nulliparity). These vulnerability factors are proposed to interact with birth events to determine the appraisal of birth as a traumatic and subsequent traumatic stress response.

### **1.6.1.2 Risk factors in birth**

The diathesis-stress model further proposes that birth risk factors are specified as type of birth (as a broad indicator of the level of intervention and complications), poor support, and high levels of negative emotion, perceived threat, and dissociation. The model indicates that the construct of birth experience, reported as a risk factor during birth, comprises a negative subjective birth experience, negative emotions during birth, and a lack of control or agency, leading to the development of PTSD (Ayers et al., 2016).

### **1.6.1.3 Postpartum factors**

The diathesis-stress model proposes that postpartum factors that might maintain initial PTSD symptoms include additional stress, maladaptive coping, and poor support (Ayers et al., 2016).

## **1.6.2 Conceptual framework of Diathesis-stress, childbirth-related trauma and PTSD and health outcomes in postpartum mothers**

The diathesis-stress model of psychopathology provides a framework for understanding the development of psychological disorders. According to the general model, each individual possesses some degree of inherent vulnerability (i.e., diathesis) for developing a given disorder. The onset of a disorder can then be triggered by environmental

stress; however, the amount or intensity of stress required to trigger a disorder depends on the extent to which an individual is inherently vulnerable.

#### **1.6.2.1 Diathesis-stress**

The premise underlying the “diathesis-stress” model in this context is that women are more likely to suffer childbirth-related PTSD if they have a particular diathesis (i.e., vulnerability or susceptibility) and are under a high level of stress (Broerman, 2017). According to the Diagnostic and Statistical Manual of Mental Disorders version V (DSM-V), stressor criterion A was defined as “the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others” and “the person's response involved intense fear, helplessness” (APA, 2013). In some instances, birth events may contribute to postpartum adjustment problems and mental health disorders. Increasing evidence suggests that some women develop post-traumatic stress disorder (PTSD) in response to birth (Malaju et al., 2022). The conceptual framework of stress in women states that a possible interaction between diathesis and stress is that the underlying predisposition may cause or affect the experience of stress. That is, having certain vulnerabilities, such as PTSD during pregnancy, may increase a woman’s likelihood of incurring a high level of stress. This may have caused them to form new negative thinking patterns. These new thinking patterns then become vulnerable and lead to later episodes of depression or childbirth-related PTSD (Ayers et al., 2016), when further stressful events are encountered such as traumatic birth (Broerman, 2017).

### **1.6.2.2 Childbirth-related trauma and PTSD**

Traumatic childbirth is a recognized risk factor for developing postpartum PTSD, and mothers may also exhibit a post-traumatic stress response following successful birth (Ertan et al., 2021). According to the Diathesis-Stress Model, mental health problems can be triggered by both predispositions and stress. Moreover, there is evidence that women who report PTSD in response to a range of traumatic stressors including childbirth may have risk factors for PTSD after birth (Ertan et al., 2021). Diathesis-stress approaches to mental health emphasize that whether a woman develops chronic postpartum PTSD is influenced to varying degrees by pre-existing vulnerability and beliefs, the events of birth, and postnatal factors such as additional stress, support, and the meaning attached to the events of birth and symptoms of PTSD (Ayers et al., 2016).

### **1.6.2.3 Impact of childbirth-related PTSD**

After birth, PTSD can develop following a difficult or traumatic birth during which women think they or their baby might have died or could be seriously hurt (Dikmen-Yildiz et al., 2017b). Traumatic childbirth can cause psychological distress, intense fear, or helplessness in women in labor and increases the risk of anxiety, depression, and post-traumatic stress disorder (PTSD) (Ertan et al., 2021). Postpartum PTSD is highly comorbid with depression and fear of subsequent births (Dikmen-Yildiz et al., 2017a), as well as reduced breastfeeding (Cook et al., 2018; Garthus-Niegel et al., 2018), poorer child development (Garthus-Niegel et al., 2017), and strain on couples' relationships (Delicate et al., 2018).

### **1.6.3 Adaptation of Diathesis-stress Model**

The model has been used in a meta-analysis (Ayers et al., 2016), in which the meta-analysis synthesized the research on vulnerability and risk factors for birth-related PTSD and refined a diathesis-stress model of its etiology. Studies were included if they reported primary research that examined factors associated with birth-related PTSD measured at least one month after birth. This meta-analysis of prospective studies updated and produced a comprehensive diathesis-stress model of the etiology of birth-related PTSD as a risk factor that can be used to inform screening, prevention, and intervention for trauma symptoms after childbirth in maternity care (Ayers et al., 2016).

The development of this etiological model is useful for identifying women who may be vulnerable to birth-related PTSD based on specific factors that can be screened during pregnancy, risk factors during labor and delivery, and assessment of women's birth experience and PTSD postnatally. Therefore, this study adapted the diathesis-stress model for the etiology of birth-related post-traumatic stress disorder (PTSD) (Ayers et al., 2016).

### **1.6.4 Application of the model to the study**

A diathesis-stress model of the etiology of birth-related PTSD provided a relevant research framework to determine the prevalence of childbirth-related trauma and PTSD, and examine the etiology of childbirth-related PTSD symptoms in this study. Mothers who had complications in pregnancy were vulnerable to developing childbirth-related PTSD. This study found that complications in pregnancy was associated with childbirth-related PTSD, this is in line with the diathesis-stress model of the etiology of birth-related PTSD used. Mode of birth is a risk factor for developing childbirth-related PTSD according to

the model used in this study. This study found that vaginal birth as a mode of birth, was associated with childbirth-related PTSD, this is in line with the model used in this study, that mode of birth is a risk factor for childbirth-related PTSD. The other risk factors in birth found in this study included childbearing experiences which indicated a negative birth experience, including excessive pain and perineal tears/episiotomy causing physical discomfort. Additionally, excessively long labor with inadequate interventions; feeling very anxious during labor; feeling out of control during labor and birth, and poor or lack of communication during labor were also found to be childbearing experiences associated with childbirth-related PTSD. Similarly, the theoretical model helped to identify the perceived communication of staff with mothers in labor and birth as associated with reduced childbirth-related PTSD. The role of communication during labor and birth is important as a protective factor against childbirth-related PTSD in this study see Figure 2.

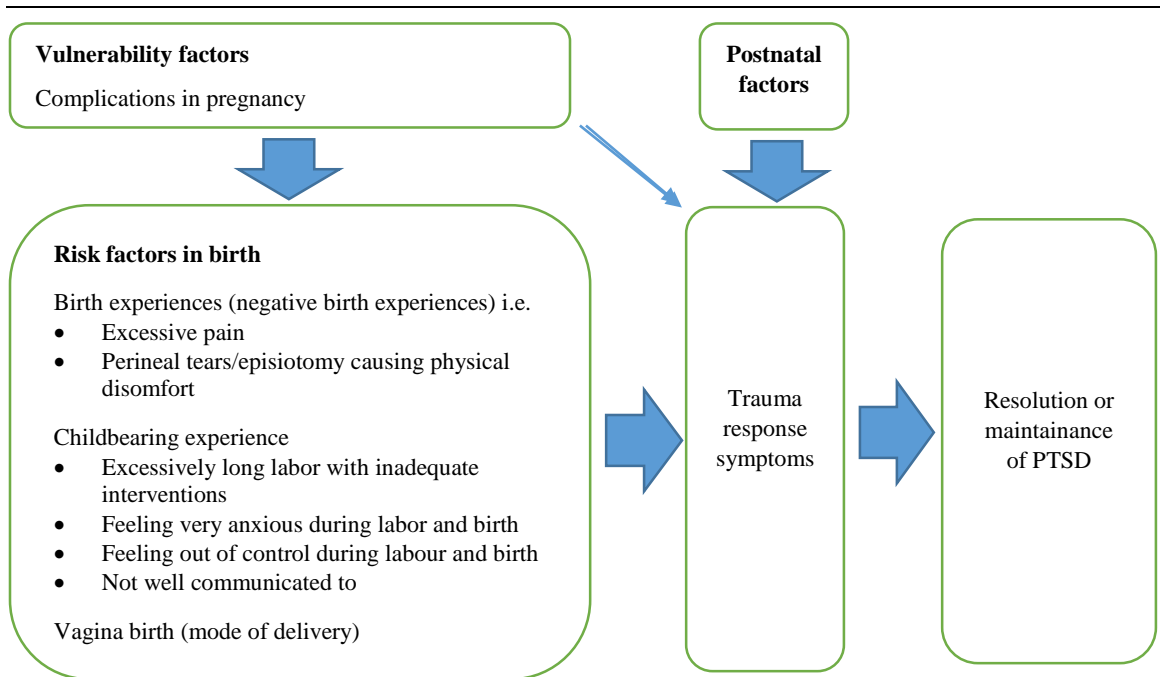


Figure 2: Diagrammatic application of the diathesis-stress model of the etiology of birth-related post-traumatic stress disorder (PTSD) to the study

## **Chapter 2**

### **Literature review**

#### **2.1 Introduction**

This chapter presents a literature review related to childbirth-related trauma and PTSD among postpartum mothers. The literature review intends to provide a context for the study and provide insight into the depth of the existing body of knowledge on the topic under study. It illustrates how the topic has previously been researched and identifies similarities and disparities within studies conducted elsewhere. Articles were identified by searching through the following electronic databases: PubMed, ResearchGate, Google scholar, ScienceDirect, Embase, SABINET, Cumulative Index of Nursing and Allied Health Literature (CINAHL), PsychARTICLES, MEDLINE, Cochrane, and results were imported into Zotero. Relevant articles were identified manually from the reference lists of key articles. The literature search focused on English-language articles published between 2013 and 2023. However, several articles and books published more than a decade ago have been cited because they contain original work or relevant information that is not available in more recent publications. The search strategies were used to search for articles on childbirth-related trauma or traumatic birth, childbirth-related PTSD, or PTSD after birth or postpartum PTSD, symptom presentation of PTSD or PTSD clusters, etiology of PTSD symptoms or vulnerability or risk factors, Malawi,

Sub-Saharan Africa, and global keywords were entered. The literature search yielded numerous articles in high income countries (HICs), low- and middle-income countries (LMICs), low income Countries (LICs) although articles from Malawi were not available.

The reviewed literature will be presented under the following sub-headings: prevalence of childbirth-related trauma and PTSD, burden of childbirth-related PTSD, symptom presentation of childbirth-related PTSD, symptom cluster examination of childbirth-related PTSD, symptom measure for childbirth-related PTSD, etiology of childbirth-related PTSD symptoms, summary of the literature review, and conclusion.

## **2.2 Prevalence of childbirth-related trauma and PTSD**

### **2.2.1 Prevalence of childbirth-related trauma**

Childbirth-related trauma, also known as traumatic birth, is a situation in which the woman has suffered distress as a result of exposure to a threat to herself and her baby, or pain or sorrow, which is of such a magnitude that it may cause the mother to have a traumatic condition, with a prolonged psychological and/or physical effect (Kranenburg et al., 2023). Furthermore, it is a psychologically stressful event that meets the PTSD trauma criteria, as the DSM-V includes PTSD in trauma- and stress-related disorders (APA, 2013; Dikmen-Yildiz et al., 2018; Grekin et al., 2021). Research suggests that between 20 and 40% of women find childbirth psychologically traumatic (Ayers et al., 2016). However, recent evidence shows that the global prevalence of traumatic childbirth experience is estimated to be between 9% and 44% (de Graaff et al., 2018), which is consistent with other studies that reported a prevalence ranging from 19.7% to 45.5% in women perceiving their childbirth as traumatic (Dikmen-Yildiz et al., 2018; Geller & Stasko, 2017).

Nevertheless, research on childbirth-related trauma is sparse in low- and middle-income countries, but existing studies have reported high prevalence rates of childbirth-related trauma compared to those found in studies conducted in high-income countries.

### **2.2.2 Prevalence of childbirth-related PTSD**

Childbirth occurs more than 130 million times every year worldwide (Ritchie & Mathieu, 2019), and 3.17% of women report post-traumatic stress disorder (PTSD) after childbirth (Ayers et al., 2016). Therefore, a prevalence rate of 3% therefore means around 3.9 million women develop postpartum PTSD every year as a result of childbirth (de Graaff et al., 2018). Comparable with the overall global prevalence, is the prevalence of 3.6 % postpartum PTSD (Gankanda et al., 2021). However, the prevalence of postpartum PTSD ranges from 1% to 30%, and many risk factors have been identified as predictors of postpartum PTSD (Ertan et al., 2021). There is more literature on HICs on childbirth-related PTSD with a report of low prevalence rates, as such studies have been conducted in settings with good access to maternity care, such as the UK, Australia, the USA, and European countries. Unlike in LMICs, limited research has found a high prevalence of childbirth-related PTSD. For instance, recent evidence shows a high PTSD prevalence of 24.8% and 36.4% when using the City BiTS, based on the DSM-V criteria for diagnosing PTSD (Osório et al., 2022). However, these indices are much higher than those found in HICs such as Croatia (11.8%), Turkey (7.9%), England (7.8%), and Israel (2.4%), using the same instrument (Ayers et al., 2018; Bayrı Bingöl et al., 2021; Handelzalts et al., 2018; Nakić Radoš et al., 2020).

### **2.3 Burden of childbirth-related PTSD on mother**

Psychological trauma caused by childbirth is an international public health problem and a universal phenomenon that has an extensive effect (Beck et al., 2018; de Graaff et al., 2018). Childbirth-related trauma and PTSD have a significant effect on postpartum mothers (Ayers et al., 2016; Ertan et al., 2021). Childbirth-related PTSD can lead to fear of future childbirth, postponing another pregnancy, or ultimately not having any more children despite a wish to have them (Ayers et al., 2016; Ertan et al., 2021). Likewise, the general consequences of traumatic birth experience vary from feelings of low self-esteem to difficulty breastfeeding, problems with sexuality, and fear of childbirth (de Graaff et al., 2018). Furthermore, traumatic childbirth experiences can lead to a woman's avoidance of intimacy, which could eventually be detrimental to the relationship with her partner (Ayers et al., 2016; Ertan et al., 2021).

Being around the newborn can trigger repeated reliving of traumatic birth memories, which may have an impact on maternal bonding and result in the mother being emotionally unavailable and unresponsive to her child's needs (D'Hooghe & Kerkplein, 2023; Kranenburg et al., 2023). There is further evidence that childbirth-related PTSD affects mothers' ability to breastfeed the baby (Garthus-Niegel et al., 2018), and can lead to impairment of maternal bonding, which indirectly has adverse effects on infant health (Ahsan et al., 2023). These effects include poor infant emotion regulation, poor infant sleep, disrupted eating patterns, and suboptimal cognitive and emotional development (McKenzie-McHarg et al., 2015; Parfitt et al., 2014; Williams et al., 2016). In addition, PTSD has serious consequences for both individuals and society. Individuals with PTSD are impaired in their daily lives in a number of ways, including career, education, and

family life (Andersen et al., 2012; Martini et al., 2022). As for society, there is great economic loss due to sick leave and a generally lower functional level (Andersen et al., 2012).

## **2.4 Symptom presentation of childbirth-related PTSD**

### **2.4.1 Symptom cluster examination of childbirth-related PTSD**

In the face of a stressor, an acute stress (fight, flight, or freeze) response is activated to conquer or avoid threats and achieve homeostasis (Dekel, Ein-Dor, et al., 2017). When the stress response remains, enduring symptoms of PTSD may ensue in reminders of exposure, such as nightmares and flashbacks, activation, such as irritability and hyperarousal, and deactivation, such as avoidance of trauma-related stimuli (Dekel, Ein-Dor, et al., 2017). Therefore, the symptoms may be viewed as an abnormal adaptation to the stressor, for a period extending beyond 1 month following exposure (APA, 2013).

The total PTSD symptoms using the City BiTS (Ayers et al., 2018) have a possible range of 0–60 based on the DSM-V of the diagnostic criteria for PTSD (APA, 2013). In a study sample on the development of a measure of postpartum PTSD, using the City BiTS, found that the total PTSD symptoms ranged from 0 to 56, with a mean score of 11.70 (SD 11.06). In a study by Milosavljevic et al. (2016), significant levels of symptoms of subthreshold PTSD could be present in 1.5–33.1% of all parturients. Furthermore, the main analyses reported by Meili et al. 2023; Thiel et al. (2018), revealed that the postpartum PTSD (PP-PTSD) symptoms group into four distinguished clusters, including reliving, namely flashbacks and nightmares, avoidance coupled with unwanted memories, other re-experiencing symptoms, negative cognitions and mood, and arousal and reactivity.

Altogether, the presentation of PTSD symptoms in relation to childbirth generally resembles formal symptom clusters of PTSD (Thiel et al., 2018). Arousal and re-experiencing symptoms are more frequent than avoidance and numbing symptoms (Ayers et al., 2018). More women met the criteria for re-experiencing, avoidance, and hyperarousal symptoms than the stressor criteria or disability and impairment (Ayers et al., 2018). Evidence of a cluster of avoidance symptoms coupled with undesired memories of childbirth, such as feeling upset and having a physical reaction to the birth reminder, is not entirely unexpected (Thiel et al., 2018). Symptoms of negative cognitions and mood clusters were in line with the comorbidity rates of PTSD and depression in non-postpartum samples (Thiel et al., 2018).

## **2.5 Etiology of childbirth-related and PTSD symptoms**

Childbirth-related post-traumatic stress disorder (CB-PTSD) is not the result of a single cause, such as a traumatic stressor, but a consequence of various interacting variables. According to the diathesis-stress model of childbirth-related PTSD, it is the outcome of the interplay between antepartum vulnerability factors, the risk factors during delivery and maintaining postnatal factors that interact over time during the perinatal period (Ayers et al., 2016).

### **2.5.1 Prenatal risk factors and childbirth-related PTSD**

Some women are more vulnerable to traumatic birth because of pre-existing problems, according to the diathesis-stress model of birth-related post-traumatic stress disorder (Ayers et al., 2016). It is evident that women who may have PTSD during pregnancy or a history of PTSD related to another trauma, which may or may not have

been resolved, are more vulnerable to childbirth-related PTSD (Ayers et al., 2016). In both these instances, it is possible that an event such as childbirth may re-trigger PTSD symptoms and/or shift the focus of current symptoms to birth (Ayers et al., 2016). There is some evidence that women with a history of PTSD are more vulnerable to PTSD following birth if they have inadequate support and care during birth (Ertan et al., 2021). Corroboratively, Dekel, Stuebe, et al., 2017; Meili et al. (2023) found that endorsement of PTSD during pregnancy was a strong predictor of childbirth-related PTSD.

A history of mental health problems, such as depression, anxiety, and previous trauma, is associated with a higher risk of PTSD after birth. For instance, a study conducted by Meili et al. (2023) reported that self-reported history of mental health problems were associated with an increased risk of post-traumatic stress within 1–11 months postpartum. Corroboratively, more depression and anxiety can increase the risk of PTSD in mothers (Ertan et al., 2021). (Ayers et al., 2016) found that postpartum PTSD was associated with poor coping and stress, and was highly comorbid with depression. This is corroborated by Biaggi et al. (2016), who asserted that personal vulnerability factors, such as pregnancy as being relevant predictors of anxiety and depression. Similarly, a study conducted in Israel indicated that, in some women, depression and anxiety during pregnancy have been reported as pre-existing vulnerability factors associated with childbirth-related trauma symptoms (Polachek et al., 2014).

Takegata et al. (2017) in a study conducted in Japan, revealed that antenatal fear of childbirth was a significant predictor of traumatic stress symptoms after childbirth in both primiparous and multiparous women. Documented in a study by Shiva et al. (2021), complications during pregnancy and childbirth were predictors of PTSD after birth.

However, Gankanda et al. (2021) in a Srilankan study, found that complications in pregnancy did not show any significant association with PTSD postpartum. There is further evidence that complications during pregnancy, such as preeclampsia, have also been associated with greater birth-related trauma symptom presentation (Ayers et al., 2016).

### **2.5.2 Risk factors in labor/delivery and childbirth-related PTSD**

Etiological factors in the diathesis-stress model of birth-related post-traumatic stress disorder (Ayers et al., 2016), also include risk factors in labor and delivery as predictors of childbirth-related PTSD. Numerous studies have found that mode of birth, especially operative birth through emergency caesarean section (emergency CS) and operative birth through assisted vaginal birth, are associated with childbirth-related PTSD (Ayers et al., 2016; Osório et al., 2022). This is in line with a study conducted among Greek women by Orovou et al. (2020), which revealed that emergency caesarean section compared to elective caesarean section and normal vaginal delivery was a more unpleasant birth experience and a risk factor for the development of postpartum PTSD. In contrast, a study conducted among a cohort of Sri Lankan postpartum mothers revealed that there was no significant relationship between mode of birth and childbirth-related PTSD (Gankanda et al., 2021). Other studies in this area have suggested that assisted delivery is associated with a traumatic appraisal of childbirth but is not independently predictive of postpartum trauma symptoms (Srkalović Imširagić et al., 2017). Nevertheless, other studies have indicated that not being able to give birth vaginally and having an unplanned caesarean section can be experienced as traumatic, leading to childbirth-related PTSD (Haagen et al., 2015). Moreover, compared to uncomplicated vaginal births, another study revealed that vaginal births with intrapartum interventions and complications were associated with

childbirth-related PTSD (Ginter et al., 2022). Several intrapartum interventions, such as administration of an enema, Kristeller maneuver, requirement to give birth in a supine position, artificial rupture of membranes without consent, and repeated vaginal examination by different people during vaginal birth are associated with childbirth-related PTSD (Ginter et al., 2022). Conversely, no association was found if laboring women were informed about those practices in advance and gave informed consent (Ginter et al., 2022).

Obstetric and subjective factors of labor and birth present subjective experience as a predictor of the development of PTSD (Ayers et al., 2016; Dekel, Stuebe, et al., 2017). For instance, several studies have revealed that factors such as perceived lack of support or poor-quality interactions with staff during birth are consistent risk factors for childbirth-related PTSD. Similarly, others suggested that severe pain experience during labor and childbirth might be considered a strong predictor of PTSD following childbirth (Dekel, Stuebe, et al., 2017; MacKinnon et al., 2017). Verbal and psycho-affective obstetric violence also show an association with the appearance of the PTSD, with verbal violence being the most likely to affect the development of this disorder (Martinez-Vázquez, Rodríguez-Almagro, Hernández-Martínez, & Martínez-Galiano, 2021). This is in line with a study by (Ďuríčková et al., 2023), who reported that the quality of interactions with medical staff was highly correlated with postpartum PTSD. Childbirth-related PTSD may also develop as a response to physiological, uncomplicated vaginal birth if the subjective experience of childbirth is traumatic; for example, due to lack of respect and involvement in decision-making, perceived lack of support from unsupportive attitudes of caregivers, lack of emotional support provided to the laboring woman, poor-quality interactions with staff during birth is consistently attributed as a risk factor for postnatal PTSD symptoms

(De Schepper et al., 2016; Dikmen-Yildiz et al., 2018). Consistent with other studies, a study by Sun et al., (2023), found that a sense of loss of control during birth was also associated with postnatal trauma and PTSD.

Previous studies have linked childbirth-related PTSD to unexpected health complications and life-threatening situations during childbirth. Women who experience severe complications during labor or neonatal complications during and after birth are at greater risk of postnatal PTSD (Ďuričková et al., 2023). Evidence suggests that women's worst hotspots during birth was associated with childbirth-related PTSD, defined as peak emotional distress, this was found that over a third of hotspots were due to interpersonal factors such as feeling abandoned, being ignored and lacking support (Ayers et al., 2016; Sun et al., 2023). Alternatively, evidence from experimental studies using birth stories that include positive support may be critical in improving women's perceived control and reducing perceived trauma (Ayers et al., 2016).

### **2.5.3 Postnatal risk factors and childbirth-related PTSD**

Postnatal factors may contribute to the maintenance or resolution of PTSD symptoms. Few studies have examined postnatal factors associated with childbirth-related PTSD compared with vulnerability and delivery risk factors (Ayers et al., 2016). Available research suggests that additional stress, use of coping strategies, and low support are associated with postnatal traumatic stress responses (Ertan et al., 2021; Sun et al., 2023). Similarly, other studies have reported that lower social support, measured in the first month postpartum, is predictive of a negative appraisal of childbirth as well as post-traumatic stress symptoms at three-month postpartum (Dekel, Stuebe, et al., 2017) Additionally, a

study by Shaban et al. (2013) found that the development or existence of pregnancy complications among most women and postpartum complications increased the incidence of PTSD following childbirth (Ayers et al., 2016).

The literature review provided, presents an overview of important issues when assessing childbirth-related trauma and PTSD. This information provides the context for the study and compliments the specific literature that has been included in each of the published papers. The literature review has highlighted that most research on childbirth-related trauma and PTSD has been conducted in high-income countries (HIC) with good access to maternity care. Research on childbirth-related trauma and PTSD in low-or middle-income countries (LMIC) is scarce but the studies that are available generally found higher prevalence of childbirth-related trauma and PTSD. As birth settings and maternity care around the world are very different, they are likely to affect women's childbirth experiences differently that are most likely to have less access to maternity care. Literature further shows that depending on the country, study design and methodology employed risk and protective factors for negative childbirth experience were notably different. However, there is scarcity of literature on childbirth-related trauma and PTSD in Malawi.

## **Chapter 3**

### **Methodology**

#### **3.1 Introduction**

Research methodology is the primary principle that guides the research (Sreekumar, 2023). A research methodology is like a plan for carrying out research and helps keep researchers on track by limiting the scope of the research through a smooth, effective and manageable process (Sreekumar, 2023). This includes all important aspects of research, including research design; data collection methods; data analysis methods, and the overall framework within which the research is conducted. This chapter presents the methodology which includes the research approach described in the methods and procedures employed in this study. The descriptive quantitative research approach described in this study was used to answer the overall aim which was to assess the psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital. The chapter further describes the “International Survey of Childbirth-related Trauma (INTERSECT)” questionnaire which includes the City BiTS based on the DSM V diagnostic criteria for PTSD used for data collection. The validity of the research approach and ethics approval for this study are also presented.

### **3.2 Study design**

This study used a cross-sectional design and adopted a descriptive quantitative approach to assess psychological consequences of childbirth-related trauma and PTSD among postpartum mothers in postnatal clinic at Thyolo district. A cross-sectional design was used because this design permits data to be collected at a point in time or in a short period without following the participants for information (Connelly, 2016). The investigator measured the outcome and exposure of the study participants at the same time (Setia, 2016). Consequently, the study design helped to determine the frequency or level of birth-related trauma and PTSD in a defined population at a particular point in time. Moreover, this approach provides a numerical description of a population that can be generalized based on a sample from a target population (Creswell, 2014). Therefore, this study design was chosen because it helped to identify the psychological consequences of childbirth-related trauma and PTSD among postpartum mothers.

### **3.3 Study setting**

This study was conducted at Thyolo District Hospital. Thyolo district is located in the southern region of Malawi and a population of approximately 759, 062 people, with expected deliveries of 37,953 according to Malawi National Statistical Office population projections (National Statistical Office (NSO), 2020). The district borders include Blantyre, Chiradzulu, Chikwawa, Nsanje, and Mulanje districts, and the Milanje district in Mozambique. Some of the clients who come to deliver their babies at the facility are referred from the district's health facilities and other surrounding districts. Thyolo District Hospital was selected as the study site because it is one of the districts that provides

maternity services in cases of high deliveries. Moreover, perinatal and postnatal care services do not include mental health services in which women can be assessed for psychological problems. Additionally, despite the district offering mental health services to clients regularly, its utilization neither includes the assessment of childbirth-related trauma and PTSD nor provide perinatal mental health services in postnatal clinics.

### **3.4 Study population**

The target population was 6-12 weeks postpartum mothers attending postnatal care at Thyolo District Hospital. This study targeted this group because 6-12 weeks postpartum mothers experience childbirth-related PTSD symptoms around this period. The targeted population was 579 of 6-12 weeks postpartum mothers based on Thyolo DHO HMIS, 2022 maternity data of women who had given birth between August and December 2022. The anticipation was that there would be adequate postpartum mothers attending postnatal clinics to realize the study sample size.

#### **3.4.1 Inclusion criteria**

Postpartum mothers aged 16 years or over; who had a baby in the previous 6-12 weeks, and postpartum mothers accessing postnatal care services at the hospital were included in this study.

#### **3.4.2 Exclusion criteria**

Postpartum mothers who had a stillbirth or neonatal birth in the previous 6 weeks; postpartum mothers who were ill or whose babies were sick; and unable to communicate with data collectors during the study period were excluded from the study. Postpartum

mothers who exhibited signs of emotional breakdown due to their participation in the study were also excluded.

### 3.5 Sample size determination

The study used a sample size of 250 of 384 respondents. The sample size influences the precision of the estimates and the power of the study to draw conclusions (Nanjundeswaraswamy and Divakar, 2021). Therefore, this study calculated an adequate sample size using a single population proportion formula developed by (Cochran), which specifies that  $n = z^2pq/d^2$ .

$n = z^2pq/d^2$ , where  $n$  = desired sample,  $z$  = level of significance at 95%, confidence interval (CI) = 1.96,  $p$  = proportion (prevalence of study condition 50% = 0.50,  $q = 1-p = (1-0.50)$  and  $d$  = level of precision or width of confidence interval set at 5% = (0.05). Therefore, the sample size used in this study was calculated as follows:

$$\text{Sample size } (n) = z^2pq/d^2$$

$$n = (1.96)^2 \times 0.50 \times 0.50 / (0.05)^2$$

$$n = (1.96 \times 1.96) \times 0.50 \times 0.50 / (0.05 \times 0.05)$$

$$n = 3.8416 \times 0.25 / 0.0025$$

$$n = 0.9604 / 0.0025$$

$$n = 384.16$$

$$n = 384$$

Therefore, 384 postpartum mothers were recruited for this study.

### **3.6 Sampling technique**

The participants were selected using a systematic random sampling technique. The systematic random sampling technique had an interval of two, where the interval constant was obtained by dividing the total number of postpartum mothers in the hospital by the sample size. The total number of 6-12 weeks postpartum mothers who would access postnatal services at Thyolo District Hospital from November 2022 to January 2023 was 579. The sample size in this study was 384. Therefore, the constant interval is equal to the total number divided by the sample size ( $579/384=1.5078125=2$ ). The sampling frame for this study included all postpartum mothers from a population of postpartum mothers attending postnatal care services at Thyolo District Hospital, however, the target population was postpartum mothers at period 6-12 weeks postpartum.

### **3.7 Data collection instrument**

The INTERSECT data collection instrument was used to collect data from all postpartum mothers who were sampled for this study see Appendix 1. These sections included the birth trauma perception scale for assessing birth-related trauma, the City BiTS for screening of birth-related PTSD, the Birth Satisfaction Scale-Revised (BSS-R) for assessing birth satisfaction, the Edinburgh Postnatal Depression Scale (EPDS) for screening of postpartum depression, the trauma checklist taken from the Post-Traumatic Stress Diagnostic Scale for screening of previous trauma, history of psychological problems and treatment, demographic and obstetric details of participants, which consisted of age, level of education, residential area, household income, relationship status, obstetric details of number of children, gestation, time since birth, type of birth (i.e., vaginal, assisted

vaginal, emergency or elective caesarean), and maternal/infant complications. The questionnaire was administered in Chichewa, a national language spoken and understood by many Malawians.

### **3.7.1 Screening instruments**

The study adopted the screening instruments identified within the INTERSECT questionnaire as the most appropriate instruments for low-resource settings to screen for childbirth-related trauma and PTSD.

#### ***Birth trauma perception scale***

The Birth Trauma Perception Scale is a single-item question on 10-point scale for assessing perceived birth trauma. Women rated whether they perceived their birth to be traumatic from ‘not at all’ (0) to ‘extremely’ (10). Scores range from 0 for (‘not at all traumatic’) to 10 (‘extremely traumatic’).

#### ***City Birth Trauma Scale (City BiTS)***

The City BiTS (Ayers et al., 2018), consists of 29 questions mapped onto the DSM-V diagnostic criteria for PTSD (APA, 2013). It rates symptoms for frequency over the “last week” and scores on a scale ranging from 0 (‘Not at all’) to 3 (‘5 or more times’). A higher score indicated greater PTSD symptoms. It has a maximum total score of 60. This is a valid instrument for measuring birth-related PTSD. Diagnostic criterion A has two dichotomous items assessing the stressor criterion rated as (yes/no) in response to: (During your labor, birth, and immediately afterwards: Did you believe you or your baby would be seriously injured? (Did you believe you or your baby would die?), that is, threatened death or serious

injury of the mother or baby during labor, birth, or immediately afterwards. The items were scored on a yes/no scale, with a score of 0 for ('No') and 1 for ('Yes'). Distress, disability and potential physical causes rates as yes/no/maybe, of which 0 for ('No'), 1 for ('Maybe/sometimes') and 2 for ('Yes'). This scale can be used as a continuous measure of symptoms or as a diagnostic tool.

### ***Birth Satisfaction Scale-Revised (BSS-R)***

The Birth Satisfaction Scale-Revised (Hollins Martin & Martin, 2014) (BSS-R) is a 10-item, self-report scale that was reduced from the original 30-item BSS (Martin & Fleming, 2011). The BSS-R assesses women's perceptions of birth to determine their satisfaction with their birth experiences. The BSS-R consists of one higher-order factor (experience of childbearing) and three lower-order factors (quality of care provision, women's personal attributes, and stress experienced during labor). Four items measured quality of care provision, four items measured stress during labor, and two items measured women's attributes. The BSS-R is a Likert-type scale that requires participants to rate their level of agreement with each item (0=Strongly Disagree to 4=Strongly Agree), with four of its items being reverse-coded (e.g., "I found giving birth a distressing experience").

### ***Edinburgh Postnatal Depression Scale (EPDS)***

The EPDS is the most validated screening instrument for antenatal care in low-resource settings, with remarkable Se, Sp, and AUCs (A. O. Adewuya et al., 2007; Alvarado-Esquivel et al., 2014; Castro E Couto et al., 2015; Chorwe-Sungani & Chipps, 2017; Martins et al., 2015; Stewart et al., 2013; Tran et al., 2011). The EPDS is a 10-item self-reported questionnaire about feelings of depression experienced in the postnatal period

rated over the past seven days, with each item rated on four exclusive scores ranging from 0 to 3 (Tran et al., 2011). The EPDS has a maximum score of 30, which is calculated by adding scores for all ten items. The standard cut-off score for the EPDS is  $\geq 10$  (Martins et al., 2015). The EPDS demonstrated good internal consistency ( $\alpha = .87$ ) (Cox et al., 1987).

### ***Post-Traumatic Stress Diagnostic Scale***

Lifetime history of trauma was measured using a trauma checklist from the Post-Traumatic Stress Diagnostic Scale (Foa et al., 1997). This scale has good reliability and validity (McCarthy, 2008), has been translated into multiple languages (Dragan et al., 2012; Griesel et al., 2006; Hearn et al., 2012; Kontoangelos et al., 2017; Norris & Aroian, 2008) and has been widely used in the perinatal population (Dikmen-Yildiz et al., 2017b; Schwab et al., 2012). Previous traumatic birth and pregnancy loss/stillbirth is also measured in 2 additional items, rated as yes/no, which is 0 for ('No') and 1 for ('Yes')

### ***History of psychological problems and treatment***

Previous and current psychological disorders and treatments were included to identify women who did or did not receive treatment. For example, women were asked whether they had had had professional help or treatment ('have you received professional help or treatment for your psychological or mental health problems?') and what type of treatment they received ('if you are currently receiving any help or treatment, what type of treatment is it?'). These questions, answers yes/no/don't know, which is 0 for ('No'), 1 for ('don't know') and for ('Yes').

### ***Demographic and obstetric information***

Demographic and obstetric information comprises basic demographics such as; (age, level of education, residential area, household income, and relationship status) and obstetric details such as; (number of children, gestation, time since birth, type of birth (i.e., vaginal, assisted vaginal, emergency or elective caesarean), and maternal or infant complications). The purpose of the demographic and obstetric information was to gauge the representativeness of the participating sample and to study the etiology of childbirth-related PTSD.

#### **3.7.2 Validity and reliability of data collection instrument**

The screening instruments used to collect data for this study were reliable and valid (Ayers et al., 2018; Chorwe-Sungani & Chipps, 2017; Martins et al., 2015; Osório et al., 2022; Stewart et al., 2013; Tran et al., 2011). The study adopted the structured data collection instrument that was identified in the INTERSECT as the most appropriate instrument for low-resource settings to assess childbirth-related trauma and PTSD in postpartum mothers. This data collection instrument is a well-validated tool that is being used in different countries across the world in similar studies as in the current study (Ayers et al., 2018). The overall questionnaire was reviewed by the INTERSECT and mental health experts at the School of Nursing at Kamuzu University of Health Sciences for their content and face validity.

#### **3.7.3 Translation of data collection instrument**

The data collection instruments used in this study were originally developed in English see Appendix 1. The tool was later translated into Chichewa see Appendix 2, a

local language, through forward translation and back translation, and was pre-tested among postpartum mothers in the Thyolo district. It is recommended that the minimum standards for applying an instrument that was developed in another language be back-translation and monolingual testing of a translated version of the instrument among the target language group (Maneesriwongul & Dixon, 2004; Toma et al., 2017). Therefore, it was necessary to translate the data collection instrument into Chichewa because it is the primary language spoken by postpartum mothers who participated in this study.

The components of the data collection tool were translated into Chichewa for a forward translation by a teacher's college English language lecturer. The lecturer was suitable for this task because he was a bilingual Malawian lecturer in Language Studies. He has an excellent command of English speaking and is fluent in his mother tongue Chichewa. The Chichewa version of the data collection instrument was translated back into English as a back-translation, by an independent bilingual Malawian, a mental health professional who had no knowledge of the data collection instrument. The mental health professional was fluent in both Chichewa and English. He was familiar with the terminology used in the data collection instrument. Further modifications of the Chichewa version of the translated instrument were performed based on back translations. This helped to ensure the clarity, succinctness, and correctness of the translated data collection instrument.

#### **3.7.4 Pre-testing of data collection instrument**

A pilot study was conducted two weeks before conducting the main study. The translated version of the data collection instrument was administered to twenty five

postpartum mothers at Thyolo District Hospital. The clarity of the items or difficulties postpartum mothers had in answering the questions included in the data collection instrument was checked. The results of the pre-test were discussed with mental health nurses, and mental health professionals who translated the data collection instrument back. Data from the pre-test were utilized to make necessary changes regarding the clarity of the data collection instrument in the local language, and then a consensus on the final Chichewa versions of the translated instrument was reached see Appendix 2. However, data from the pre-test of the data-collection instruments were excluded from the main study.

### **3.8 Data collection procedure**

The data were collected with the help of two research assistants. Data collection took place during operational hours and normal working days of the postnatal care clinic. Prior to data collection, two Registered Mental health/psychiatric nurses were recruited as research assistants. They received a 2 days training which included an overview of the study, review of data collection techniques and instruments, practice on the use of data collection instruments, and a discussion on ethical issues pertaining to the study.

The data were collected from November 2022 to January 2023. The study was explained to the midwives in charge of the postnatal care clinic at Thyolo District Hospital and also sought permission to recruit postpartum mothers from the clinic. The data were collected during normal working days from 7:30 am to 1:30 pm. Postpartum mothers were allowed to access postnatal services before being interviewed to avoid disturbing them from accessing postnatal services. Immediately postpartum mothers were done with

postnatal services, the midwives referred and introduced the mothers to the study. The postnatal mothers were then briefed about their possible participation in the study. Verification of their consultation notes was done to confirm the postnatal period of 6-12 weeks and age of 16 years and above. Those who met the inclusion criteria were taken to a private room where the participant information sheet was read to them by a face-to-face recruitment procedure of explaining the study see Appendices 6, 7, 10, 11, 14, and 15. Postpartum mothers who accepted to participate were asked to provide consent to participate in the study. Participants who met the eligibility criteria had an informed consent administered to them see Appendices 8, 9, 12, and 13 or assent see Appendices 16 and 17 and signed as a proof of their voluntary participation in the study. Those who could not write pressed their thumbprint on the consent form as a proof of their participation in the study. Then a number was written on the consent form of each participant and this number also appeared on the questionnaire used to collect data from the participant.

The eligible consenting participants were consecutively recruited until the sample size of 250 participants was reached. Data were collected using an INTERSECT structured questionnaire see Appendices 1 and 2, which was initially developed in English and translated into Chichewa because most of the participants were not English literate. Data collection was conducted through face-to-face interviews in Chichewa, a local language, and guided by the structured questionnaire. This provided an opportunity to yield high response through clarification of questions that participants could not understand in the first place. The questionnaire was read out loud and clear to each participant. Documentation of the information as the participants gave responses was immediately done

on each participant's questionnaire sheet. Participants responded to the same questions in exactly the same order. The interview took approximately 25 minutes for each participant.

### **3.9 Data management**

Questionnaires were administered to respondents and all completed questionnaires were kept safe. This helped prevent data contamination by limiting access to the collected data and ensuring confidentiality. The completed questionnaires were secured in a lockable cabinet during the research period. The completed questionnaires were checked for completeness and errors, cleaned, and coded for identification before the data were entered into the computer program for analysis. Data were entered into a computer according to code identification and analyzed it using the International Business Machines-Statistical Package for Social Sciences version 22.0 (IBM-SPSS 22.0). Access to the computer used for data analysis was secured using a password. After analysis and report writing, raw data on completed questionnaires will be kept safe for a period of five years before being destroyed to allow time for queries that might demand the retrieval of raw data. Henceforth, the hard copies will be incinerated, and the soft copies will be deleted from the computer storage.

### **3.10 Data analysis**

The IBM SPSS version 22.0 was used to analyze the data. The significance level for all the statistical tests was set at 95% ( $\leq 0.05$ ). Descriptive statistics, including standard deviations, percentages, and frequencies, were used to summarize the data. A diagnosis of childbirth-related PTSD was determined using the City BiTS, based on the DSM-V criteria for PTSD diagnosis. Additionally, a cut-off score of  $\geq 28$  on the City BiTS was used to

determine the probable diagnosis of childbirth-related PTSD (Osório et al., 2022). The total scores for each respondent on the City BiTS scale were computed. Descriptive and inferential statistics were used to analyze and summarize demographic characteristics in relation to probable childbirth-related PTSD cases identified by the City BiTS. The prevalence of childbirth-related trauma and PTSD was computed using descriptive statistics including frequencies, percentages, means, standard deviations, and 95% confidence intervals. Childbirth-related PTSD symptoms were compared between average scores on childbirth-related PTSD diagnosis and those without childbirth-related PTSD using means and standard deviations. This was used in all respondents with childbirth-related PTSD symptoms (total PTSD), and all four symptom subscales according to the DSM-V: re-experiencing, avoidance, negative cognitions and mood, and hyperarousal.

Stepwise regression was used to identify a useful subset of etiological factors from the list of variables. This involved a step-by-step iterative construction of a regression model that involved the selection of independent variables to be used in the final model. Childbirth-related PTSD was used as the response variable in this study. The etiological variables that had no significant differences in relation to childbirth-related PTSD were removed after computing the Pearson Chi-square test. The etiological factors that had significant differences from the response variable were then combined to build a binary logistic regression model to generate a group of etiological factors for childbirth-related PTSD.

### **3.11 Ethical considerations**

The study received ethics approval from Kamuzu University of Health Sciences (KUHeS) (formerly known as College of Medicine Research and Ethics Committee [COMREC]) with reference number: P 02/22/3589 see Appendix 4. The head of the mental health nursing department provided a support letter to the Research and Ethics Committee see Appendix 3. Institutional clearance to conduct this study at Thyolo district hospital was granted by the Director of Health and Social Services (DHSS) for Thyolo District Health Office for researcher to carry out this study see Appendix 5.

The nature and benefits of the study were explained to postpartum mothers before being recruited in this study see Appendices 6, 7, 10, 11, 14, and 15. The potential harm to postpartum mothers who participated in this study was minimized. The names of respondents did not form part of the demographic data that were collected, thus respecting their privacy and maintaining confidentiality. The respondents were informed that they would not be offered any material rewards, but the information that they provided would be utilized to make recommendations about maternal mental health care for postpartum mothers. Respondents were informed that only aggregated data would be analyzed and disseminated. They were also informed that all hard copies of the data collected would be locked in a cabinet at workplace, Thyolo District Hospital and would be incinerated after five years. They were also informed that all electronic data would be secured by a password and would be deleted from the storage device after five years.

The respondents were informed that their participation in the study was voluntary and those who agreed to participate were asked to sign consent where possible see Appendices 8, 9, 12, and 13, and sign an assent for participants under 18 years see

Appendices 16 and 17. Participants were told that they were free to participate in the study or withdraw at any time if they felt uncomfortable with any aspect of the study. In addition, they were assured that they would not be denied healthcare services because of their withdrawal or refusal to participate in the study. Postpartum mothers who were observed to be emotionally broken down due to their participation in the study or presented with clear signs of mental disorder or psychosis were referred to the psychiatric clinic for assistance.

### **3.12 Dissemination of study results**

The results of this study will be disseminated through Conferences in Malawi, as well as at international research dissemination conferences. At the district level, the results will be disseminated to Thyolo DHO and to all relevant stakeholders. Furthermore, the findings of this study will be disseminated at any available opportunity in a national research dissemination conference in the Ministry of Health, Malawi, to make the data on childbirth-related trauma and PTSD available in Malawi. This will be published in a peer-reviewed journal to make available data from Malawi to other global researchers and local researchers on childbirth-related trauma and PTSD, according to the INTERSECT survey conducted worldwide. Copies of the findings and thesis will be submitted to the School of Nursing at the Kamuzu University of Health Sciences (KUHeS) library.

This chapter started with providing the methodology used in this study, that included the research approach and objectives of the study. The respondents were recruited and data were collected on the same day and no further follow up was done. An adopted data collection instrument used to collect data is also described as a valid tool used in

similar studies being conducted in other countries. The ethics of this study are also discussed ensuring that the study protected the dignity, rights and welfare of research participants. The next chapter further engages the presentation of the study results in all sections as regards to the study objectives.

## **Chapter 4**

### **Presentation of results**

#### **4.1 Introduction**

This chapter presents the findings of the study which aimed at assessing the psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital. The findings have been presented according to sections of the study and in relation to study objectives and the diathesis-stress model of etiology of birth-related PTSD which guided the study. In line with the study objectives, this chapter describes the findings on demographic characteristics of respondents; and further provides the findings on the prevalence of childbirth-related trauma and PTSD; symptom presentation findings are presented in mean scores, the distribution and impact of PTSD symptoms, risk factors associated with childbirth-related PTSD diagnosis and etiological factors that predicted childbirth-related PTSD symptoms and diagnosis.

#### **4.2 Findings of the study**

##### **4.2.1 Demographic characteristics of respondents**

A total of 250 out of possible 384 respondents had the INTERSECT questionnaire administered with a response rate of 65.1%. The age of the respondents ranged from 16 to 47 years (mean  $26.4 \pm 6.9$ ). The mean number of children per respondent was  $2.0 \pm 1.6$

(range 0-7 children). Respondents' gestation ranged from 32 to 41 weeks, with a mean gestation period of 38.2 weeks  $\pm$ 1.2. Over three-quarters of the respondents were from a rural area (90%,  $n = 225$ ), had given birth to their babies through vaginal delivery (83.6%,  $n = 209$ ), and were married (80.0%,  $n = 200$ ). Almost all the respondents were supported by a relative at the time of birth (94.8%,  $n = 237$ ) see Table 1.

**Table 1: Demographic characteristics of respondents ( $n=250$ )**

Item	n	%	Mean sd
Age in years			26.4 $\pm$ 6.9
No. of children			2.0 $\pm$ 1.6
Gestation in weeks			38.2 $\pm$ 1.2
Mode of delivery			
Vagina delivery	209	83.6	
Caesarean section	41	16.4	
Residential area			
Urban	25	10.0	
Rural	225	90.0	
Education level			
Primary or none	197	78.8	
Secondary or above	53	21.2	
Household income			
Below average	222	88.8	
Average or above	28	11.2	
Marital status			
Married	200	80.0	
Single	50	20.0	
Caretaker			
Relative	237	94.8	
Other	13	5.2	

#### 4.2.2 Childbirth-related trauma and PTSD prevalence analysis

This study initially evaluated all 6-12 weeks postpartum mothers with childbirth-related trauma (100%,  $n = 250$ ). This study found that respondents had different

perceptions and experiences of birth as traumatic as follows: insinuated birth as moderately traumatic (50% [95% CI 45.8% – 54.1%],  $n = 125$ ), had extremely traumatic births (23.2% [95% CI 17.8% – 28.2%],  $n = 58$ ), and regarded their birth as not traumatic at all (26.8% [95% CI 22% – 32%],  $n = 67$ ). Using the stressor criterion A of the City BiTS, the overall mean rating of experience of stress associated with traumatic birth was found to be high at 70.4% (95% CI 38%–102%,  $n = 176$ ). More than half of the respondents (56% [95% CI 52.1% - 59.9%],  $n = 140$ ) believed that they or their baby would be seriously injured during labor, birth, and immediately afterwards. Further, 58% (95% CI 54.2% - 61.8%,  $n = 145$ ) of the respondents indicated that they believed they or their baby would die. This study found a high prevalence of current childbirth-related PTSD (23.2% [95% CI 17.3% – 28.7%],  $n = 58$ ) based on the City BiTS among postpartum mothers attending postnatal clinics at Thyolo District Hospital in Malawi see Table 2.

**Table 2: Respondents’ mean scores on prevalence of childbirth-related trauma and PTSD**

Item	Traumatic birth n (%)	Childbirth-related PTSD n (%)	Mean	Sd
Traumatic birth experience				
Not at all traumatic	67 (26.8%)		0.3	0.4
Moderately traumatic	125 (50.0%)		0.5	0.5
Extremely traumatic	58 (23.2%)		0.2	0.4
Stressor criterion				
Did you believe you or your baby would be seriously injured?			0.6	0.5
Yes	140 (56.0%)			
No	110 (44.0%)			
Did you believe you or your baby would die?			0.6	0.5
Yes	145 (58.0%)			
No	105 (42.0%)			
Overall childbirth-related trauma				
Traumatic birth cases	176 (70.4%)			
Yes	74 (29.6%)			
No				
Overall childbirth-related PTSD				
Childbirth-related PTSD Cases			0.2	0.4
Yes		58 (23.2%)		
No		192 (76.8%)		

#### **4.2.3 Respondents’ presentation of childbirth-related PTSD symptoms**

The presentation of childbirth-related PTSD symptoms was evaluated by respondents see Table 3. However, the average score of total birth-related PTSD among respondents with a PTSD diagnosis was found to be three times higher than those without a PTSD diagnosis ( $M = 32.7$ ,  $SD = 4.5$ ). Furthermore, all respondents with symptoms were reported to have experienced all symptoms in all four symptom clusters, namely, re-experiencing, avoidance, negative cognitions and mood, and hyperarousal, but none of the

respondents experienced dissociative symptoms. Consequently, respondents with a PTSD diagnosis reported re-experiencing symptoms with an average score double that of those without a PTSD diagnosis ( $M = 10.4, SD = 1.2$ ). An average score of four times more was reported in avoidance symptoms of respondents with PTSD diagnosis than those without PTSD diagnosis ( $M = 3.6, SD = 1.2$ ). The average scores for negative cognitions and mood symptoms in respondents with PTSD diagnosis were five times higher than those without PTSD diagnosis ( $M = 10.8, SD = 2.7$ ). Additionally, an average score of four times that of those without a PTSD diagnosis was reported in respondents with a PTSD diagnosis who experienced hyperarousal symptoms ( $M = 7.8, SD = 1.8$ ).

The overall average score reported in respondents with re-experiencing symptoms was greater than in those without a PTSD diagnosis ( $M = 5.9, SD = 4.1$ ). Avoidance symptom experience of respondents reported an overall average score once more than in those without a PTSD diagnosis ( $M = 1.6, SD = 1.7$ ). Respondents who experienced negative cognitions and mood symptoms reported an overall average score of double compared to those without a PTSD diagnosis ( $M = 4.3, SD = 4.5$ ). The overall average score for hyperarousal symptoms was reported to be double that of those without a PTSD diagnosis ( $M = 3.5, SD = 3.4$ ). Respondents with total PTSD symptoms reported an overall average score three times higher than those without a PTSD diagnosis ( $M = 15.5, SD = 12.4$ ). Accordingly, respondents with a diagnosis of birth-related PTSD experienced three times more trauma than those without childbirth-related PTSD ( $M = 32.7, SD = 4.5$ ) see Table 3.

**Table 3: Respondents' mean scores on PTSD symptom presentation**

Item	PTSD diagnosis		Overall summary mean score M, Sd
	<u>Yes</u> M, Sd	<u>No</u> M, Sd	
PTSD symptom clusters			
Re-experiencing	10.4, 1.2	4.7, 3.7	5.9, 4.1
Avoidance	3.6, 1.2	1.0, 1.4	1.6, 1.7
Negative cognitions and mood	10.8, 2.7	2.4, 2.8	4.3, 4.5
Hyperarousal	7.8, 1.8	2.2, 2.7	3.5, 3.4
PTSD symptoms	32.7, 4.5	10.3, 10.3	15.5, 12.4

#### 4.2.4 Impact of childbirth-related PTSD symptoms on respondents

The impact of childbirth-related PTSD symptoms among respondents who presented with symptoms was evaluated through responses to questions regarding the onset of symptoms, duration, distress, and impairment. This study found that the majority of mothers with symptoms reported onset in the first 6 months after birth (64.8%, n = 162), and that these symptoms lasted 1-3 months (60.8%, n = 152). However, a small proportion of women reported that their symptoms started before birth (8.0%, n = 20), suggesting that they had preexisting PTSD or related symptoms. Just over half of the mothers said that their symptoms caused them a lot of distress (59.6%, n = 149), and almost half of the respondents reported that the symptoms prevented them from doing things (43.2%, n = 108) see Table 4.

**Table 4: Onset and impact of PTSD in women who reported symptoms**

Item	Response scale	n (%)
Onset of symptoms	Not applicable (no symptoms)	68(27.2)
	Before the birth	20(8.0)
	In the first 6 months after birth	162(64.8)
Duration of symptoms	Not applicable (no symptoms)	68(27.2)
	Less than 1 month	29(11.6)
	1-3 months	152(60.8)
	3 months or more	1(.4)
Do these symptoms cause you a lot of distress?	No	75(30.0)
	Sometimes	26(10.4)
	Yes	149(59.6)
Do they prevent you from doing things you usually do?	No	98(39.2)
	Sometimes	44(17.6)
	Yes	108(43.2)

#### 4.2.5 Demographic characteristics associated with childbirth-related PTSD diagnosis

This study found significant differences in the prevalence of childbirth-related PTSD diagnosis based on the following respondents' demographic characteristics: maternal age  $\leq 19$  years ( $\chi^2 = 27.8, p < 0.001$ ), vaginal birth delivery ( $\chi^2 = 68.7, p < 0.001$ ), number of children (parity) ( $\chi^2 = 18.6, p < 0.001$ ), and having other children ( $\chi^2 = 22.8, p < 0.001$ ) see Table 5. However, there were no significant differences in childbirth-related PTSD based on gestational age, birth partner, residential area, education level, household income, relationship status (marital status), previous traumatic birth, or pregnancy loss ( $p > 0.05$ ) see Table 5.

**Table 5: Demographic characteristics associated with childbirth-related PTSD (*n*=250)**

Demographic characteristics	CB-PTSD		Statistic $\chi^2$ , <i>P</i>
	Yes 58(23.2)	No 192(76.8)	
Age in years			27.81, <0.001*
≤19	25(43.1)	23(12.0)	
≥20	33(56.9)	169(88.0)	
Number of children			18.63, <0.001*
<1	47(81.0)	94(49.0)	
>1	11(19.0)	98(51.0)	
Have other children			22.84, <0.001*
Yes	24(41.4)	144(75.0)	
No	34(58.6)	48(25.0)	
Gestation in wks.			2.44, 0.11
≤36	1(1.7)	14(7.3)	
≥37	57(98.3)	178(92.3)	
Mode of delivery			68.73, <0.001*
Vagina birth	28(48.3)	181(94.3)	
C/Section	30(51.7)	11(5.7)	
Residential area			0.01, 0.92
Urban	6(10.3)	19(9.9)	
Rural	52(89.7)	173(90.1)	
Education level			1.16, 0.76
Primary/none	44(75.9)	153(79.7)	
Secondary/above	14(24.1)	39(20.3)	
Household income			0.95, 0.62
Below average	53(91.4)	169(88.0)	
Average/above	5(8.6)	23(11.9)	
Marital status			0.27, 0.60
Married	45(77.6)	155(80.7)	
Single	13(22.4)	37(19.3)	
Birth partner			6.94, 0.07
Relative	56(96.6)	181(94.3)	
Other	2(3.4)	11(5.7)	
Previous traumatic birth			3.09, 0.07
Yes	17(29.3)	81(42.2)	
No	41(70.7)	111(57.8)	
Pregnancy loss			0.01, 0.89
Yes	6(10.3)	21(10.9)	
No	52(89.7)	171(89.1)	

Data = *n*(%); CB-PTSD = Childbirth-related PTSD.

\*significance set at ≤ 0.05.

#### 4.2.6 Risk factors associated with childbirth-related PTSD diagnosis

Bivariate analysis, using Pearson Chi-Square test revealed that the following risk factors: medical complications (mother) ( $\chi^2 = 7.81, p 0.005$ ); experience of childbearing including, came through childbirth virtually unscathed ( $\chi^2 = 4.62, p 0.03$ ); thought labor was excessively long ( $\chi^2 = 80.96, p <0.001$ ); felt well supported by staff during labor and birth ( $\chi^2 = 16.52, p <0.001$ ); staff communicated well during labor ( $\chi^2 = 48.62, p <0.001$ ); felt very anxious during labor and birth ( $\chi^2 = 38.73, p <0.001$ ); found giving birth a distressing experience ( $\chi^2 = 31.77, p <0.001$ ); felt out of control during birth experience ( $\chi^2 = 67.51, p <0.001$ ); not distressed at all during labor ( $\chi^2 = 24.40, p <0.001$ ), and EPDS diagnosis ( $\chi^2 = 87.36, p <0.001$ ) were significantly associated with childbirth-related PTSD diagnosis (Tables 4.6-4.7). However, there were no significant differences in childbirth-related PTSD based on medical complications (baby), experience of childbearing including, delivery room clean and hygienic; previous trauma including serious, life-threatening illness; physical assault; child abuse; accident; serious injury or death; other trauma; general health including, and previous mental health problem ( $p > 0.05$ ) see Tables 6-7.

**Table 6: Risk factors linked to childbirth-related PTSD diagnosis**

Birth Satisfaction Scale item	CB-PTSD		Statistic $\chi^2$ , <i>P</i>
	Yes 58(23.2)	No 192(76.8)	
Experience of childbearing			
Quality care provision			
Felt well supported by staff			
Yes	34(58.6)	161(83.9)	16.5, <0.001*
No	24(41.4)	31(16.1)	
Staff communicated well with me			
Yes	12(20.7)	138(71.9)	48.6, <0.001*
No	46(79.3)	54(28.1)	
Delivery room clean and hygienic			
Yes	50(86.2)	159(82.8)	0.37, 0.54
No	8(13.8)	33(17.2)	
Stress during labor and birth			
Came through childbirth virtually unscathed			
Yes	25(43.1)	54(28.1)	4.6, 0.03*
No	33(56.9)	138(71.9)	
Labor excessively long			
Yes	54(93.1)	51(26.6)	80.9, <0.001*
No	4(6.9)	141(73.4)	
Giving birth a distressing experience			
Yes	52(89.7)	92(47.9)	31.7, <0.001*
No	6(10.3)	100(52.1)	
Not distressed at all during labor			
Yes	3(5.2)	76(39.6)	24.4, <0.001*
No	55(94.8)	116(60.4)	
Women's attributes			
Felt very anxious during labor and birth			
Yes	50(86.2)	76(39.6)	38.7, <0.001*
No	8(13.8)	116(60.4)	
Felt out of control during birth experience			
Yes	53(91.4)	58(30.2)	67.5, <0.001*
No	5(8.6)	134(69.8)	

Data = *n*(%);CB-PTSD = Childbirth-related PTSD.

\*significance set at  $\leq 0.05$ .

**Table 7: Risk factors (general health) linked to childbirth-related PTSD diagnosis**

General health item	CB-PTSD		Statistic $\chi^2$ , <i>p</i>
	Yes 58(23.2)	No 192(76.8)	
Medical complications during pregnancy/labor			
Complications-Mother			
Yes	9(15.5)	9(4.7)	7.81 0.005*
No	49(84.5)	183(95.3)	
Complications-Baby			
Yes	1(1.7)	0(0.0)	3,32 0.068
No	57(98.3)	192(100)	
<u>Feelings in the past 7 days</u>			
EPDS Diagnosis			
Yes	39(67.2)	17(8.9)	87.3, <0.001*
No	19(32.8)	175(91.9)	
<u>Previous trauma</u>			
Serious illness			
Yes	13(22.4)	39(20.3)	0.11, 0.73
No	45(77.6)	153(79.7)	
Physical assault			
Yes	2(3.4)	4(2.1)	0.35, 0.55
No	56(96.6)	188(97.9)	
Accident			
Yes	12(20.7)	27(14.1)	1.4, 0.22
No	46(79.3)	165(85.9)	
Other trauma			
Yes	1(1.7)	2(1.0)	0.17, 0.67
No	57(22.8)	190(99.0)	
<u>General health</u>			
Previous mental health diagnosis			
Yes	1(1.7)	1(0.5)	0.81, 0.36
No	57(98.3)	191(99.5)	

Data = *n*(%);CB-PTSD = Childbirth-related PTSD.

\*significance set at  $\leq 0.05$ .

#### 4.2.7 Etiological factors that predicted childbirth related PTSD

A binary logistic regression model was used to compute the demographic characteristics and risk factors that predicted childbirth-related PTSD among respondents see Tables 5-7. A logistic regression model with 14 variables (4 demographic characteristics and 10 risk factors with significant differences) was constructed. The model with the 14 variables was statistically significant ( $\chi^2 = 182.06, p < 0.001$ ) and showed that there were only seven predictors of childbirth-related PTSD: [1] vaginal birth method see Table 8, [2] complications-mother, [3] came through childbirth virtually not unscathed (scathed), [4] excessively long labor, [5] staff not communicated well during labor, [6] felt very anxious during labor and birth, and [7] felt out of control during birth experience see Table 9.

The highest predictor of childbirth related PTSD was “Labor excessively long” [OR = 12.84 (2.84–57.99),  $p = <0.001$ ] with mothers who perceived excessively long labor having 13 times chances of experiencing a childbirth-related PTSD diagnosis compared to mothers who did not perceive labor as excessively long. The other etiological factors that predicted childbirth-related PTSD were: [1] mothers who had “medical complications during pregnancy/labor” had 8 times chances of developing childbirth-related PTSD as compared to mothers who had no medical complications [OR = 8.12 (1.23–33.30),  $p = 0.02$ ]; [2] mothers who confirmed “coming through childbirth not virtually unscathed (scathed)” had 7 times more chances of developing childbirth-related PTSD as compared to mothers who came through childbirth virtually unscathed [OR = 7.18 (1.08–47.62),  $p = 0.04$ ]; [3] mothers who “felt very anxious during labor and birth” had five times more chances of developing childbirth-related PTSD than mothers who came through mothers

who were did not feel very anxious [OR = 5.24 (1.49–18.44),  $p = 0.01$ ]; [4] mothers who “delivered baby through vaginal birth method (SVD)” had 4 times chances of developing childbirth-related PTSD as compared to mothers who delivered through caesarean section [OR = 3.70 (1.77–7.75),  $p = <0.001$ ]; and [5] mothers who “felt out of control during birth experience” had 9 times more chances of developing childbirth-related PTSD as compared to mothers who did not feel out of control [OR = 8.83 (2.09–37.22),  $p = 0.003$ ].

This study found one protective factor so that mothers who were “well communicated to, by staff during labor and birth” had 87% less chances of developing childbirth-related PTSD as compared to mothers who were not well communicated to [OR = 0.13 (0.03–0.52),  $p = 0.004$ ] see Tables 8 and Table 9.

**Table 8: Etiological factors (demographic characteristics) of childbirth-related PTSD**

Demographic characteristics item	CB-PTSD		Statistic $\chi^2$	$p$	OR (95% CI)	$p$
	Yes	No				
	n(%) 58(23.2)	n(%) 192(76.8)				
Age in years						
≤19	25(43.1)	23(12.0)	27.81	<0.001*	0.48(0.09-2.35)	0.36
≥20	33(56.9)	169(88.0)				
Number of children						
<1	47(81.0)	94(49.0)	18.63,	<0.001*	0.35(0.06-1.77)	0.2
>1	11(19.0)	98(51.0)				
Other children						
Yes	24(41.4)	144(75.0)	22.84	<0.001*	1.13(0.21-6.01)	0.87
No	34(58.6)	48(25.0)				
Birth method						
Vaginal birth	28(48.3)	181(94.3)	68.73	<0.001*	3.70(1.77-7.75)	<0.001*
C/Section	30(51.7)	11(5.7)				

Data,  $n(\%)$ ; CI, confidence interval; OR, odds ratio; CB-PTSD = Childbirth-related PTSD.

\*significance set at  $\leq 0.05$ .

**Table 9: Etiological factors (general and birth experience) of childbirth-related PTSD**

Item	CB-PTSD		Statistic <i>x</i> <sup>2</sup>	<i>p</i>	OR (95% CI)	<i>p</i>
	Yes n(%) 58(23.2)	No n(%) 192(76.8)				
Medical complications						
Complications – mother						
Yes	9(15.5)	9(4.7)	7.81	0.005*	8.12(1.23-53.30)	0.02*
No	49(84.5)	183(95.3)				
EPDS Diagnosis						
Yes	39(67.2)	17(8.9)	87.36	<0.001*	1.61(0.46-5.70)	0.45
No	19(77.6)	175(91.1)				
<u>Quality care provision</u>						
Staff communicated well						
Yes	12(20.7)	138(71.9)	48.62	<0.001*	0.13(0.03-0.52)	0.004*
No	46(79.3)	54(28.1)				
Felt well supported						
Yes	34(58.6)	161(83.9)	16.52	<0.001*	3.64(0.79-16.79)	0.09
No	24(41.4)	31(16.1)				
<u>Stress during labor</u>						
Virtually unscathed						
Yes	25(43.1)	54(28.1)	4.62	0.03*	7.18(1.08-47.62)	0.04*
No	33(56.9)	138(71.9)				
Excessively long labor						
Yes	54(93.1)	51(26.6)	80.96	<0.001*	12.84(2.84-57.99)	0.001*
No	4(6.9)	141(73.4)				
Distressing experience						
Yes	52(89.7)	92(47.9)	31.77	<0.001*	2.46(0.55-10.99)	0.23
No	6(10.3)	100(52.1)				
Not distressing at all						
Yes	3(5.2)	76(39.6)	24.40	<0.001*	0.35(0.01-7.18)	0.5
No	55(94.8)	116(60.4)				
<u>Women's attributes</u>						
Felt very anxious						
Yes	50(86.2)	76(39.6)	38.73	<0.001*	5.24(1.49-18.44)	0.01*
No	8(13.8)	116(60.4)				
Felt out of control						
Yes	53(91.4)	58(30.2)	67.51	<0.001*	8.83(2.09-37.22)	0.003*
No	5(8.6)	134(69.8)				

Data, *n*(%); CI, confidence interval; OR, odds ratio; CB-PTSD = Childbirth-related PTSD.

\*significance set at  $\leq 0.05$ .

This chapter presented the findings of this study as guided by the study objectives and theoretical model. The study revealed a high prevalence of childbirth-related PTSD. According to diathesis-stress model of the etiology of PTSD that was used to guide this study, the study revealed that complications experienced by mothers is a vulnerability factor for developing childbirth-related PTSD. The results have also shown that over three quarters of the the respondents had given birth to their babies through vaginal delivery, and had excessively long labor with inadequate interventions as a highest predictor of childbirth-related PTSD and a risk factor for childbirth-related PTSD. In the next chapter, the discussion of the study findings will be presented bases on the results presented.

## **Chapter 5**

### **Discussion of findings**

#### **5.1 Introduction**

This chapter presents a discussion of the results of this study. The discussion of the results is based on the aim of the study, its objectives, and the etiology of childbirth-related PTSD has been guided by the diathesis-stress model. The discussion focuses on the findings of: prevalence of childbirth-related trauma and PTSD; PTSD symptoms presentation PTSD symptoms, and etiological factors associated with childbirth-related PTSD. The findings of this study are described and compared for any similarities or differences. The inconsistencies of study findings between this study and other studies are well highlighted by stating the reasons for the differences. This study aimed at assessing psychological consequences of childbirth-related trauma and PTSD among postpartum mothers attending postnatal care clinics at Thyolo District Hospital.

#### **5.2 Discussion of study results**

##### **5.2.1 Prevalence of childbirth-related trauma and PTSD**

Although the birth of a baby is viewed positively in nearly all cultures, research suggests that between 20% and 40% of women find childbirth psychologically traumatic, and 4% of women may develop PTSD as a result (Ayers et al., 2016; Heyne et al., 2022).

This study revealed a high rate of traumatic birth experience (70.4%) in postpartum mothers based on the City BiTS criterion for PTSD. This is a higher rate than those reported in some low- and middle-income countries, namely, Tabriz, Iran (37.0%) (Ghanbari-Homayi et al., 2019), Bushehr, Iran (54.5%) (Modarres et al., 2012) and Brazil (38.5%) (Osório et al., 2022). Furthermore, the rate of traumatic birth experiences is nearly four times for some high-income countries, namely the Netherlands (16.0%) (Rijnders et al., 2008), the UK (20.3%) (Ayers et al., 2018), and Norway (21.1%) (Henriksen et al., 2017). The inconsistency could be that the lower rates of traumatic birth experiences in high-income countries can be attributed to better access to maternal mental health services by postpartum mothers (Chabbert et al., 2021), unlike in low- and middle-income countries like Malawi, where access to maternal mental health care is limited.

Research on postpartum PTSD in low- or middle-income countries (LMIC) is sparse, but studies on the prevalence of post-traumatic stress symptoms after childbirth vary from 1.5% to 36.4% (A. Adewuya et al., 2006; Bayrı Bingöl & Demirgoz Bal, 2020; Dikmen-Yildiz et al., 2017b; Osório et al., 2022). In a meta-analysis, a study from Nigeria by Adewuya et al. (2006), reported that 5.9% of women who attended the 6-weeks postnatal and infant immunization clinics at 6 weeks met the DSM-V criteria for postpartum PTSD diagnosis (Ayers et al., 2016). However, this study found a childbirth-related PTSD prevalence as high as 23.2% (95% CI 17.3% – 28.7%,  $n = 58$ ) based on the City BiTS. This prevalence is higher than that found in Croatia (11.8%) (Nakić Radoš et al., 2020), Turkey (7.9%) (Bayrı Bingöl et al., 2021), England (7.8%) (Ayers et al., 2018), and Israel (2.4%) (Handelzalts et al., 2018), using the same instrument. The variations between the findings could be due to different setting and socio-economic, the way that

healthcare professionals within the delivery care unit treated the mothers; low income and limited resources affecting quality care; high rate of vaginal births as compared to emergency caesarean sections; inadequate assessment for maternal mental health during pregnancy, labor progress, and birth, could be considered as the reasons for the high prevalence of postpartum PTSD among mothers in this study. Unlike in other studies HICs reported lower prevalence demonstrates good economy for quality maternal mental health service provision. Future research should include assessment of risk factor for trauma and PTSD in pregnant women as well as women in labor and delivery to improve their wellbeing.

### **5.2.2 Symptom presentation of childbirth-related PTSD**

This study found PTSD symptoms with overall mean scores of ( $M=15.5$ ,  $Sd=12.4$ ). Similarly, a study sample on the development of a measure, The City BiTS reported a mean score of 11.70 ( $SD 11.06$ ) (Ayers et al., 2018). Evidence has shown that the presentation of PTSD symptoms in relation to childbirth generally resembles formal symptom clusters of PTSD (Ayers et al., 2016; Bayrı Bingöl et al., 2021; Handelzalts et al., 2018; Nakić Radoš et al., 2020; Thiel et al., 2018). In this study, some mothers developed PTSD after traumatic delivery. The following are the DSM-V PTSD symptom clusters: re-experiencing, avoidance, negative cognitions and mood, and hyperarousal (APA, 2013). This study revealed that all mothers experienced PTSD symptom clusters. Consistent with this study, other studies also reported that PTSD symptom clusters were revealed in their respondents (Ayers et al., 2018; Osório et al., 2022). There is scarcity of literature on symptom presentation that contradicts this study findings, hence no information to contrast with. However, this study revealed that re-experiencing symptoms (mean score=5.9,  $SD =$

4.1) was the most eminent, frequently endorsed symptom cluster for development of childbirth-related PTSD. Conversely, Thiel et al. (2018) found that 36% of respondents endorsed the overall re-experiencing symptom cluster as compared to negative cognition and mood being the most frequently endorsed symptom cluster 49%. This inconsistency suggests that childbirth-related PTSD may have been triggered by a traumatic birth experience in mothers rather than a mere abnormal anxiety response in this study.

PTSD peaks at 4-6 weeks postpartum and then falls at 6 months postpartum (Dikmen-Yildiz et al., 2017b). Nevertheless, in this study, most respondents reported having onset of PTSD symptoms in the first 6 months after birth and symptoms lasted for 1-3 months. Consistent with this finding, (Ayers et al., 2018) also found that the onset of PTSD symptoms was within the first 6 months after birth, and the symptoms lasted 3 months or more. It can be argued that the duration of PTSD symptoms found in this study is consistent with the DSM-V criteria for PTSD diagnosis, which stipulate that for an individual to be considered as having PTSD symptoms must last more than a month and should be severe enough to interfere with relationships or work (APA, 2013). There is scarcity of literature on onset of symptoms that contradicts this study findings, hence no information to contrast with. Future research should be on the assessment of risk factors for the experiencing reexperiencing symptom cluster in relation to PTSD.

### **5.2.3 Etiological factors associated with childbirth-related PTSD**

Evidence suggests that mode of delivery or type of delivery has been found to be associated with childbirth-related PTSD. This study found that mode of delivery was associated with childbirth-related PTSD. According to the diathesis-stress model of the

etiology of birth-related PTSD by Ayers et al. (2016), used to guide this study, mode of birth was also linked to labor pains, identified as risk factor for negative childbirth experiences for mothers during birth and for developing PTSD after birth. This is consistent with other studies in a meta-analysis that reported mode of delivery as associated with childbirth-related PTSD (Ayers et al., 2016). Conversely to this study findings, Gankanda et al. (2021) in a study conducted among a cohort of Sri Lankan postpartum mothers, found no significant associations between PTSD and the type or mode of birth. The observed difference could be the differences of socio-economic factors, compared to Sri Lanka, this study was done in a limited resource strained setting with inadequate obstetric care. Additionally, this study found that vaginal delivery as a mode of birth was associated with childbirth-related PTSD. Consistent with this study, Ayers et al. (2016) in a meta-analysis, reported that most women with PTSD symptom profiles had delivered their babies through normal vaginal delivery. Similarly, women who had vaginal births experienced severe PTSD symptoms during the postpartum period (Ginter et al., 2022). Contrary to this study findings, most studies reported that emergency caesarean section was associated with childbirth-related PTSD (Ayers et al., 2016). The inconsistency of the findings could be differences in socio-economic status, Sri Lanka is more economically developed where more women attained higher education, and that maternity services are more advanced to even allow women demand for their preferred mode of delivery as compared to Malawi with limited resources for standard care provision. These findings can be explained by some women's preference for the caesarean section over vaginal delivery due to tokophobia in Malawi. According to Martínez-Vázquez, Rodríguez-Almagro, Hernández-Martínez, Delgado-Rodríguez, et al. (2021), some intrapartum clinical practices related to

dehumanized treatment that arise during vaginal birth increase the incidence of postpartum PTSD among mothers. As such, vaginal delivery may become a risk factor, especially when the woman's preference was to give birth via caesarean section (Olieman et al., 2017). Some women in countries with low medical resources who have to undergo caesarean section may consider themselves privileged to have received a potentially life-saving surgery (Ginter et al., 2022; König, 2019). In this regard, caesarean section may become a protective factor against childbirth-related PTSD (Martinez-Vázquez, Rodríguez-Almagro, Hernández-Martínez, & Martínez-Galiano, 2021). However, this may not always be the case in certain settings. Future research on mothers' perception of mode of delivery in regards to cause of emotional fear should follow, especially the associated factors between a vagina delivery and childbirth-related trauma and PTSD.

Apart from the mode of delivery, obstetric factors (OR 11.86, 95% CI 6.36–22.10) in a Nigerian study by Adewuya et al. (2006) complications were previously found to be most associated with the occurrence of PTSD after childbirth (Ayers et al., 2016). This is consistent with the findings in this study that, medical complications among mothers during pregnancy strongly predicted childbirth-related PTSD (OR = 8.12 (1.23–33.30)], with mothers who had complications having nine chances of experiencing childbirth-related PTSD compared to those who did not. According to the diathesis-stress model of the etiology of birth-related PTSD by Ayers et al. (2016), used to guide this study, having complications was the vulnerability factor for developing PTSD after birth. This is supported by Shiva et al. (2021), who found that complications during pregnancy and childbirth were predictors of PTSD after birth. Conversely, a Srilankan study by (Gankanda et al., 2021), found that complications in pregnancy did not show any significant

association with PTSD following childbirth. This variation may be attributed to the limited availability of quality perinatal health care in LMICs with poor socio-economic status like Malawi, as compared to Srilanka with better economy. For instance, limitations in proper assessment during pregnancy and lack of timely attendance of antenatal care could result in missing out problems that could later lead to complications. With poor socio-economic status also lead to lack of resources to enable women access services in time. Antenatal attendance during the first trimester is still low in most of low and middle-income countries especially Sub-Saharan region including Malawi, according to the 2015–16 Malawi Demographics and Health Survey (MDHS) (NSO/Malawi & ICF, 2017). Bhaskar et al. (2015) and Branco da Fonseca et al. (2014) asserted that women with few or inadequate antenatal care visits and those who start antenatal care late in the first trimester have poorer pregnancy outcomes, including complications (Chimatiro et al., 2018). Consequently, an area of future research could be on the identification of risk factors associated with complications in pregnancy that would help reduce the incidence of childbirth-related PTSD among postpartum mothers.

### ***Experience of childbearing***

A negative experience can be disempowering and has a negative impact on women's self-esteem, self-efficacy, and mental health (Chabbert et al., 2021). This study found that experience of childbearing was significantly associated with childbirth-related PTSD, which included coming through childbirth not virtually unscathed (scathed), excessively long labor, feeling very anxious during labor and birth, feeling out of control during labor and birth, and being well communicated to staff during labor and birth. According to the diathesis-stress model of the etiology of birth-related PTSD by Ayers et

al. (2016), used to guide this study, experience of childbearing is the risk factor in birth for developing PTSD after birth.

This study found that “coming through childbirth not virtually unscathed (scathed)” was significantly associated with childbirth-related PTSD. This shows that mothers had negative experience of childbirth, in this case the experience of being virtually scathed is an indication of having a risk factor in birth associated with childbirth-related PTSD according to diathesis-stress model. Some mothers experienced perineal tears or episiotomies during childbirth. This study is supported by other studies that have found that perineal tears are associated with the onset of PTSD after birth (Hernández-Martínez et al., 2020; Khsim et al., 2022). Delivering a baby vaginally leads to a spontaneous tear due to pressure on the perineum or by making a surgical cut, known as episiotomy, which aims to facilitate vaginal birth and prevent severe spontaneous tears to happen (Choudhari et al., 2022; Royal College of Midwives, 2012). However, the pain and fear that endures both in tearing or episiotomy performance and repair leads to a more distressful experience. Moreover, many potentially stressful procedures, such as perineal tear and episiotomy repair, become worse when no suitable analgesia or medical care is available. These findings are contrary to other studies conducted in HICs that were reported in a meta-analysis by Ayers et al. (2016), that having sustained perineal tears or episiotomies was not associated with childbirth-related trauma. This inconsistency might be due to fact that, compared to high-income settings, episiotomy rates are high in low- and middle-income countries (LMICs) such as Malawi (Khwepeya et al., 2018), which surfaces an increased adversity of conditions affecting the health and well-being of mothers living in resource-poor settings with limited resources (Aguiar et al., 2019). Additionally, in LMICs, the high

rates of episiotomies in hospitals are associated with a higher risk of birth-related perineal trauma, raising concerns regarding the quality of care women receive in these settings. (Aguiar et al., 2019). Most of the time, medicines are in short supply, and pain relief may not be provided by midwives or other health workers (Khwepeya et al., 2018; Kumbani et al., 2012). The risk of complications associated with birth-related perineal trauma is also likely to increase in poorer settings because of limited access to adequate resources such as optimal suturing materials, poor environmental and household circumstances, lack of sanitation, and malnutrition (UNICEF, 2009; World Health Organization & United Nations Population Fund, 2009). Future research which shall look into ways that midwives and other health care professionals can improve and increase the prevention of harm, such as perineal tears during birth, while simultaneously reducing the incidence of childbirth-related trauma and PTSD.

Gankanda et al. (2021) reported that there were no significant associations between PTSD and the duration of labor among a cohort of Srilankan postpartum mothers. On the contrary to these findings, this study found that experiencing “excessively long labor’ was the strongest predictor of childbirth-related PTSD with mothers who had long labor having 13 times the chance of mothers experiencing childbirth-related PTSD after birth compared to those who did not. The inconsistency in the findings between these studies derives from differences in socio-demographics, in a study of Srilankan women were highly educated and able to understand the care given. Whereas in this study, with low level of education of some women, they were not critical of the care they needed to receive because they could not demand for the standard care for action before labor prolonged. Furthermore, different obstetric care models and socio-economic differences played a role in this study,

women were allowed to labor for long before an intervention leading them to experience fear, and also culturally they believe that women in labor need to experience the labor regardless of the negative effects, unlike women in a Srilankan study who accessed care in good maternity services with an expectation of good quality services. Consistent with this study findings, it is reported that women may perceive their labor as traumatic for many reasons, such as the mode of birth, as clearly first, and more prolonged labor is more likely to be perceived as more traumatic (Sanni et al., 2022). Similarly Modarres et al. (2012), as reported in meta-analysis found that prolonged labor duration can increase the likelihood of unfavorable birth experiences, resulting in women experiencing post-traumatic stress symptoms (Ayers et al., 2016). This study findings is in line with diathesis-stress model used that states that, some of the unfavorable birth experiences during prolonged labor involve severe pain experienced during the birth, and maternal feeling of being obliged to endure this pain, and labor can be a factor in the occurrence of neurological problems and PTSD following childbirth (Sanni et al., 2022). Furthermore, fear of intolerable pain, injury, or death of the infant or the woman during active labor has sometimes been associated with poor ability to cope with stress following enervated uterine contractility and is consequently suspected to prolong active labor (Sanni et al., 2022). Generally, fear causes stress and anxiety to mothers, both of which are factors that have been found to distort contractions, prolong labor, and render one's birth experience negative (Shakarami et al., 2021). Additionally, there is need for future research on knowledge of women in labor on the standard obstetric care required of them as provided by health professionals.

Several studies have shown that depression and anxiety are some factors that can trigger mental illness (Chan et al., 2020). This is corroborated by Chorwe-Sungani &

Chipps, 2018; Ng'oma et al. (2019) in Malawian studies on perinatal mental health among pregnant women, who asserted that anxiety or depression was the strongest predictor of depression in pregnant women. This study found that “feeling very anxious during labor and birth” was associated with childbirth-related PTSD. According to this study, feeling very anxious while in labor is one of the risk factors during birth for childbirth-related PTSD as guided by the diathesis-stress model used. Additionally, Shaban et al. (2013), documented in a systematic review by Khsim et al. (2022), established that women with moderate-to-severe anxiety had four times higher rates of PTSD after birth than women without anxiety. Documented in a systematic review by Khsim et al. (2022), in a study among Canadian women by Verreault et al. (2012), higher anxiety sensitivity emerged as a significant predictor in the development of PTSD after child birth. This is similar with a study by Malaju et al. (2022), who found that depression and anxiety are risk factors associated with postpartum PTSD among women in Northwest Ethiopia. The anxiety symptoms might be due to childbirth-related negative emotions which could overwhelm the mother and induce dissociative symptoms that interfere with the integration of traumatic memories (Malaju et al., 2022). However, other studies have reported an inverse direction of relationship between anxiety and childbirth-related PTSD, for instance a study by Sumner et al. (2012) did not find any association of anxiety and childbirth-related PTSD in their study among Latinas (Malaju et al., 2022). The contradictory findings with this study could be due to different data collection instruments used in the studies. Furthermore, different settings considering that Latinas are far much better in socio-economics liable of getting quality care hence not stressed as compared to Malawi where some women experience the care and hospital environment as stressful. Therefore, future research is

needed to establish the trend of the relationship between postpartum depression, anxiety and postpartum PTSD.

Personal control is another factor related to satisfaction with the childbirth experience. Perceived control during labor is a major predictive factor for the subjective experience of childbirth (Chabbert et al., 2021). However, this study found that “feeling out of control during labor and birth” was significantly associated with a diagnosis of childbirth-related PTSD. Therefore, the diathesis-stress model points out the negative birth experienced due to perceived lack of control as a risk factor during birth for childbirth-related PTSD. Consistent with the findings of this study, a Nigerian study by Adewuya et al. (2006) found that poor maternal experience of control during childbirth was significantly associated with PTSD after childbirth (Ayers et al., 2016). This is corroborated by Harris and Ayers (2012), who found that women were at a higher risk of PTSD if they experienced fear and lack of control during the hotspot (Ayers et al., 2016). Furthermore, the performance of episiotomies during birth made mothers feel out of control of their labor and birth in this study, which coincides with Chabbert et al. (2021), who found that the performance of episiotomy was related to a more negative childbirth experience. Unlike in the study by Gankanda et al. (2021), no association was found between poor maternal experience of control during childbirth and childbirth-related PTSD. The findings of this study contradict with a Srilankan study because of different socio-economic and cultural backgrounds with different perception of things. Malawians would feel that they do not have control over care given by health professionals hence not demands for, as compared to Srilanka where women could demand for a service that they will pay for and have control over. There is need for future research using birth stories to

explain if positive support may be critical in improving women's perceived control and support, reducing their perceived trauma.

Evidence suggests that women worldwide experience mistreatment during childbirth, including physical abuse, verbal abuse, discrimination, non-consented procedures, and non-supportive care (Bohren et al., 2015). This study found that being “well communicated by staff during labor and birth” was a protective factor in the occurrence of childbirth-related PTSD. In line with the diathesis-stress model used in this study, poor communication is a birth risk factor, which is associated with poorer birth outcomes and a greater risk of childbirth-related PTSD, as is mistreatment during child birth (Garthus-Niegel et al., 2020). These results coincide with those found by Martinez-Vázquez et al. (2021) in a study on obstetric violence, in which they found an association between childbirth-related PTSD and lack of communication from staff, specifically experiencing verbal obstetric violence being the most likely to affect the development of PTSD. This finding is corroborated by Ayers et al. (2016) who in their meta-analysis reported that the quality of interactions with medical staff was highly correlated with postpartum PTSD. This may reflect the specific behaviors and characteristics of medical staff that will invariably cause negative reactions among mothers (Ayers et al., 2016). Consistent with the findings of this study, a study conducted among a cohort of Srilankan postpartum mothers who experienced verbal abuse, considered poor communication, was found to be associated with childbirth-related PTSD (Gankanda et al., 2021). Documented in Bohren et al. (2019), more than a third of women reported physical abuse, verbal abuse, stigma or discrimination during labor, and vaginal examinations and procedures such as caesarean section, episiotomy, induction, and without consent. In a study by van Dinter-

Douma et al. (2020), appropriate verbal treatment, providing concrete and understandable information, and ensuring informed consent were most frequently used to reduce fear or the likelihood of a traumatic birth experience. According to the findings reported by Chabbert et al. (2021), a good relationship with healthcare professionals and feeling the professionalism of midwives are also predictors of positive childbirth experiences. It should be noted that a woman's relationship with maternity care providers and the maternity care system during pregnancy and childbirth is vitally important, as women's experiences with caregivers' communication at this time have an impact on empowering and comforting, or inflicting lasting damage and emotional trauma, adding to or detracting from women's confidence and self-esteem. The WHO (2018) lists several recommendations on intrapartum care for a positive childbirth experience, including respectful maternity care, effective communication, companionship during labor and childbirth, and continuity of care. The perception of mothers who experience good communication from staff may make them feel protected and empowered in the presence of possible stressful events that arise, reducing the possibility of stress appearing during childbirth and preventing PTSD after birth. Since there is limited research found to contrast with these results, there is need for future research to establish on how women in labor and delivery perceive treatment from health professionals in labor and delivery rooms.

### **5.3 Strengths and limitations of the study**

#### **5.3.1 Strengths of the study**

This is the first study to be done in Thyolo district and in Malawi, has never been done anywhere else in Malawi, on assessing psychological consequences of childbirth-

related trauma and PTSD among postpartum mothers. Furthermore, data were collected using the INTERSECT questionnaire, which incorporated the City BiTS according to the DSM-V criteria for the diagnosis of childbirth-related PTSD, used in similar studies across the world; thus, this study provides valid data on the prevalence of childbirth-related trauma in Malawi. This was a quantitative study that recruited 250 postpartum mothers in their 6-12 weeks postpartum period at Thyolo District Hospital, which made it possible to collect data at one point in time without causing much inconvenience to the participants. The fact that the study was carried out at a district hospital that also provides postnatal care services and specialist mental health and psychiatric care, created the opportunity to include such a large number of mothers who came from across the district, from which the findings could be generalized to other settings.

### **5.3.2 Limitations of the study**

This study may have been affected by selection bias because it recruited postpartum mothers who presented at postnatal care clinics and excluded those in the community. However, the sample was considered appropriate because the study investigated a facility-based assessment of childbirth-related trauma and PTSD. Furthermore, the interviewer administration of the questionnaire may have influenced postpartum mothers to provide answers that they deemed socially acceptable in the presence of the interviewer. Additionally, postpartum mothers' willingness to reveal sensitive information may have been affected by the presence of the interviewer. This study may also have been affected by recall effects since the interviewers asked postpartum mothers to report issues about their health from as far back as the previous months, labor and birth experience, and, in some instances, childhood. Despite these limitations, face-to-face interviews remain an

appropriate method for administering the questionnaire in the local context because most postpartum mothers have low literacy levels.

#### **5.4 Conclusions of the study**

The findings of this study have an impact on how to manage women during pregnancy, labor, and birth, with regard to the requirements that need to be addressed for the management of childbirth-related trauma and PTSD. Assessing childbirth-related trauma and PTSD would help to address the risk factors, thereby reducing the burden of childbirth-related trauma among mothers through promotion, prevention, early intervention, and treatment. Given the prevalence of childbirth-related trauma and PTSD reported in this study, early screening and management of risk and protective factors are crucial. More importantly, increasing awareness of risk and protective factors can reinforce the development of screening strategies and mental health targeted interventions for childbirth-related trauma and PTSD among postpartum mothers in the Thyolo district in Malawi.

#### **5.5 Recommendations of the study**

The following recommendations regarding clinical practice, nursing and midwifery education, and future nursing research were made based on the findings of this study:

##### **5.5.1 Clinical practice**

- Midwives and other health care professionals should assess childbirth-related trauma and PTSD using the City BiTS, which is based on the DSM-V criteria for diagnosing childbirth-related PTSD; be aware of risk factors for childbirth-related trauma and

PTSD to prevent them where necessary through provision of quality care during pregnancy, labor, and birth; and assess childbirth-related PTSD postnatally.

### **5.5.2 Nursing and Midwifery education**

- Midwives should be involved in ongoing education to assess childbirth-related trauma and PTSD using the City BiTS, which is based on the DSM-V criteria for diagnosing childbirth-related PTSD.
- Midwifery educators also need to ensure that curricula for pre-service midwifery training adequately prepare midwives to assess childbirth-related trauma in labor and delivery rooms, and PTSD in postnatal clinics.

### **5.5.3 Nursing research**

- Further research should be conducted to assess midwives' perceptions of the quality of care provision during pregnancy, labor, and birth with regard to childbirth-related trauma and PTSD.

This chapter was about discussion of findings of this study based on the results. The discussion highlighted on the comparison of results and differences with other study findings. However, it has been clearly stated that other study findings differed from this study findings, this has been highlighted by stating the reasons for such differences; for instance some of them were due to socio-demographic, socio-economic factors, and cultural factors. Additionally, studies that appeared to have similar findings with this study have also been clearly stated as being in support. Recommendations for future research have been suggested based on the study limitations related to the variables under discussion

in this chapter. This study used the diathesis-stress model of the etiology of birth-related PTSD to guide this study, mode of birth and childbearing experience were the risk factors in birth, and complications were the vulnerability factor for developing PTSD after birth. This study aimed at assessing psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital.

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## Appendices

### Appendix 1: Data collection tool (English version)

#### International Survey of Childbirth-related Trauma (INTERSECT)



This questionnaire asks about you, your birth, baby, experiences, feelings, and support. Your answers are completely confidential. Thank you for being part of the study

**Q1** Date of completion (please write as dd/mm/yyyy)

**Q2** I confirm I am 16 years old or over:

- Yes
- No

*(If you have answered no to this question, please hand this questionnaire back to the researcher. You must be over 16 to take part in this survey).*

**Q3** I confirm that I have had a baby in the previous 6-12 weeks:

- Yes
- No

**Q4** I confirm that I agree to take part in this study:

- Yes
- No

#### **BIRTH AND YOUR BABY**

**These questions will ask about your recent birth and baby.**

**Q5** In your recent birth, did you have?

- 1 baby
- Twins
- More than 2 babies

**Q6** What date was your baby born? (Please write dd/mm/yyyy).

**Q7** How many weeks pregnant were you when your baby was born? (please state this in weeks)

**Q8** How was your baby born?

- Vaginal birth

- Assisted birth, for example forceps, ventouse
- Emergency caesarian
- Elective caeserean

**Q9** Did you have any medical complications during this pregnancy/childbirth?

- Yes, minor complications.
- Yes, major complications.
- No

*If you answered no to this question, please move on to question 11.*

**Q10** Are these complications still affecting you?

- Yes
- No

**Q11** Did your baby have any medical complications during this pregnancy/childbirth?

- Yes, minor complications.
- Yes, major complications.
- No

If you answered no to this question, please move on to question 13.

**Q12** Are these complications still affecting your baby?

- Yes
- No

### **YOUR EMOTIONAL WELLBEING**

This questionnaire asks about your experience during the birth of your most recent baby. It asks about potential traumatic events during (or immediately after) labor and birth, and whether you are experiencing symptoms that are reported by some women after birth. Please tick the responses closest to your experience.

**Q13** Overall, how traumatic did you find your birth?

- 0 Not at all traumatic
- 1
- 2
- 3
- 4
- 5 Moderately traumatic
- 6
- 7
- 8
- 9
- 10 Extremely traumatic

**Q14 During your labor, birth and immediately afterwards:**

Did you believe you or your baby would be seriously injured?

- Yes
- No

**Q15** Did you believe you or your baby would die?

- Yes
- No

**Q16 Symptoms about the birth**

The next question ask about the symptoms you might have experienced. Please indicate how often you experienced the following symptoms **in the last week**: Please note that, although these questions refer to birth, many women have symptoms of events that happened just before or after birth. If this is the case for you, and the events were related to pregnancy, birth, or the baby, please answer for these events.

	(not at all) (0)	(once) (1)	(2-4 times) (2)	(5 or more times) (3)
Recurrent unwanted memories of the birth (or parts of the birth) that you can't control				
Bad dreams or nightmares about the birth (or related to the birth)				
Flashbacks to the birth and/or reliving the experience				
Getting upset when reminded of the birth				
Feeling tense or anxious when reminded of the birth				
Trying to avoid thinking about the birth				
Trying to avoid things that remind me of the birth (e.g. people, places, TV programs)				
Not able to remember details of the birth				
Blaming myself or others for what happened during the birth				
Feeling strong negative emotions about the birth (e.g. fear, anger, shame)				

**Q17 Symptoms that began or got worse since the birth**

	(not at all) (0)	(once) (1)	(2-4 times) (2)	(5 or more times) (3)
Feeling negative about myself or thinking something awful will happen				
Lost interest in activities that were important to me				
Feeling detached from other people				
Not able to feel positive emotions (e.g. happy, excited)				
Feeling irritable or aggressive				

Feeling self-destructive or acting recklessly				
Feeling tense or on edge				
Feeling jumpy or easily startled				
Problems concentrating				
Not sleeping well because of things that are not due to the baby's sleep pattern				
Feeling detached or as if you are in a dream				
Feeling things are distorted or not real				

**If you have any of these symptoms:**

**Q18** When did these symptoms start?

- Before the birth
- In the first six months after birth
- More than six months after birth
- Not applicable (I have no symptoms)

**Q19** How long have these symptoms lasted?

- Less than 1 month
- 1 to 3 months
- 3 months or more
- Not applicable (I have no symptoms)

**Q20** Do these symptoms cause you a lot of distress?

- Yes
- No
- Sometimes

**Q21** Do they prevent you from doing things you usually do (e.g., socializing and daily activities)?

- Yes
- No
- Sometimes

**Q22** Could any of these symptoms be due to medication, alcohol, drugs, or physical illness?

- Yes
- No
- Maybe

**The following questions will ask you about your birth:**

**Q23** I came through childbirth virtually unscathed.

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q24** I thought my labor was excessively long

- Strongly agree
- Agree
- Neither agree nor disagree.

- Disagree
- Strongly disagree

**Q25** The delivery room staff encouraged me to make decisions about how I wanted my birth to progress.

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q26** I felt very anxious during my labor and birth

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q27** I felt well supported by staff during my labor and birth

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q28** The staff communicated well with me during labor

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q29** I found giving birth a distressing experience:

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q30** I felt out of control during my birth experience

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q31** I was not distressed at all during labor

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q32** The delivery room was clean and hygienic

- Strongly agree
- Agree
- Neither agree nor disagree.
- Disagree
- Strongly disagree

**Q33** Apart from the medical staff, who was with you at your birth? (Please select all that applies.)

- Partner
- Friend
- Relative
- Other
- No other

If you were alone during your birth, please move on to question 34.

**Q34** How much support did you receive from your birth companion(s) listed above during labor?

- None at all
- A little
- A moderate amount
- A lot
- A great deal

**The following questions will ask about your feelings.**

We would like to know more about your feelings. Please mark the answer that comes closest to how you have felt in the past seven days, and not just how you feel today.

**In the past 7 days.**

**Q35** I have been able to laugh and see the funny side of things:

- As much as I could always.
- Not quite so much now
- Definitely, not so much.
- Not at all

**Q36** I have looked forward with enjoyment to things:

- As much as I ever did
- Rather less than I used to.
- Definitely less than I used to do.
- Hardly at all

**Q37** I have blamed myself unnecessarily when things went wrong:

- Yes, most of the time
- Yes, some of the time
- No, not very often
- No, never

**Q38** I have been anxious or worried for no good reason:

- No, not at all
- Hardly ever
- Yes, sometimes
- Yes, very often

**Q39** I have felt scared or panicky for no very good reason:

- Yes, quite a lot
- Yes, sometimes
- No, not much
- No, not at all

**Q40** Things have been getting on top of me:

- Yes, most of the time I have not been able to cope at all.
- Yes, sometimes, I have not been coping as well as usual.
- No, most of the time I coped quite well.
- No, I have been coping, as well as ever.

**Q41** I have been so unhappy that I have had difficulty sleeping:

- Yes, most of the time
- Yes, sometimes
- Not very often
- No, not at all

**Q42** I have felt sad or miserable:

- Yes, most of the time
- Yes, sometimes
- Not very often
- No, not at all

**Q43** I have been so unhappy I have been crying:

- Yes, most of the time
- Yes, quite often
- Only occasionally
- No, never.

**Q44** The thought of harming myself has occurred to me:

- Yes, quite often
- Sometimes
- Hardly ever
- Never

**Q45 Previous trauma**

Many people have lived through or witnessed stressful and traumatic events at some point in their lives. Below is a list of traumatic events: Please tick the box next to the events that have happened to you or that you have witnessed.

- Serious, life-threatening illnesses (heart attack)
- Physical Assault (attacked with a weapon, severe injuries from a fight, held at gunpoint, etc.)
- Sexual assault (rape, attempted rape, forced sexual act with a weapon)
- Military combat or living in war zone
- Child abuse (severe beatings, sexual acts with someone five years older than you, etc.)
- Serious accident injury or death from a car, at work, house fire, etc.)
- severe hurricanes, floods, earthquakes, etc.)
- Other traumas (Please briefly describe)

**These questions will ask you about your general health**

**Q46** Have you previously been diagnosed with a psychological or mental health problems?

- Yes
- No
- Don't know

**Q47** Do you currently have a psychological or mental health problems?

- Yes
- No
- Don't know

**Q48** Have you received professional help or treatment for your psychological or mental health problems?

- Yes currently
- Yes in the past
- No
- Not applicable

*If you answered No, or Not applicable to this question, please move on to question 50.*

**Q49** If you are currently receiving any help or treatment, what type of treatment is it? (Select all that apply)

- Medication
- Support from a professional (e.g., counseling and talking therapy).
- Both

**About you**

Finally, we would like to know a bit more information about you.

**Q50** What is your age? .....

**Q51** In your country of residence, which of the following best describes your ethnic/racial affiliation?

- Ethnic/racial majority (e.g., **Please fill in with the ethnic majority group of your country, for example White in the UK**)
- Ethnic/racial minority
- Not sure

**Q52** Are you currently living in your country of birth?

- Yes (1)
- No (0)

**Q53** Which of the following best describes where you live?

- Town, urban
- Town, sub-urban
- Rural area

**Q54** Which of the following best describes your education?

- No formal education
- Elementary/primary education
- High/secondary school education
- Higher education

**Q55** Compared to others in your country of residence, is your household income:

- Below average
- Average
- Above average

**Q56** What is your relationship status?

- Married or civil partnerships
- In a relationship but not living together.
- Single
- Widowed
- Separated/divorced
- Other

**Q57** Do you have any other children (not including this baby)?

- Yes (1)  
i) How many? .....
- No (0)

*If you answered no to this question, please move on to question 59.*

**Q58** Would you consider the birth of any of your other children traumatic?

- Yes (1)
- No (0)

**Q59** Have you ever experienced pregnancy loss, such as miscarriage or stillbirth?

- Yes (1)
- No (0)

Thank you for your consideration. Your participation is very important, and we appreciate the time you took to complete this questionnaire.

**Q60** If there is anything else you would like to tell us or comment on regarding your birth or how you are feeling, please add it here:

.....  
.....  
.....

## Appendix 2: Data collection tool (Chichewa version)

### International Survey of Childbirth-related Trauma (INTERSECT)



Mafunso awa afunsidwa kwa inu pofuna kudziwa za ndondomeko ya kubereka kwa mwana uyu, komanso kudziwa za mwanayu, nyengo zomwe munadutsamo pa nthawi ya kubereka, maganizo anu komanso chisamaliro chomwe munalandira. Mayankho anu adzakhala otetezedwa komanso kusungidwa mwa chinsisi.

**Zikomo kwambiri chifukwa chotenga gawo mu kafukufukuyu.**

**Q1** Tsiku ..... (dd/mm/yyyy).

**Q2** Ndikuvomeleza kuti ndili ndi zaka zoposera khumi zisanu ndi chimodzi (16)

- Eya
- Ayi

*(Ngati mwayankha kuti ayi pa funso limeneli, bwezani pepala la mafunso kwa opangitsa kafukufuku. Munayenera kukhala ndi zaka zoposera khumi zisanu ndi chimodzi zimene zili zovomerezeka kuti munthu atenge nawo gawo mu kafukufuku wathu).*

**Q3** Ndikuvomeleza kuti ndinabeleka ma sabata asanu ndi imodzi kapena masabata khumi ndi awiri apitawo (6-12 weeks).

- Eya
- Ayi

**Q4** Ndikuvomeleza kutenga nawo gawo pa kafukufukuyu.

- Eya
- Ayi

### **ZOKHUDZA UBELEKI WANU NDI MWANA WANU**

Mafunso otsatira akhudzana ndi kubeleka kwanu kwa panopa ndi mwana.

**Q5** Kubeleka kwanu kwapanopa munabeleka ana angati?

- m'modzi
- mapasa.
- kuposera awiri.

**Q6** Mwana wanu anabadwa liti) (Yambani ndi tsiku/mwezi/chaka.. (dd/mm/yyyy).

**Q7** Mwana wanu anabadwa mimba yamasabata angati? (dd/mm/yyyy).

**Q8** Munachila munjira yanji?

- Kuchila bwinobwino (njira ya chilengedwe).
- Kuchila mothandizidwa.
- Kuchila ndi mpeni mwadzidzidzi (opares honi).
- Kuchila ndi mpeni mokonzekela.

**Q9** Muli oyembekezera ndi panthawi yobeleka munakumanako ndi mavuto okhudza za umoyo wanu?

- Eya vuto laling'ono.
- Eya vuto lalikulu.
- Ayi.

*(Ngati Ayi, pitani pa funso nambala 11)*

**Q10** Mavuto amenewa mukukumana nawobe?

- Eya.
- Ayi.

**Q11** Panali vuto lililonse kwa mwana mukuyembekezera kapena atangobadwa kumene?

- Eya vuto laling'ono.
- Eya vuto lalikulu.
- Ayi.

*(Ngati Ayi, pitani pa funso nambala 13.)*

**Q12** Kodi mwanayu akupezanabe ndi mavuto amenewo?

- Eya.
- Ayi.

**ZOKHUDZA M'MMENE MUNACHILANDILIRA MMALINGALIRO**  
**KUMBALI YA UBEREKI WANU**

Mafunso otsatilawa afufuza zokhudza ubeleki wanu wapanopa, panali nyengo zowawitsa zimene munakumana nazo pobeleka, kapena mutangobeleka kumene komanso ngati mukukumana ndi mavuto omwe azimayi ena amakumana nawo akabeleka kumene. Chongani mokhudzana ndi zomwe munadutsamo.

**Q13** Kodi nyengo zowawitsa nthawi ya ubeleki wanu mungakufotokoze motani?

- 0 Palibe nyengo yowawitsa.
- 1
- 2
- 3
- 4
- 5 Nyengo yowawitsa pang'ono.
- 6

- 7
- 8
- 9
- 10 Nyengo yowawitsa kwambiri.

**Q14** Matenda atayamba, nthawi yobeleva ndi mutangobeleleva kumene Munakhulupililapo kuti inu kapena mwana wanu akhoza kuvulala.

- Eya.
- Ayi.

**Q15** Munayamba mwakhulupilirapo kuti inu kapena mwana wanu akhoza kumwalira?

- Eya.
- Ayi.

**Q16 Zizindikilo zokhudza ubelevi.**

Mafuso otsatilawa afufuza za zizindikilo zomwe munakumana nazo panthwawi ya ubelevi wanu. Tchulani kuti munakumana ndi zindikiro zimenezi kangati **mu sabata yapitayi**. Dziwani izi: Ngakhale mafusowa akukhudzana ndi za ubelevi, amayi ambiri amakhala ndi zizindikilo asanabeleva kapena atangobeleleva kumene. Ngati zinali choncho ndi inu nthawi yomwe mukuyembekezera, pobereleva kapena kukhudzana ndi mwana yankhani mafuso otsatilawa.

	Palibe (0)	Kamodzi (1)	Kawiri mpaka kanayi (2)	Kupitilila kasanu (3)
Kukumbukira zoipa zinachitika pa nthawi yobereleva.				
Maloto oyipa okhudzana ndi nthawi yobeleva				
Kukumbikila nthawi yobeleva kapena kudusa munyengo zake.				
Kukhumudwa mukakumbusidwa za nthawi yakubeleva.				
Kukhala ndi mantha mukakumbutsidwa nthawi yobeleva.				
Kupewa kuganiza za nthawi yobeleva.				
Kupewa zinthu zokukumbutsani nthawi yobeleva (e.g. anthu, malo, kanema).				
Kusakumbukila zinachitika nthawi yobeleva.				
Kutenga inu kapena ena olakwa pa zomwe zinachitika pa nthawi yobeleva.				

Kudziva kusakwanitsidwa ndi ubereki wanu (mantha, mkwiyo, manyazi)				
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**Q17** Zizindikiro zomwe zinayamba ndiposo kupitilila mutabereka.

	Palibe (0)	Kamodzi (1)	Kawiri mpaka kanayi (2)	Kupitilila kasanu (3)
Kuziganizila zoipa kapena kumangoganiza kuti choipa chichitika.				
Kusiya kukonda zinthu zomwe zinali zofunikila kwa ine.				
Kuzipatula pagulu.				
Kukanika kukhala osangalala Kapena wokondwa.				
Kukhala okwiya msanga komaso wankhaza.				
Kufuna kuwononga moyo wanu kapena kupanga zinthu mosalabada.				
Kukhala okhumudwa kapena odandaula.				
Kumangokhala wamantha ndi chilichonse.				
Kusakhala ndi chidwi pa zinthu.				
Kumakanika kugona koma osati chifukwa chakuti mwana akuvuta.				
Kuzimva kusalidwa kapena kumakhala ngati ukulota.				
Kumaona ngati zinthu sizikuchitika Kumaona zibalubalu.				

**Ngati muli ndi zizindikiro zina mwa izi.**

**Q18** Zizindikiro zimenezi zinayamba liti?

- Ndisanabeleke.
- Miyezi isanu ndi umodzi yoyambilila nditabeleka kumene.
- Kupitilila miyezi isanu ndi umodzi nditabeleka.
- Ndilibe zizindikiro zilizonse.

**Q19** Zizindikiro zimenezi zinakhala nthawi yayitali bwanji?

- Osaposeera mwezi umodzi.
- Mwezi umodzi mpaka miyezi.
- Miyezi itatu kapena kuposela apo.
- Ndilibe zizindikiro zilizonse.

**Q20** Kodi zizindikiro zimenezi zimakupatsani mavuto aliwonse?

- Eya.
- Ayi.
- Nthawi zina.

**Q21** Zimakukanikitsani kuchita zinthu zomwe mmachita kale? (e.g.Kucheza ndi anzanu, ntchito za tsiku ndi tsiku).

- Eya.
- Ayi.
- Nthawi zina.

**Q22** Kodi zizindikiro zimenezi zingakhale kuti zinayamba chifukwa cha mankhwala, mowa, mankhwala ozunguza bongo kapena matenda

- Eya.
- Ayi.
- Nthawi zina.

**MAFUNSO OTSATIRAWA AFUFUZA ZA UBELEKI WANU**

**Q23** Ndinabeleka bwinobwino osavulala.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q24** Ndimaona ngati matenda anga anatenga nthawi yayitali.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q25** Othandizila anandilimbikitsa kuti ndipange chiganizo cha mmene ndikufunila kuti ubeleki wanga uyendele.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q26** Ndinali ndi nkhawa/ mantha nthawi ya matenda komaso ubeleki wanga.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q27** Ndinasamalidwa bwino ndi ogwira ntchito ku chipatala nthawi ya matenda komaso ubeleki wanga.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q28** Ogwira ntchito amandiyankhula bwino nthawi ya ubeleki wanga.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q29** Mnaona kuti kubeleka ndi chiphinjo chokumana nacho pa umoyo

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q30** Ndinalephela kuzigwira nthawi yaubeleki wanga.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q31** Ndinalibe nkhwana nthawi yobeleka.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q32** Chipinda chobelekella chinali chaukhondo.

- Ndikugwilizana nazo kwambiri.
- Ndikugwilizana nazo.
- Ndili pakatikati.
- Sindikugwirizana nazo.
- Sindikugwilizana nazo kwambiri.

**Q33** Kupatula ogwira ntchito kuchipatala, munali ndi ndan nthawi yaubeleki wanu? (Sankhani mose moyenela)

- Amuna anga.

- Mzanga.
- M'mbale wanga.
- Ndinali ndekha.
- Ena.

*Ngati munali nokha pa nthawi yomwe mumabeleka (pitani pa funfo nambala 34). If you were alone during your birth, please move on to question 34.*

**Q34** Kodi pa anthu mwawatchulawa anakuthandiza motani nthawi yomwe mumabeleka?

- Palibe.
- Pang'ono zedi.
- Pang'ono.
- Kwambiri.
- Kwambiri zedi.

### **MAFUNSO OTSATILAWA AFUFUZA ZA MOMWE MUKUMVERA**

Tikufuna kudziwa zambiri za momwe mukumvera/ munamvera. Chongani yankho lomwe likukhudzana ndi momwe munamvela pamasiku asanu ndi limodzi apitawa osati momwe mukumvera lero lokha.

**Pa masiku asanu ndi limodzi apitawa.**

**Q35** Ndakhala munthu okondwa

- Monga ndinkasangalalila nthawi zonse.
- Sindikusangalala ngati kale.
- Sindikusangalalilatu.
- Palibe.

**Q36** Ndikumakhala okondwera ndi zinthu

- Monga mwa nthawi zones.
- Mochepekela ngati kale.
- Mochepetsa ngati kale.
- Sindikukhala okondwa.

**Q37** Ndimazitenga olakwitsa zinthu zikasokonekela.

- Eya nthawi zambiri.
- Eya nthawi zina.
- Mwa apo ndi apo.
- Ayi sizinachitikeko.

**Q38** Ndimakhala odandaula wankhawa popanda chifukwa.

- Ayi sizichitika.
- Sikwenikweni
- Eya nthawi zina.
- Eya mwapafupipafupi.

**Q39** Ndimakhala wamantha popanda chifukwa.

- Eya nthawi zambiri.
- Eya nthawi zina.
- Mwa apo ndi apo.
- Ayi sizinachitikeko.

**Q40** Zinthu zimandikulira.

- Eya nthawi zambiri sindimatha kuzitolela.
- Eya nthawi zina sindimatha kuzitolela ngati kale.
- Ayi nthawi zina ndimazitolela bwinobwino.
- Ayi ndimazitolela bwino.

**Q41** Ndimakhala okhumudwa mpaka ndimakanika kugona:

- Eya nthawi zambiri.
- Eya nthawi zina.
- Osati nthawi zambiri.
- Ayi sizichitika.

**Q42** Ndimakhala odandaula

- Eya nthawi zambiri.
- Eya nthawi zina.
- Osati nthawi zambiri.
- Ayi sizichitika.

**Q43** Ndimakhala okhumudwa komaso ndimangolila

- Eya nthawi zambiri.
- Eya kawirikawiri
- Mwapatalipatali.
- Ayi sizinachitikepo

**Q44** Maganizo ofuna kuzivulaza ndekha amabwera:

- Eya kawirikawiri
- Eya nthawi zina.
- Sikwenikweni
- Sindinaganizeko.

**Q45 Zowawitsa/zophinja za mmbuyomu.**

Anthu ambiri akumanapo kapena ndikudusa munyengo zokhumudwitsa komanso zowawitsa pamoyo wawo. Chongani nyengo mwadusamo ndikuziona.

- Matenda oopsyeza moyo wanu (ngati a mtima ndi ena wotero).
- Kuvulazidwa (ndi chida, kumenyedwa , kuopsezedwa mfutii)
- Nkhaza zokhuza kugonana (kugwilidwa, kukakamizidwa kugonana pogwiritsa chida)
- Kukhalako mmalo, nkondo
- Nkhaza kwa ana (Kumenyedwa, kuchitidwa nkhaza zogonana ndi munthu wamkulu msikhu zaka 5 kuposa inu)

- Ngozi yoopsya (Ngozi kapena imfa yapamsuwe, kupsya kwa nyumba).
- Ngozi ya chilengedwe (Kusefukila kwa madzi, chivomelezi, mphepo ya mkutho)
- Zowawitsa zina (Fotokozani).

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**MAFUNSO OTSATILAWA AFUNA KUDZIWA ZA UMOYO WANU**

**Q46** Kodi munapezekako ndi mavuto okhudza maganiziddwe agwiro?

- Eya.
- Ayi.
- Sindikudziwa.

**Q47** Pakali pano kodi muli mavuto okhuza kaganizidwe kagwiro?

- Eya.
- Ayi.
- Sindikudziwa.

**Q48** Munalandilako thandizo lokhudzana ndi mavuto akaganizidwe kagwiro?

- Eya panopa ndikulandila.
- Eya kalekale.
- Ayi.
- Sizikugwirizana

*Ngati mwayankha kuti ayi pa funso limeneli, pitani ku funso 50.*

**Q49** Ngati mukulandila thandizo lokhudzana ndi matenda a maganizoo, ndi thandizo lotani limene mukulandila (Sankhani zomwe zikugwilizana).

- Mankhwala
- Uphungu
- Zonse

**ZOKHUDZA INU.**

Pomalizila, tikufuna kudziwa zokhudza inu.

**Q50** Muli ndi zaka zingati? .....

**Q51** Ndinu mtundu wanji wa anthu.

- Mtundu waukulu (Chewa)
- Mtundu wawung'ono
- Sindikuziwa

**Q52** Kodi pakali pano mukukhala mdziko lanu?

- Eya
- Ayi

**Q53** Kodi mumakhala kuti?

- Mtawuni
- Mtawuni ya kumudzi.

- Kumudzi

**Q54** Sukulu munapita nayo patali bwanj?

- Sindinaphunzile
- Pulayimale
- Sekondale
- Sukulu ya ukachejede

**Q55** Kodi mumapeza motani

- Mochepetsetsa
- Pakatikati (pa mochepetsetsa and mochuluka).
- Mochuluka

**Q56** Kodi muli pabanja?

- Ndili pabanja
- Paubwenzi koma sitikhalila limodzi.
- Ndili ndekha
- Amuna anga anamwalila
- Tinasiyana
- Zina

**Q57** Muli ndi ana ena kupatulako uyuyu?

- Eya
- i) Alipo angati? .....
- Ayi

**Ngati mwayankha ayi, pa funso ili, pitani pa funso 59**

**Q58** Munakumako ndi mavuto pa ubeleki wa ana enawo?

- Eya
- Ayi

**Q59** Kodi munapititsako padela kapena munabelekako mwana wakufa?

- Eya
- Ayi

Zikomo chifukwa chotenga nawo mbali pa kafukufukuyu.

**Q60** Ngati pali china choonjezera chokhudzana ndi ubeleki wanu kapena mmene mukumvera nenani.

.....

### Appendix 3: Support letter from head of mental health nursing department



KAMUZU UNIVERSITY OF HEALTH SCIENCES  
School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

**Kamuzu University**  
of Health Sciences

Private bag 360,  
Blantyre  
www.kuhes.ac.mw  
+2651 871 911/+2651 872 291

---

Formerly College of Medicine and Kamuzu College of Nursing.

**TO** : The Chairperson (COMREC)  
Private Bag 360,  
Chichiri, Blantyre 3.

**FROM** : Head of Department- Mental Health Nursing

**DATE** : 20<sup>th</sup> December, 2021

Application for ethical approval for a research entitled "*Assessing psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo district hospital.*"

I write to support Elizabeth Mwangala who is applying for ethical approval for the above captioned research as part of her Master's degree requirements.

This research will be housed in my department; I would therefore support her application.

Should there be need for clarification, please do not hesitate to contact the undersigned.

A handwritten signature in blue ink, appearing to read "AS", is placed above the name of the signatory.

Anthony Sefasi.  
HOD- Mental Health Nursing.

**Appendix 4: Ethics approval certificate from COMREC – KUHeS**



## Appendix 5: Clearance from Thyolo District Health Office

Telephone: + 265 1473 411  
Facsimile: + 265 1473 409

All Communications should be addressed to:  
The Director of Health and Social Services



*In reply please quote No.*  
Thyolo District Council  
P/Bag 5  
Thyolo.

13<sup>th</sup> December, 2021

Elizabeth A. Mwangala  
Kamuzu University of Health Sciences - KUHeS  
School of Nursing  
Private Bag 1  
Lilongwe

Dear Elizabeth

### **PERMISSION TO CONDUCT RESEARCH AT THYOLO DISTRICT HEALTH FACILITIES**

I refer to your letter dated 7<sup>th</sup> December 2021 in which you requested for permission to conduct a research entitled *“Assessing psychological consequences of birth trauma among postpartum mothers in Thyolo district health facilities”*.

I am pleased to inform you that your request has been approved. You are allowed to conduct this study so that you achieve a partial fulfilment of Master of Science in Mental Health (Mental Health Nursing) at Kamuzu University of Health Sciences – KUHeS

By copy of this letter, you are allowed access to patients/clients, staff and medical records for purposes of the study, having satisfied the requirements of Hospital Research Committee that the results will be shared with Thyolo District Health Office to help improve on the management of patients/clients.

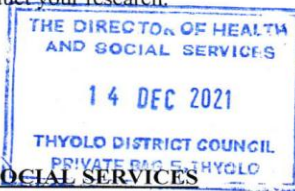
We wish you all the best as you conduct your research.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Dr. Arnold Jumbe'.

Dr. Arnold Jumbe

**DIRECTOR OF HEALTH AND SOCIAL SERVICES**



## Appendix 6: Information sheet (English version)



KAMUZU UNIVERSITY OF HEALTH SCIENCES  
School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### **INFORMATION SHEET**

**Study Title:** Assessing psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo District Hospital, Malawi

We are inviting you to participate in this study because you are among mothers who gave birth to a baby in the previous 6-12 weeks (now within the 6-12 weeks postpartum period) and postpartum mothers are at risk of childbirth-related trauma and PTSD.

**Purpose of the Study:** To assess psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital, Malawi.

**Study procedures:** You will be asked to undergo an oral interview in a private room within the clinic. You will be asked about childbirth-related trauma and PTSD that you might have experienced due to the birth of your baby, previous trauma, history of psychological problems and treatment, and demographic and obstetric details (i.e., age, mode of delivery, etc.).

**Risks:** There may be some risks from participating in this study because all human interactions and talking about oneself or others carry some amount of risk. Nevertheless, we will minimize such risks and act promptly to assist you if you experience any discomfort, psychological disturbances, or otherwise during the process of your participation in this study. If you may feel uncomfortable answering questions perceived to be personal, you are at liberty to decline answering such questions without giving reasons.

**Benefits:** This research is not designed to help you personally, but the results may help the investigator learn more about birth-related trauma and PTSD. However, it should be noted that while you may directly benefit from this study, the information gathered would help in developing interventions for improving mental health care for postpartum women in maternity units. If we are particularly concerned about your health, you should be informed that we will not provide any healthcare to you at the moment. Where necessary, an appropriate referral will be made to a professional suitable for further assistance or intervention.

**Compensation:** If you decide to participate in this study, you will receive K1000.00 as our appreciation for precious time and valuable information you will share with us. This money

will be given to you at the end of this interview and might be used to delay transport back home.

**Confidentiality:** You are assured that all the information that you will provide in this study will be kept confidential and shall only be used for research purposes and not otherwise. Your name will not appear in any study report but will only be identified by a number that you know alone. If the information from the study is published or presented at scientific meetings, your name and other personal information will not be used.

**Data storage:** Collected data will be accessed by the principal investigator. This will be accessed during processing and analysis. The data were stored on a personal computer. The researcher will keep hard and soft copies of raw data in a secure place in the office. This will help to maintain anonymity and confidentiality.

**Participation:** Participation in the study is voluntary. You are free to participate, refuse to participate, or withdraw from the study at any time without providing any reasons for doing so. However, you are expected to participate in this study because participation and responses are required and are of great importance. If you choose not to participate in this study, be assured that this will not affect your medical consultation, treatment, or future care in any way.

**Contact information:** If you have any questions about this study, please contact Elizabeth Agnes Mwangala at Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 888 33 19 02 / 0 995 47 39 94, E-mail: [mwangala2021elizabeth@kcn.unima.mw](mailto:mwangala2021elizabeth@kcn.unima.mw)

Should you have any questions regarding this study and your rights as a research participant, or if you wish to report any problems you have experienced related to the study, please contact:

Anthony Sefasi (*Head of Department. Mental Health Nursing*), Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 995 81 97 55; E-mail: [asefasi@kuhes.ac.mw](mailto:asefasi@kuhes.ac.mw)

Genesis Chorwe-Sungani, Ph.D., Professor in Mental Health. (*Research Supervisor*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 991 16 70 79; E-mail: [gchorwe@kuhes.ac.mw](mailto:gchorwe@kuhes.ac.mw)

The Chairperson at the College of Medicine Research and Ethics Committee (COMREC), College of Medicine, University of Malawi, Blantyre, Malawi. Cell Phone: 0 888 11 89 93; E-mail: [comrec@medcol.mw](mailto:comrec@medcol.mw)

This study was approved by the College of Medicine of the University of Malawi. College of Medicine Research and Ethics Committee (COMREC), (REFERENCE NUMBER: P 02/22/3589)

## Appendix 7: Information sheet (Chichewa version)



KAMUZU UNIVERSITY OF HEALTH SCIENCES  
School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### **INFORMATION SHEET (Chichewa Version)**

**Mutu wa kafukufuku:** Kufufuza za chiphinjo cha m’ malingaliro chomwe chimadza potsatira ubeleki wowawitsa, pakati pa amayi amene atha masabata asanu ndi imodzi (6) mpakana masabata khumi ndi awiri (12) chibadwire mwana, ku sikelo ya uchembere pa chipatala cha boma, cha Thyolo.

Kafukufukuyi akupangidwa ndi Elizabeth Agnes Mwangala wophunzira wa pa sukulu ya ukachenjede ya Kamuzu University of Health Sciences School of Nursing. Tikukupemphani kuti mutenge nawo gawo pa kafukufukuyi chifukwa choti mwatha masabata asanu ndi imodzi kapena masabata khumi ndi awiri chibadwire mwana, ndipo muli pa chiopyezo chokhala ndi matenda a mantha okudza kamba ka ubeleki wozunza maganizo.

**Cholinga cha kafukufuku:** Kufufuza za chiphinjo cha m’ malingaliro komanso mantha chomwe chimadza potsatira ubeleki wowawitsa pakati pa amayi amene atha masabata asanu ndi imodzi (6) mpakana masabata khumi ndi awiri (12) chibadwire mwana.

**Ndondomeko yake:** Ngati muli okonzeka ndipo mukufuna kutenga nawo gawo mu kafukufuku ameneyu muli omasuka kutero. Mudzafunsidwa mafunso muli mu kachipinda komata pachipatala pompano. Mudzafunsidwa zokhudza zizindikiro zomwe zimadza kutsatira ubeleki wozunza maganizo, za zizindikiro za matenda okhumudwa odza kamba ka uchembere. Kuonjezera apo mudzafunsidwa zokhudza chisamaliro chomwe munalandira ku chipatala nthawi yobereka. Kotero ndikufunsani mafunso mu mphindi mphindi makumi awiri (20).

**Phindu komanso chiopsyezo:** Pa kafukufuku ameneyu sindikupereka chithandizo china chilichonse cha matenda. Palibe cholinga chilichonse chofuna kukuvulazani kapena chipsyinjochi cha mtundu wina uliwonse, ndipo mukhale omasuka. Sitikupereka chithandizo china chilichonse cha matenda. Koma mudzatumizidwa ku malo oyenera kuti mukalandire thandizo ngati mungapezeke ndi vuto.

**Chithokozi:** Mukapanga chisankho cholowa nawo mukafukufuku uyu, mudzalandira K1000.00 pokuthozokani chifukwa chopereka nthawi yanu kutenga gawo komanso kugawira kapena kupereka mfundo zanu zamtengo wapatali.

**Chinsisi:** Pofuna kukusungirani chinsisi chanu mu kafukufuku ameneyu, dzina lanu silidzatchulidwa, koma mmalo mwake tigwiritsa ntchito nambala yanu ya chinsisi yomwe tipatsane. Chilichonse chomwe tikambirane chikhala cha chinsisi pakati pa inu ndi Mapepala anu onse asungidwa pokuti wina sangawapeze kapena kutenga. Ndipo adzaonongedwa pamene kafukufukuyu wafika ku mapeto.

**Kutenga mbali:** Muli ndi ufulu kukana kutenga nawo gawo pakafukufuku ameneyu ngakhaleenso kusiyira pa njira ngati mwasankha kutero. Simudzapatsidwa chilango cha mtundu uliwonse ngati musankha kusatenga nawo gawo ngakhale kusiyira panjira kafukufuku ameneyu. Koma chachikulu ndi khumbo langa kuti mutengeko mbali pa kafukufuku ameneyu.

Ngati muli ndi funso liri lonse lokhudza kafukufukuyi, chonde lankhulani ndi a: Elizabeth Agnes Mwangala (*wopanga kafukufuku*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 888 33 19 02 / 0 995 47 39 94, E-mail: [mwangala2021elizabeth@kcn.unima.mw](mailto:mwangala2021elizabeth@kcn.unima.mw)

Ngati mungakhale ndi mafunso ena ali onse okhudzana ndi kafukufukuyi ndi ufulu wanu ngati otenga nawo gawo pakafukufuku kapena ngati mukufuna kuneneza za mavuto amene mwakumana nawo kukhudzana ndi kafukufuku, chonde lankhulani ndi:

Anthony Sefasi (*Head of Department. Mental Health Nursing*), Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 995 81 97 55; E-mail: [asefasi@kuhes.ac.mw](mailto:asefasi@kuhes.ac.mw)

Genesis Chorwe-Sungani, Ph.D., Professor in Mental Health. (*Research Supervisor*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 991 16 70 79; E-mail: [gchorwe@kuhes.ac.mw](mailto:gchorwe@kuhes.ac.mw)

The Chairperson at the College of Medicine Research and Ethics Committee (COMREC), College of Medicine, University of Malawi, Blantyre, Malawi. Cell Phone: 0 888 11 89 93; E-mail: [comrec@medcol.mw](mailto:comrec@medcol.mw)

Kafukufukuyi anavomerezedwa ndi komiti yoona zakafukufuku ya kusukulu ya zaukadaulo ya College of Medicine, University of Malawi. College of Medicine Research and Ethics Committee (COMREC), (REFERENCE NUMBER: P 02/22/3589).





## Appendix 10: Parent information sheet (English version)



KAMUZU UNIVERSITY OF HEALTH SCIENCES  
School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### **PARENT INFORMATION SHEET (English Version)**

**Study Title:** Assessing psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo District Hospital, Malawi

**Purpose:** This consent form is a request for your child to participate in a study by Elizabeth A. Mwangala, a Master of Science in Mental Health Nursing Student at Kamuzu University of Health Sciences, School of Nursing.

As a parent, you are asked to consent to your child's participation in this study, and your child has the right to know about the procedures that will be used in this study so that you can decide whether or not to consent to your child's participation. The information presented here will make you better informed so that you may give or withhold your consent for your child's participation in this study. You are asked to consent for your child's participation in this study because she is one of the women who gave birth and is now within 6-12 weeks postpartum, attending postpartum care. She is aged 16 or 17 years old and still recognized as a child that requires parental or guardian consent according to the laws of Malawi, which state that any person aged below 18 years is a child.

**Purpose of the Study:** To assess psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital, Malawi.

**Voluntary Participation:** Participation in this study was voluntary. Moreover, if your child participates, he/she may discontinue participation at any time and for any reason without negative consequences by letting the researcher know using the contact information below.

**Study procedures:** As a participant, your child and other participants will be required to answer questions from a questionnaire that has been developed focusing on the topic of study. If you consent for your child to participate in the study, she will be asked to respond to the questionnaire, which will take 20 minutes for each participant to complete. She will be individually asked about the childbirth-related trauma that she might have experienced due to the birth of her child.

**Confidentiality:** You will be asked to provide a signature at the bottom of the next page signifying that you understand the information contained in this consent form. You are assured that all the information that your child will provide in this study will be kept

confidential and will only be used for research purposes. Your child's name will not appear in any study report but shall only be identified by a number that is known by her alone.

**Discomforts and Risks:** Risks associated with participation in this study are minimal. There may be some risks from participating in this study because all human interactions and talking about oneself or others carry some risks. Nevertheless, we will minimize such risks and act promptly to assist your child if she experiences any discomfort, psychological disturbances, or otherwise during the process of her participation in this study. If she feels uncomfortable answering questions perceived to be personal, she is at liberty to decline to answer such questions without giving reasons.

**Expected Benefits:** This research was not designed to help your child personally, but the results may help the investigator learn more about the psychological consequences of birth-related trauma. However, it should be noted that while your child may directly benefit from this study, the information gathered would help in developing interventions to improve mental health/psychological care for postpartum women with regard to childbirth trauma. We will not provide any healthcare to your child. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention. If you decide and consent for your child to participate in this study, she will receive K1000.00 as our appreciation for precious time and valuable information shared with us.

**Use of Research Data:** The information from this research will be used only for scientific and educational purposes. It may be presented at scientific meetings and/or published in professional journals or books, or used for any other purposes, which Kamuzu University of Health Sciences considers appropriate in the interest of education, knowledge, or research. As noted earlier, data will be analyzed and presented in the aggregate such that all individual responses will be kept confidential.

Any questions or concerns about your child's rights as a research participant? contact:

Elizabeth Agnes Mwangala (*Principal Investigator*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 888 33 19 02 or 0 995 47 39 94, E-mail: [mwangala2021elizabeth@kcn.unima.mw](mailto:mwangala2021elizabeth@kcn.unima.mw)

Anthony Sefasi (*Head of Department. Mental Health Nursing*), Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 995 81 97 55; E-mail: [asefasi@kuhes.ac.mw](mailto:asefasi@kuhes.ac.mw)

Genesis Chorwe-Sungani, Ph.D., (*Research Supervisor*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 991 16 70 79; E-mail: [gchorwe@kuhes.ac.mw](mailto:gchorwe@kuhes.ac.mw)

The Chairperson at the College of Medicine Research and Ethics Committee (COMREC), College of Medicine, University of Malawi, Blantyre, Malawi. Cell Phone: 0 888 11 89 93; E-mail: [comrec@medcol.mw](mailto:comrec@medcol.mw)

This study was approved by the College of Medicine of the University of Malawi. College of Medicine Research and Ethics Committee (COMREC), (REFERENCE NUMBER: P 02/22/3589)

## Appendix 11: Parent information sheet (Chichewa version)



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School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### PARENT INFORMATION SHEET (Chichewa Version)

**Mutu wa kafukufuku:** Kufufuza za chiphinjo cha m' malingaliro chomwe chimadza potsatira ubeleki wowawitsa, pakati pa amayi amene atha masabata asanu ndi imodzi (6) mpakana masabata khumi ndi awiri (12) chibadwire mwana, ku sikelo ya uchembere pa chipatala cha boma, cha Thyolo.

Ine dzina langa ndi *Elizabeth Agnes Mwangala*, ndine mmodzi mwa ophunzira a mchaka chomaliza (chaka chachiwiri) pa sukulu ya ukachenjede ya anamwino ndi azamba ya Kamuzu University of Health Sciences. Ndipo ndikupanga maphunziro apamwamba a zokhudza unamwino woona za maganizo a ngwiro. Malingana ndi lamulo loti aliyense ayenera kupanga kafukufuku molingana ndi maphunziro athu mu chaka chomalizachi, zatengera ine kuti ndikwaniritse lamuloli.

**Cholinga cha kafukufuku:** Kufufuza za nkhwana za mmaganizo (mmalingaliro) zomwe mwana/m'bale wanu anali/ali nazo potsatira kubadwitsa kwa mwana wake, patatha pakati pa masabata asanu ndi imodzi (6) ndi masabata khumi ndi awiri (12) chibadwire mwana wakeyo.

**Ndondomeko yake:** Inu monga kholo/m'bale wa wotenga mbali mu kafukufuku uyu, muli kufunsidwa kupereka chilolezo kuti mwana/m'bale wanu akhoze kutenga nao mbali mu kafukufuku ameneyu. Izi zili choncho chifukwa mwana/m'bale wanu ndi mmodzi mwa azimayi amene ali ndi mwana, ndipo watha masabata asanu ndi imodzi (6) kapena masabata khumi ndi awiri (12) chibadwire mwana wakeyo. Komanso chifukwa chakuti mwana/m'bale wanuyu ali ndi zaka zosakwana (18), ali ndi zaka 16 kapena 17 zomwe malingana ndi malamulo a dziko lino amati; munthu aliyense wosakwana zaka 18, ameneyu adakali mwana, choncho chilolezo chinachilichonse chimayenera kuchokera kwa makolo kapena achibale omwe naonso adutsa zaka 18. Ngati muli okonzeka kupereke chilolezo ndipo mukufuna kuti mwana/m'bale wanu atenge nawo gawo mu kafukufuku ameneyu muli omasuka kutero.

Kotero mwana/m'bale wanu adzafunsidwa mafunso mu mphindi khumi ndi zisanu (15) ngakhale mphindi makumi awiri (20). Adzapemphedwa kuyankha mafunso okhudza malingaliro ake pa zotsatira za kubadwitsa mwana wake.

**Phindu komanso chiopsyezo:** Pa kafukufuku ameneyu palibe cholinga chilichonse chofuna kuvulaza kapena chipsyinjochi cha mtundu wina uliwonse, ndipo inu ndi mwana/m'bale wanu mukhale omasuka. Mukapanga chisankho chakuti mwana wanu

alowe nawo mukafukufuku uyu, adzalandira K1000.00 pomuthokoza chifukwa chopereka nthawi ndi kutenga gawo komanso kugawira kapena kupereka mfundo zamtengo wapatali. Sitikupereka chithandizo china chilichonse cha matenda. Koma mwana wanu adzatumizidwa ku malo oyenera kuti akalandire thandizo ngati angapezeke ndi vuto.

**Chinsisi:** Pofuna kusunga chinsisi mu kafukufuku ameneyu, dzina la mwana/m'bale wanu silidzatchulidwa, koma mmalo mwake tigwiritsa ntchito nambala yake ya chinsisi yomwe tipatsane. Chilichonse chomwe tikambirane chikhala cha chinsisi pakati pa iye ndi Mapepala ake onse asungidwa pokuti wina sangawapeze kapena kutenga. Ndipo adzaonongedwa pamene kafukufukuyu wafika ku mapeto.

**Kutenga mbali:** Muli ndi ufulu kukana kupereka chilolezo cha kutenga nawo gawo kwa mwana/m'bale wanu pakafukufuku ameneyu ngakhale kusiya pa njira ngati mwasankha kutero. Simudzapatsidwa chilango cha mtundu uliwonse ngati musankha kusapereka chilolezo cha kukwa mwana/m'bale wanu ngakhale kusiya panjira kafukufuku ameneyu. Koma chachikulu ndi khumbo langa kuti mwana wanu alandire chilolezo kuti atengeko mbali pa kafukufuku ameneyu. Ngati mungakhale ndi mafunso okhudza za kafukufuku ameneyu mutha kundipeza kapena kundilemba kalata kwa:

Elizabeth Agnes Mwangala (*Principal Investigator*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 888 33 19 02 or 0 995 47 39 94, E-mail: [mwangala2021elizabeth@kcn.unima.mw](mailto:mwangala2021elizabeth@kcn.unima.mw)

Anthony Sefasi (*Head of Department. Mental Health Nursing*), Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 995 81 97 55; E-mail: [asefasi@kuhes.ac.mw](mailto:asefasi@kuhes.ac.mw)

Genesis Chorwe-Sungani, Ph.D., Professor in Mental Health. (*Research Supervisor*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 991 16 70 79; E-mail: [gchorwe@kuhes.ac.mw](mailto:gchorwe@kuhes.ac.mw)

Kafukufukuyi anavomerezedwa ndi komiti yoona zakafukufuku ya kusukulu ya zaukadaulo ya College of Medicine, University of Malawi. College of Medicine Research and Ethics Committee (COMREC), (REFERENCE NUMBER: P 02/22/3589).

## Appendix 12: Parent consent form (English version)



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School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### PARENT CONSENT FORM (English Version)

**Study Title:** Assessing psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo District Hospital, Malawi

**Consent to Participate:** By signing the below, I consent for my child to voluntarily participate in this study. I acknowledge that:

1. I have read and understand the above description of the study.
2. I understand that if my child participates I may withdraw her at any time without penalty.

Minor's name (written): \_\_\_\_\_

Check one:

\_\_\_\_\_ I give consent for my child to participate in the study outlined above.

\_\_\_\_\_ I do not give my consent for my child to participate in the study outlined above.

Parent's name (written): \_\_\_\_\_

Parent's signature: \_\_\_\_\_

Parent/Guardian's thumbprint

## Appendix 13: Parent consent form (Chichewa version)



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School of Nursing  
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Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### **PARENT CONSENT FORM (Chichewa Version)**

**Mutu wa kafukufuku:** Kufufuza za chiphinjo cha m'malingaliro chomwe chimadza potsatira ubeleki wowawitsa, pakati pa amayi amene atha masabata asanu ndi imodzi (6) mpakana masabata khumi ndi awiri (12) chibadwire mwana, ku sikelo ya uchembere pa chipatala cha boma, cha Thyolo.

#### **MFUNDO YA CHILOLEZO**

Muli kupemphedwa kusayina ngati mwavomereza kuti mwana/m'bale wanu atenge mbali pa kafukufuku ameneyu mwa kufuna kwanu.

- Mwawerenga ndondomeko ya chilolezo komanso mwafotokozeredwa bwino ndikuyankhidwa mafunso anu moyenera. Mwauzidwa zochitika mkati mwa kafukufuku ameneyu. Mwauzidwa za ubwino ndi kuipa komwe kungakhalepo polowa nawo mu kafukufukuyu. Mwasankha kuti mwana/m'bale wanu atenge nawo mbali mu kafukufukuyu mwa kusankha kwanu.

#### **NDAPEREKA CHILOLEZO KUTI MWANA WANGA ATENGE NAWO GAWO MU KAFUKUFUKUYU**

##### **Wopereka chilolezo cha kutenga mbali pa kafukufuku:**

Ine..... ndapereka chilolezo kuti mwana/m'bale wanga wa (zaka zosakwana 18) atenge nawo mbali pa kafukufuku ameneyu nditafotokozeredwa zambiri zokhudza kafukufuku ameneyu.

.....  
Dzina la kholo/m'bale Saini (kholo/m'bale)  
Tsiku

.....  
Dzina la kholo/m'bale Chidindo cha chala (kholo/m'bale)  
Tsiku

##### **Wopangitsa kafukufuku:**

Ine .....ndikutsimikiza kuti ndalongosola mwatsatanetsatane wake wa cholinga, zofunika, pempho komanso ubwino wa kafukufuku ameneyu kwa kholo/m'bale wa wotenga mbali.

.....  
Dzina (wopangitsa kafukufuku) Saini (wopangitsa kafukufuku) Tsiku

## Appendix 14: Minor assent information sheet (English version)



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School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### **MINOR ASSENT INFORMATION (English version)**

**Study Title:** Assessing psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo District Hospital, Malawi

My name is Elizabeth A. Mwangala, Master of Science in Mental Health Nursing Student at Kamuzu University of Health Sciences. I am conducting this research

You are asked to assent for your participation in this study because you are one of the women who gave birth and are now within 6-12 weeks postpartum, attending postpartum care. You are aged 16 or 17 years old and still recognized as a child that requires parental or guardian consent according to the laws of Malawi that stipulate that any person aged below 18 years is a child. For you to participate in this study, it will be necessary for you to give your written assent for your participation in this study and sign below.

**Purpose of the Study:** To assess psychological consequences of childbirth-related trauma and PTSD among postpartum mothers at Thyolo District Hospital, Malawi.

**Voluntary Participation:** Participation in this study was voluntary. Moreover, if you participate, you may discontinue participation at any time and for any reason without negative consequences, by letting the researcher know using the contact information below.

**Study procedures:** If you decide that you want to participate in this study, you will be required to answer some questions from a questionnaire that has been developed focusing on the topic of study. If you agree to participate in the study, you will be asked to respond to a questionnaire that will take 20 minutes for each participant to complete. You will be individually asked about childbirth-related trauma that you might have experienced because of the birth of your child.

**Confidentiality:** You will be asked to provide a signature at the bottom of the next page signifying that you understand the information contained in this assent form. You are assured that all the information that you will provide, will be kept confidential and will only be used for research purposes. Your name will not appear in any study report but will only be identified by a number that you know alone. Completed surveys and signed consent forms will be kept in a locked filing cabinet at the researcher's office.

If the information from the study is published or presented at scientific meetings, your name and other personal information will not be used.

**Discomforts and Risks:** Risks associated with participation in this study are minimal. There may be some risks from participating in this study because all human interactions and talking about oneself or others carry some risks. Nevertheless, we will minimize such risks and act promptly to assist you if you experience any discomfort, psychological disturbances, or otherwise during the process of your participation in this study. If you may feel uncomfortable answering questions perceived to be personal, you are at liberty to decline answering such questions without giving reasons.

**Expected Benefits:** This research is not designed to help you personally, but the results may help the investigator learn more about the psychological consequences of birth-related trauma. However, it should be noted that while you may directly benefit from this study, the information gathered would help in developing interventions to improve psychological care for postpartum women with regard to childbirth trauma. We will not provide any healthcare to you at the moment. Where necessary, an appropriate referral will be made to a professional suitable for further assistance or intervention. If you decide to participate in this study, you will receive K1000.00 as our appreciation for precious time and valuable information you will share with us.

**Use of Research Data:** The information from this research will be used only for scientific and educational purposes. It may be presented at scientific meetings and/or published in professional journals or books, or used for any other purposes, which Kamuzu University of Health Sciences considers appropriate in the interest of education, knowledge, or research. As noted earlier, data will be analyzed and presented in the aggregate such that all individual responses will be kept confidential.

**Approval of Research:** This research project was approved by the College of Medicine Research and Ethics Committee (COMREC).

Should you have any questions or concerns about your child's rights as a research participant? Please contact:

Elizabeth Agnes Mwangala (*Principal Investigator*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 888 33 19 02 or 0 995 47 39 94, E-mail: [mwangala2021elizabeth@kcn.unima.mw](mailto:mwangala2021elizabeth@kcn.unima.mw)

Anthony Sefasi (*Head of Department. Mental Health Nursing*), Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 995 81 97 55; E-mail: [asefasi@kuhes.ac.mw](mailto:asefasi@kuhes.ac.mw)

Genesis Chorwe-Sungani, Ph.D., Professor in Mental Health. (*Research Supervisor*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 991 16 70 79; E-mail: [gchorwe@kuhes.ac.mw](mailto:gchorwe@kuhes.ac.mw)

This study was approved by the College of Medicine of the University of Malawi. College of Medicine Research and Ethics Committee (COMREC), (REFERENCE NUMBER: P 02/22/3589)

## Appendix 15: Minor assent information sheet (Chichewa version)



KAMUZU UNIVERSITY OF HEALTH SCIENCES  
School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

+2651 871 911/+2651 872 291

### MINOR ASSENT INFORMATION (Chichewa version)

**Mutu wa kafukufuku:** Kufufuza za chiphinjo cha m' malingaliro chomwe chimadza potsatira ubeleki wowawitsa, pakati pa amayi amene atha masabata asanu ndi imodzi (6) mpakana masabata khumi ndi awiri (12) chibadwire mwana, ku sikelo ya uchembere pa chipatala cha boma, cha Thyolo.

Ine dzina langa ndi *Elizabeth Agnes Mwangala*, ndine mmodzi mwa ophunzira a mchaka chomaliza (chaka chachiwiri) pa sukulu ya ukachenjede ya anamwino ndi azamba ya Kamuzu University of Health Sciences. Ndipo ndikupanga maphunziro apamwamba a zokhudza unamwino woona za maganizo a ngwiro.

**Cholinga cha kafukufuku:** Kufufuza za nkhawa za mmaganizo (mmalingaliro) zomwe munali/muli nazo potsatira kubadwitsa kwa mwana wanu, patatha pakati pa masabata asanu ndi imodzi (6) ndi masabata khumi ndi awiri (12) chibadwire mwana wanuyo.

**Ndondomeko yake:** Muli kufunsidwa kuvomerezana ndi chilolezo chimene kholo/m'bale wanu apereka pololeza inu kuti mutha kutenga nao mbali mu kafukufuku ameneyu. Izi zili choncho chifukwa inu ndi mmodzi mwa azimayi amene ali ndi mwana, ndipo watha masabata asanu ndi imodzi (6) kapena masabata khumi ndi awiri (12) chibadwire mwana wanayo. Komanso chifukwa chakuti muli ndi zaka zosakwana (18), muli ndi zaka 16 kapena 17 zomwe malingana ndi malamulo a dziko lino amati; munthu aliyense wosakwana zaka 18, ameneyu adakali mwana, choncho chilolezo chinachilichonse chimayenera kuchokera kwa makolo kapena achibale omwe naonso adutsa zaka 18. Ngati muli okonzeka kupereke kuvomerezana nazo ndipo mukufuna kuti mutenge nawo gawo mu kafukufuku ameneyu muli omasuka kutero. Koterokero mudzafunsidwa mafunso mu mphindi khumi ndi zisanu (15) ngakhale mphindi makumi awiri (20). Mudzapemphedwa kuyankha mafunso okhudza malingaliro anu pa zotsatira za kubadwitsa mwana wanu.

**Phindu komanso chiopsyezo:** Pa kafukufuku ameneyu palibe cholinga chilichonse chofuna kukuvulazani kapena chiphsyinjochi cha mtundu wina uliwonse, ndipo inu mukhale omasuka. Mukapanga chisankho cholowa nawo mukafukufuku uyu, mudzalandira K1000.00 pokuthozokani chifukwa chopereka nthawi yanu kutenga gawo komanso kugawira kapena kupereka mfundo zanu zamtengo wapatali. Sitikupereka chithandizo china chilichonse cha matenda. Koma mudzatumizidwa ku malo oyenera kuti mukalandire thandizo ngati mungapezeke ndi vuto.

**Chinsisi:** Pofuna kukusungirani chinsisi mu kafukufuku ameneyu, dzina lanu silidzatchulidwa, koma mmalo mwake tigwiritsa ntchito nambala yanu ya chinsisi yomwe tipatsane. Chilichonse chomwe tikambirane chikhala cha chinsisi pakati pa inu ndi Mapepala anu onse asungidwa pokuti wina sangawapeze kapena kutenga. Ndipo adzaonongedwa pamene kafukufukuyu wafika ku mapeto.

**Kutenga mbali:** Muli ndi ufulu kukana kutenga nawo gawo pakafukufuku ameneyu ngakhale kusiya pa njira ngati mwasankha kutero. Simudzapatsidwa chilango cha mtundu uliwonse ngati musankha kusavomereza ngakhale kusiya panjira kafukufuku ameneyu. Koma chachikulu ndi khumbo langa kuti muvomereze kutengako mbali pa kafukufuku ameneyu.

Ngati mungakhale ndi mafunso okhudza za kafukufuku ameneyu mutha kundipeza kapena kundilemba kalata kwa:

Elizabeth Agnes Mwangala (*Principal Investigator*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 888 33 19 02 or 0 995 47 39 94, E-mail: [mwangala2021elizabeth@kcn.unima.mw](mailto:mwangala2021elizabeth@kcn.unima.mw)

Anthony Sefasi (*Head of Department. Mental Health Nursing*), Kamuzu University of Health Sciences, School of Nursing, Private Bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 995 81 97 55; E-mail: [asefasi@kuhes.ac.mw](mailto:asefasi@kuhes.ac.mw)

Genesis Chorwe-Sungani, Ph.D., Professor in Mental Health. (*Research Supervisor*), Kamuzu University of Health Sciences, School of Nursing, Private bag 360, Chichiri, Blantyre 3, Malawi. Tel: +2651 871 911/+2651 872 91. Cell Phone: 0 991 16 70 79; E-mail: [gchorwe@kuhes.ac.mw](mailto:gchorwe@kuhes.ac.mw)

The Chairperson at the College of Medicine Research and Ethics Committee (COMREC), College of Medicine, University of Malawi, Blantyre, Malawi. Cell Phone: 0 888 11 89 93; E-mail: [comrec@medcol.mw](mailto:comrec@medcol.mw)

Kafukufukuyi anavomerezedwa ndi komiti yoona zakafukufuku ya kusukulu ya zaukadaulo ya College of Medicine, University of Malawi. College of Medicine Research and Ethics Committee (COMREC), (REFERENCE NUMBER: P 02/22/3589).

## Appendix 16: Minor assent form (English version)



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School of Nursing  
Private bag 360,  
Blantyre  
www.kuhes.ac.mw

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### MINOR ASSENT (English version)

**Study Title:** Assessing psychological consequences of childbirth-related trauma among postpartum mothers at Thyolo District Hospital, Malawi

**Consent to Participate:** By signing the below, I consent to voluntarily participate in this study. I acknowledge that:

1. I have read and understand the above description of the study.
2. I understand that if I participate, I may withdraw at any time I wish so, without penalty.

Check one:

\_\_\_\_\_ I want to be in the study.

\_\_\_\_\_ I do NOT want to be in the study.

Your name: \_\_\_\_\_

Your signature: \_\_\_\_\_

Your thumb print:

