Title

What is traumatic birth? A concept analysis and narrative literature review

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Key phrases

Traumatic birth is a commonly used term in the maternal health literature, but the term is used is a variety of different ways by different authors.

The lack of a consistent definition creates difficulty for those engaging in research in the area, and those providing services to women.

Following the framework of Walker and Avant, this paper provides an analysis the concept of traumatic birth.

A group of women exist who may experience negative after effects from a traumatic birth, whilst not being diagnosed with a specific psychological condition.

Abstract

Objective: To review the literature pertaining to 'traumatic birth' and produce a definition of the

concept

Background: A significant number of women experience childbirth as traumatic. This experience can

have enduring and potentially life-long effects on both mental and physical health, and have implications

for the woman's relationship with her baby, partner and family. It can also have implications for future

decisions about pregnancy and birth. However, the meaning of the term 'traumatic birth' remains poorly

defined.

Clear understanding of the concept is critical to better underpin understanding and effectively evaluate

women's experiences.

Methods: The concept analysis framework of Walker and Avant (2011) was used. Electronic

bibliographic databases, CINAHL, Medline, PsycINFO, and Cochrane were searched to find papers

written in English and dated 1998-2015. From a narrative literature review the defining attributes were

ascertained: model, borderline, related, contrary, invented and illegitimate cases were constructed. The

antecedents and consequences were then identified and empirical referents determined.

Results: The apparent attributes of 'traumatic birth' are that a baby has emerged from the body of its

mother at a gestation where survival was possible. This birth has involved events and/or care that have

caused deep distress or disturbance to the mother, and the distress has outlived the immediate

experience.

Conclusion: 'Traumatic birth' is a complex concept which is used to describe a series of related

experiences of and negative psychological responses to childbirth. Physical trauma in the form of injury

to the baby or mother may be involved, but is not a necessary condition.

Keywords

Traumatic, Birth, Psychological, Distress, Concept Analysis

2

Introduction

Experiencing childbirth as a traumatic event is a factor that has been highlighted as contributing to poorer psychological outcomes for mothers. Up to 30% of women in the UK experience childbirth as a traumatic event, with many consequently going on to experience some form of anxiety, depression, or post-traumatic stress disorder (PTSD) following childbirth (Slade, 2007; Ayers, 2014). When childbirth presents as a traumatic experience it can impose a profound effect on the lives of mothers, fathers (Nicholls and Ayers, 2007), their children (Allen, 1998) and family and friends (Beck, 2004a; Ayers et al, 2006). If left untreated the effects can last many years (Forssen, 2012). Consequences of traumatic birth include enduring mental health problems (Forssen, 2012; Beck, 2004a), compromised maternal infant relationships (Nicholls and Ayers, 2007), poorer quality marital relationships (Ayers et al, 2006) concomitant depression in partners (Nicholls and Ayers, 2007) and can present a challenge to future reproductive decisions (Fenech and Thomson, 2014).

This paper comes from a piece of research into future reproductive decisions that women make, when they have previously experienced a traumatic birth. It is already known that there are lower birth rates amongst those who have experienced a traumatic birth (Gottvall and Waldenstrom, 2002), and higher rates of elective caesarean section amongst those women who do have more children (Kottmel et al, 2012). What is not fully known is what other choices women make during pregnancy and birth, when they have previously experienced a traumatic birth. In order to understand what choices such women make, getting to the root of what their common experience was, and defining what is meant by a traumatic birth, when it is not defined elsewhere, is an essential first step.

A body of literature about traumatic birth already exists, and the term is widely used by authors investigating theories and models of causality (Allen, 1998; Creedy et al, 2000; Slade, 2007; Ayers, 2014; Boorman et al, 2014). However, there are competing models within this literature about what constitutes a traumatic birth. In their meta-analysis of traumatic birth Elmir et al (2010) begin by saying:

'There is no consistent definition of traumatic birth and no systematic way to assess birth trauma, and the terms birth trauma and traumatic birth are used frequently synonymously'.

A psychiatric model of traumatic birth exists as childbirth-related Post-Traumatic Stress Disorder (PTSD), and is defined through the DSM-5 (American Psychiatric Association, 2013). This definition relates more to the appraisal of the event, and the individual's reactions to the event, rather than the event itself. Conversely, the medical definition of traumatic birth, as it is widely used in the literature, relates to the mode of delivery (operative birth) and the event of birth only, yet it is evident from the literature that not all women who have an operative birth will be traumatised by it (Murphy et al, 2003; Bahl et al, 2004). Adding to the confusion is the fact that there is no single term used in the literature, instead a variety of terms are used, with slightly differing meanings (shown in Table 1 below):

Table 1: terms used in the literature to describe concept being analysed

Birth trauma

Traumatic birth

Difficult birth

Traumatic experience of childbirth

Negative birth experience

Partial Post-traumatic Stress Disorder (PPTSD) resulting from childbirth

Post-traumatic Stress Disorder (PTSD) resulting from childbirth

Post-traumatic Stress Symptoms (PTSS) after childbirth

The latter two of these terms are most clearly defined, in that they have diagnostic criteria attached. However, whilst PTSD and PTSS are potential consequences of a traumatic birth, not all traumatic births result in a woman experiencing either condition. Childbirth related PTSD is often undiagnosed and because of this researchers may use cohorts that include those with a diagnosis alongside those without (Beck and Watson, 2010) and terms are often confused and used interchangeably (e.g. Beck, 2009).

Hence, the concept of 'traumatic birth' is meaningful within the literature relating to childbirth, but is generally poorly defined. There is therefore a need to conceptualise the concept of a traumatic birth, distinct from diagnosable conditions that may result from the experience, or the mode of delivery. In this situation concept development is needed to clarify the concept (Walker and Avant, 2011), refine

meaning and direct future application. This paper aims to clarify what is meant by 'traumatic birth' through a concept analysis, using Walker and Avant's model (2011).

Method

Concepts form the foundation of applied theory in the social sciences (Morse et al, 1996). A concept is a mental image of a phenomenon or experience, with a meaning that can be communicated to others and understood. A concept analysis is a deductive process that analyses the existing usage of a concept, identifying and refining shared meaning (Walker and Avant, 2011). In order to analyse a concept, it needs to be broken down into simpler elements to establish their internal composition. Walker and Avant (2011) provide a model for undertaking this process, the goal of which is to bring to light the attributes of a particular concept and clarify its meaning. Walker and Avant's (2011) framework relies on literature-based evidence and ensures that the uses of the concept are not just limited to nursing and medical literature, but facilitate sources such as dictionaries, thesauruses and research papers. This method is not without criticism, with some authors arguing that it does not add to the knowledge base, and is instead only an intellectual idea (Rogers, 1993), and others saying it does not create a strong enough theoretical basis for further work (Morse, 2000). Other methods have been proposed - evolutionary concept analysis (Rogers, 1993), simultaneous concept analysis (Haase et al, 1993), utility method (Morse, 2000), principle-based method of concept analysis (Penrod and Hupcey, 2005), and hybrid model of concept development (Schwartz-Barcott and Kim, 1993). However, the Walker and Avant model has been selected for this paper because it is the most widely utilised within nursing and midwifery research, and it has specifically been used in a perinatal context to analyse concepts related to traumatic birth (Spiteri et al, 2013; Allan et al, 2013). Overall, this method is deemed rigorous, logically structured and appropriate to the concept being analysed.

Traumatic birth is a concept that is relatively new in the research and midwifery literature, and one for which meaning has not fully coalesced. Using Walker and Avant's (2011) framework, this paper will explore what different writers mean by traumatic birth, to develop an accurate understanding of what is being discussed. This method involves using a series of eight steps, which have been summarised in Table 2 below:

Table 2: Process of Concept Analysis

Step	Process	Purpose
1	Selection of a concept	Define what is being analysed
2	Determine the aims and purposes of the analysis	Identify why the analysis is useful
3	Identify all the uses of the concept	Understand how the concept is currently used (includes literature review)
4	Determine the defining attributes	Analyse what features lie behind the current usage
5	Constructing a model case	Create an exemplar of how the concept is currently used
6	Constructing borderline, related, contrary, invented and illegitimate cases	Demonstrate that the concept is narrow enough to exclude mis-usage
7	Defining antecedents and consequences of the concept	Explain what happens prior to and after the concept to make the usage valid
8	Empirical referents	Check definition of concept for external validity

Results

Step 1: Selection of a concept

The literature already contains a wide range of terms, which are used in sometimes overlapping or contradictory ways. The first stage in the Concept Analysis is therefore to decide which term should be selected. Examining the list of terms currently used in the literature, there exists a choice of at least eight overlapping but slightly different concepts which could be analysed (see Table 1). Some of these terms name specific psychological conditions which can result from a traumatic birth, but exclude women who do not develop these conditions. These terms were therefore ruled out. Walker and Avant (2005) recommend analysing concepts where the meaning is unclear, and not strictly defined. On this basis, all terms with diagnostic criteria were ruled out. Consideration was then given to whether the term was narrow enough to be conceptually useful. Terms such as 'difficult birth' and 'negative birth experience' have a wide applicability and encompass a wide range of birth experiences, which may or may not be experienced as traumatic (Soet, 2002; Sorenson and Tschetter, 2010). This means that defining either of these terms would not add to the understanding of traumatic birth, and on this basis these terms were excluded from selection. With these terms excluded, the potential terms available were 'traumatic birth', 'traumatic experience of childbirth' and

'birth trauma'. A brief review of the literature was undertaken to determine which term was used most consistently. On this basis, the concept of 'traumatic birth' has been selected for analysis.

Step 2: Determine the aims or purposes of analysis

The lack of a clear definition of a traumatic birth results in difficulty both for those conducting research on traumatic births, and those providing services to women affected by traumatic birth. In the research arena, this leads to a reliance on either self-definition, or third party definitions. Where stricter criteria are used, the only existing definitions are those which result in the diagnosis of a mental health problem to identify who has been affected by a traumatic birth. This makes comparisons between populations difficult, and therefore leads to potential lack of reliability in comparing the effectiveness of prevention of trauma, or treatment for those who have been traumatised. In clinical practice, the lack of a clear and defined concept may create barriers for women wishing to access services, as they may have experienced a traumatic birth which has not resulted in a diagnosable mental health problem. This can lead to inappropriate diagnosis, and to treatment which is at best ineffectual, but potentially harmful, whilst leaving women's real needs unmet (Hilpern, 2003; Kitzinger, 2006). Defining the concept will therefore facilitate comparisons across studies dealing with prevalence, prevention and treatment after traumatic births and highlight areas for future research and may enable targeted support and assistance for those experiencing or at risk of a traumatic birth.

Step 3: Identify all uses of the concept

Once the concept has been selected and the purpose of the analysis has been defined, the concept is broken down into its component words, so that the individual words 'traumatic' and 'birth' can be examined separately. The terms are then re-joined, to provide a single definition. The analysis then progresses to examine how the concept as a whole is currently used in the literature. Initially this stage utilises as wide a range of sources as possible, including dictionary definitions, academic and medical literature, and common usage sources (Walker and Avant 2011).

Birth

'Birth' is a relatively simple concept to understand. It is a specific event, and is defined in the Oxford English dictionary as

'The emergence of a baby or other young from the body of its mother; the start of life as a physically

separate being'.

In conjunction with 'give', 'birth' can also be used as a verb to describe the process of the event:

'Give birth to (a baby or other young)'.

Two other uses of birth are given in the Oxford English Dictionary: 'The beginning or coming into

existence of something' and 'A person's origin, descent, or ancestry' – but for this analysis only the first

two uses of the term 'birth' are relevant – a specific event that involves the emergence of a baby from

a mother, and the process associated with this event.

Traumatic

'Traumatic' is a more difficult concept to define. Beginning with the root word 'trauma', the Oxford English

Dictionary contains two definitions:

1. 'A deeply distressing or disturbing experience'

2. 'Physical injury'

As an adjective 'traumatic' can relate to either of these meanings, but refers to the distress and

disturbance caused by either the psychological or physical injury. In the context of birth, trauma can

arise from medical interventions, whether or not they cause physical injury, or from the care received.

Therefore psychological consequences are always involved in the concept of 'traumatic', regardless of

whether physical injury is involved.

Traumatic birth

The enduring nature of the distress is a matter for consideration. Clearly it should last past the end of

the birth itself, but does it also outlast all the physical consequences of the birth, when some of those

might last for years, or even be permanent? In the definition of PTSD and PTSS which are lucidly related

8

to a traumatic birth, the minimum duration for symptoms is given as one month (American Psychiatric Association; Criterion F, DSM-5, 2014). It may be feasible therefore to tentatively advance this timescale as a minimum for the duration of distress in the case of traumatic birth. If untreated, or ineffectively treated, there is unlikely to be a maximum duration to the psychological distress caused by a traumatic birth. Turning again to the definitions used for PTSD, the UK NICE Guidelines (2005) recognise that many individuals presenting with symptoms of PTSD will have experienced them for many months or even years. Existing literature on traumatic childbirth also demonstrates that the psychological distress may last a woman's entire life, and never be resolved (Forssen, 2012).

When these concepts are put together the following definition can be proposed:

'The emergence of a baby from the body of its mother, in a way which may or may not have caused physical injury. The mother finds either the events, injury or the care she received deeply distressing or disturbing. The distress is of an enduring nature.'

At this point some consideration must be given to what constitutes the timeframe of 'birth'. The beginning of birth could be conceptualised as the onset of labour, but for women who are induced, or birth their baby through a pre-labour caesarean section, the beginning of labour does not mark the beginning of birth. It is therefore proposed that the beginning of birth be taken to be either:

- 1. The onset of labour, or
- 2. The admission to hospital for medical intervention intended to begin birth

Using the Oxford dictionary definition above, the end of birth would occur when the baby had emerged from the mother's body. In midwifery and gynaecology, the birth is seen as complete when the placenta has been delivered. In the case of a caesarean section, a woman will still be cared for in the Recovery Room, following the delivery of the placenta and the stitching of the incision. From the literature, none of these definitions seem to fit with women's experiences, in which the care received is as important, if not more important, than the medically significant events (Allen, 1998; Storksen et al, 2012). It is proposed that the end of birth be conceptualised for the purposes of this analysis as the end of the care

received from medical professionals, maternity staff, and other birth workers (e.g. doulas) in direct relation to the episode of birth. In practice, this might mean when a midwife who has attended a homebirth leaves the home, or in a hospital delivery it would mean when a woman is discharged from the Labour Ward or Midwife Led Unit, either to return home, or for admission to the Postnatal Ward. This definition of the timeframe of birth fits the literature, but is an area in which future development could be helpful.

Using this timeframe, the usage advanced above is consistent with the definition based on the separate terms that was advanced above.

The next component of this step is to search the literature on 'traumatic birth'; to evaluate whether the definition arrived at fits the ways in which the concept being analysed is used in practice.

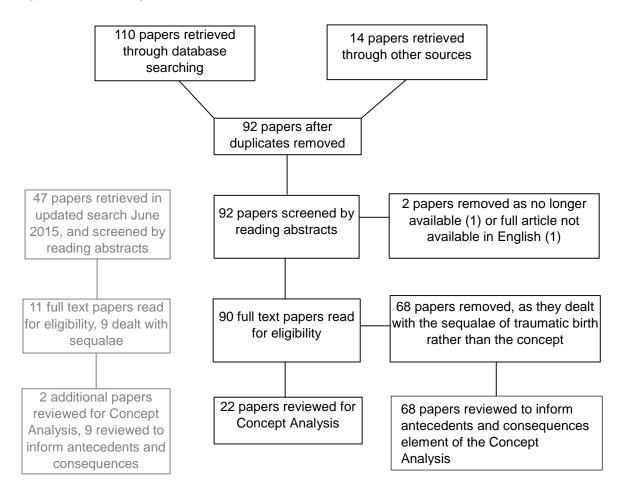
Literature search

In Walker and Avant's method of Concept Analysis, a literature search is not a specific step in the process. Instead it forms one part of the larger step of identifying all the uses of the concept that can be found in the literature, to examine consistency of the definition that has been advanced. However, a search strategy using Cochrane, PsycINFO, CINAHL and Medline databases was employed, for dates between 1998 and 2014, to ensure the inclusion of literature from a wide variety of sources. Studies over 15 years old were excluded as the aim was to examine contemporary uses of the concept. This time period was chosen as Allen's work in 1998 and Saisto et al's in 1999 mark a point in the literature when the concept of traumatic birth is beginning to be used. With the publication of the updated DSM-IV-TR the following year, the diagnosis of PTSD relating to childbirth becomes possible, and the literature relating to traumatic birth increases (American Psychiatric Association, 2000). The keywords used for the search were 'traumatic' and 'birth'; only sources in English were included.

The search returned 92 potentially relevant papers, after duplicates were removed. Following reading of all abstracts, one article was excluded as the full text was only available in Persian and one was removed because it was no longer available. This left 90 papers which related to traumatic birth in some way. Sixty-eight of the papers were concerned largely with the sequelae of a traumatic birth, rather than

what was actually meant by 'traumatic birth'. These 68 papers were used to inform the consequences of traumatic birth, whilst the 22 dealing with the births themselves were used to inform the defining attributes. The 22 papers dealing with the births themselves included a meta-ethnography of traumatic births (Elmir et al, 2010), and the 68 papers dealing with the sequalae of traumatic birth included one meta-ethnography of Beck's work (Beck, 2011), and a meta-synthesis by Fenech and Thomson (2014). An updated search in June 2015 added an additional 2 papers to the Concept Analysis, and an additional 9 to the papers on the sequalae and consequences section of the analysis. These papers were analysed, and the results interwoven with the findings from the original analysis. This is shown in Figure 1 below.

Figure 1 – Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart (Moher et al, 2009)



In literature that does define the actual experience that constitutes a traumatic birth, a range of different experiences are revealed. Earlier papers refer almost exclusively to physical trauma having occurred to the mother or baby (Ryding et al, 1998; Saisto et al, 1999; Oliver, 2005; Lesianics, 2005) and this

usage is similarly reflected in popular understandings of traumatic birth:

'Birth trauma (BT) refers to damage of the tissues and organs of a newly delivered child, often as a result of physical pressure or trauma during childbirth. The term also encompasses the long term consequences, often of a cognitive nature, of damage to the brain or cranium '. (Wikipedia)

Some of the papers identified in the literature search focused on this kind of physical injury to the mother or baby (McKinlay et al, 2008). In many other cases the trauma is presumed by researchers to be implicit in the mode of delivery (Oliver, 2005; Rowlands and Redshaw, 2012), in particular for unplanned caesarean section (Ryding et al, 1998; 2000; Lesanics, 2005; Van Reenen and Van Rensburg, 2015), but also for instrumental vaginal delivery (Parker, 2004; Gamble and Creedy, 2005).

There seems little disagreement that severe physical injury to either mother or baby, and unplanned operative births have the potential to be psychologically traumatic as well as physically injurious, although research shows that unplanned operative births do not always result in maternal psychological trauma (Boorman et al, 2014; Van Reenen and Van Rensburg, 2015). In more recent years, it has become common to use the term 'traumatic birth' for a wider variety of experiences. The notion that the birth experience *per se* irrespective of physical injury or intervention can be traumatic is not a sudden development. Kitzinger (2000), highlighted the manifestation of PTS symptoms in women following normal birth and Robinson (2002) reflected that home-birth can cause PTSD 'when a midwife is set on giving a hospital birth at home'. Both authors reinforced Beech's and Robinson's (1985) findings that the consequences of this distress can last for a great many years. Yet the number of researchers using traumatic birth in this way were relatively few, until more recently when psychological trauma unrelated to physical injury began to emerge as part of a discourse on whether childbearing women can experience PTSD. Childbirth related PTSD is now generally accepted, although the criteria for diagnosis remain under discussion (Ayers et al, 2008; Stramrood et al, 2010; Vythilingum, 2010; Ayers et al, 2015).

It is also now increasingly acknowledged that women without PTSD can experience clinically significant distress following childbirth. Beck (2004b) posited a definition for birth trauma centred round the

mother's psychological rather than physical experience:

'An event occurring during the labor and delivery process that involves actual or threatened serious injury or death to the mother or her infant. The birthing woman experiences intense fear, helplessness, loss of control, and horror' (Beck, 2004b, p28).

The terminology used to describe the experience of these women has fluctuated over time, as researchers have grappled with defining and naming women's experiences. Initially, terminology remained closely related to the clinical terminology of PTSD. Where women have symptoms of PTSD, but the symptoms had not lasted long enough to qualify, or the birth was not physically traumatic, terms such as partial PTSD (Stramrood et al, 2010), Post-Traumatic Stress Symptoms (Simkin, 2006), or Post Traumatic Stress Experience (Simkin, 2004) have been used. Where clinical terminology was inappropriate, more general terms, such as 'distress' (Moyzakitis, 2004) 'negative birth perception' (Sorenson and Tschetter, 2010) and 'trauma' (Soet, 2002) were also used. Despite the differences in language, all of these terms were describing a potentially similar phenomenon: a sub-clinical psychological reaction to an event or care experience which occurred during birth.

A paper by Ayers et al (2008) marked a seminal moment in the area of traumatic birth, as it explicitly acknowledged the existence of women without PTSD who experienced clinically significant distress following childbirth that is not necessarily related to physical injury. This reflected a change that occurred in the literature from just a short time before the publication of this paper – the usage of 'traumatic birth' in much of the literature widened to include psychological distress in the absence of severe physical trauma or operative births. Terminology continued to be inconsistent though, with some authors using the term 'birth trauma' (Kitzinger and Kitzinger, 2007), some using 'traumatic birth' (Ayers et al, 2008), and some using the two interchangeably (Beck, 2010). In addition, wider terms such as 'negative birth experience' continue to be used (Sorenson and Tschetter, 2011).

There has been a more recent acknowledgment that psychological trauma can occur to other people who are present at a birth. In particular the woman's partner can have a psychological reaction to a traumatic birth (Ayers and Nicholls, 2007). Midwives and other health professionals present at a birth

can also experience a similar reaction (Weston, 2011; Rice and Warland, 2013; Beck et al, 2015; Davies and Coldridge, 2015). This is an emerging area of research, with a paucity of literature, and so defining the characteristics of the experience of a traumatic birth in someone other than the mother is currently difficult. Further commentary on this subject is outside the scope of this paper. It is acknowledged that a birth which did not cause psychological distress to the mother, but did cause significant distress to someone else present is still a traumatic birth. There may be further consequences for the witness in this case that are not covered within this concept analysis.

'Traumatic birth' is therefore used in the literature to refer to a birth where there has been:

- 1. Physical injury to the baby and resulting psychological distress, and/or
- 2. Physical injury to the mother which results in psychological distress, and/or
- 3. Fear of physical injury to mother or baby and associated psychological distress, and/or
- 4. Psychological response to the experience of birth, including care received, which causes psychological distress of an enduring nature

Step 4: Determine the defining attributes

Having identified the way that 'traumatic birth' is used in both contemporary society and academic literature, the next stage is to understand what attributes define a traumatic birth, to create greater precision in the analysis of the concept.

The defining attribute of 'birth' is that a baby must have been within the mother's uterus, and emerged. If the baby has not survived, it must be of a gestation where survival was possible, in order to fulfil the criteria of a birth rather than a miscarriage.

The mother must have been traumatised by what happened during the process of the baby being born. This injury could be physical, occurring to either the mother or the baby, but must result in psychological distress that lasts after the birth. The trauma could be purely psychological, or could include both physical and psychological aspects. Psychological trauma could arise from care during the birth, including brusque or unsympathetic care, or inability to obtain interventions or analgesia the woman

feels is necessary, or from experiencing interventions the woman feels are unnecessary. Psychological trauma could also arise when a woman has experienced a previous traumatic experience, including sexual abuse, and events that occur during the birth vividly remind her of these experiences. The long lasting nature of the distress is one attribute which separates the concepts of 'difficult birth' or 'negative birth experience' from a traumatic birth. Why some women experience short-lived distress, and for others the distress continues is not fully understood, though it may be related to how the woman processed the events either as they happened, or to feeling emotions such as horror and intense fear during the events (Beck 2004a), or how she processed them afterwards (Van Reenan and Van Rensburg, 2015; Ayers et al, 2015), and whether the events are reinforced or balanced by other events of new motherhood (Beck, 2009).

The defining attributes are therefore:

- 1. A baby has been born
- Events and/or care during the birth caused significant distress and trauma to the mother as they unfolded. The trauma could be
 - a). Physical and psychological
 - b). Psychological alone
- 3. The distress from the trauma must be long lasting

The attributes must all be present to fulfil the criteria for a traumatic birth. Using these defining attributes, it is then possible to construct cases which include all, some, or none of them. The purpose of this stage of the analysis is to test the application of the newly defined concept.

Steps 5 and 6: Constructing a model case, and constructing borderline, related, contrary, invented and illegitimate cases

The next step in Concept Analysis is to identify a series of cases, and apply the defining attributes to them to check for 'fit'. These include model cases which show the concept being applied in an exemplary way, and then a range of other uses, including borderline, related, contrary, invented and illegitimate cases. The cases are based on the full inclusion, partial inclusion or exclusion of the defining attributes, which in turn have emerged from the literature. For this analysis, the cases relate to whether a woman

has become a mother through a traumatic birth, and how this might relate to her future choices about pregnancy and birth. The purpose of identifying these cases is to check that the definition of the concept can be applied appropriately. The exact purpose of each case is summarised from Walker and Avant (2011), and shown in Table 3 below:

Table 3: Summary of purpose of cases in Walker and Avant's method of Concept Analysis

Case	Purpose
Model	An example drawn from the literature which fits the definition of the concept
	exactly
Borderline	An example drawn from the literature which includes most of the defining
	attributes of the concept, but excludes one attribute. This case should be used as
	a test to help tease out the nuances of the defining attributes
Related	An example drawn from the literature which contains some of the elements being
	studied, but not all of them, demonstrating the concept can be used accurately to
	differentiate between related cases
Contrary	An example from outside the literature which is a clear example of 'not the
	concept', which helps to define what the concept is
Invented	An invented example which demonstrates the applicability of the concept to cases
	which have not happened
Illegitimate	To be used when a concept has alternate meanings

Model

A mother is told her baby's life is at risk and given unwanted medical interventions including an episiotomy without adequate anaesthesia. She does not feel in control, and is distressed by both the threat to her baby's life, the pain and the physical injury incurred through the episiotomy. She feels medical staff are brusque and uncaring in their attitude towards her. She has lasting physical effects from the episiotomy, and feels traumatised when thinking back over the birth. She wishes she had made different choices, and feels that the perceived removal of her choice was traumatic, as well as the lasting physical trauma from the episiotomy.

Borderline

A mother is told her baby's life is at risk and advised that she needs medical interventions she does not want, including an episiotomy. She feels respected by those caring for her, and in control of the decisions, and decides to have the advised interventions. She experiences distress at the threat to her baby's life, and at having interventions she would have preferred not to have, and describes the

birth as difficult. But the care she received, and feeling in control of decisions protects her from being traumatised by the events. On reflection, she feels she would have made the same choices again, and trusts that she would have been supported by those caring for her in whatever decisions she had made.

Related

- a). A mother has minor perineal grazes from giving birth. They are tender for a few days, but cause her no lasting problems or distress.
- b). A mother is told her baby's life is at risk and is given medical interventions which she welcomes.
 - Contrary

A mother has an empowering and satisfying birth experience and is very happy with it.

Invented

A solitary pregnant alien finds herself on Earth. She cannot explain her needs and does not receive appropriate care as she gives birth. Her expectations of what should happen during birth are not met, and things happen during the birth which surprise her and which she did not expect. She is unable to understand what is happening. She and her baby suffer no major physical harm, and live, but the mother is distressed and traumatised by what happened.

Illegitimate

No illegitimate uses of the concept of traumatic birth were found.

Considering these cases demonstrates that the definition of the concept of 'traumatic birth' can be applied appropriately, this shows that the defining attributes identified were consistent with the current usage of the concept.

Step 7: Defining antecedents and consequences of the concept

Once a definition has been arrived at, and has been demonstrated, the next step is to identify the necessary antecedents and consequences of the concept – that is, what must have happened prior to the concept under study, and what are the unavoidable things which happen afterwards? In the Walker and Avant (2011) method of concept analysis, antecedents and consequences are the things which must *all* have happened, in order for the concept to be applied appropriately. These are detailed in Table 4 below.

Table 4: Necessary antecedents and consequences of a traumatic birth

Necessary antecedents	Necessary consequences
Conception occurred, and	The woman has become a mother, and
A fetus developed to the point where it was	A baby has been born, and
viable, and	The psychological distress experienced lasts
A viable baby was birthed, and	beyond the immediate delivery
Physical and psychological, or psychological	
harm alone, occurred to the mother during the	
events or care received during the birth or as a	
direct result of the events of the birth	

It can immediately be seen that many of these necessary antecedents and consequences apply to all births. Because of the nature of the concept under investigation, there are also a number of antecedents and consequences which are likely, but may not *all* have happened. These potential consequences are however part of what sets a traumatic birth apart from other closely linked concepts, such as a difficult birth. The nature of a traumatic birth is that the distress a mother experiences is long lasting, and that this long lasting distress has potential important consequences; it is therefore necessary that a mother has experienced *some* of the potential antecedents and consequences in order for a birth to be defined as a traumatic birth. The Walker and Avant (2011) method does not include analysing likely antecedents and consequences, but it has been decided to adapt the model slightly to the nature of the concept being reviewed. These potential antecedents and consequences are shown in Table 4a below:

Table 4a: Potential antecedents and consequences of a traumatic birth

Potential antecedents	Potential consequences
Dhysical harm to mather or behy	Development of diagnosable psychological
Physical harm to mother or baby	conditions such as PTSD and post-natal anxiety or
Warned of potential harm to mother or baby	depression
Death of baby	Difficulty with infant-maternal bonding
Operative birth	Lower rates of breastfeeding
Medical intervention	Marital/relationship difficulties or breakdown
Haemorrhage	Difficulties in sexual function or relationships

Lack of care	Difficulty maintaining existing friendships or
Care which is perceived as uncaring, unsupportive	forming new ones
or inhumane	Distress on anniversary of birth
Experiencing high levels of pain during labour,	Distress when encountering people, places, or
and not being able to obtain analgesia	phenomena which remind mother of the birth
Having choice removed by the actions of a person	
(rather than events)	
Not holding baby immediately after birth	
Existing psychological condition	
Previous sexual abuse	
Previous traumatic experience	

Step 8: Empirical referents

The final step in the Walker and Avant (2011) model of concept analysis is to define the empirical referents of 'traumatic birth'. Empirical referents are 'classes or categories of actual phenomena that by their existence or presence demonstrate the occurrence of the concept itself' (p73).

With a traumatic birth, a necessary antecedent is that the mother experienced the birth, or specific events during the birth, as traumatic. The referents for this would be that she has experienced deep distress or disturbance, and that this continued for a significant period of time afterwards. An additional referent would be that she describes the birth as a traumatic experience. This does not have to be a literal use of language; negative terms such as upsetting, traumatic, distressing, horrific might also be used (Beck 2006).

Other referents may be present, for example sometimes the mother will avoid discussion of the birth, or discussion of other people's births. She might also avoid returning to the physical location of the birth, or experience anxiety if she needs to return there. She might experience flashbacks to the birth, or vivid re-imaginings of it, or have nightmares about it. Related psychological conditions might develop; common ones are PTSD/PTSS, anxiety disorders, depression, conversion disorder and bonding/attachment difficulties (Parker, 2004; White et al, 2006; Bick and Rowan, 2007; Simpson, 2008;

Sorenson and Tschetter, 2010; Reid, 2011). Absence of these latter referents does not indicate an absence of a traumatic birth. Whilst psychological wellbeing is often affected by a traumatic birth, it appears to be possible to have experienced a traumatic birth, to experience clinically significant levels of distress, but not to have a diagnosable pathological outcome (Ayers et al, 2008).

Discussion

Traumatic birth, and its negative sequelae, have only begun to be properly recognised within the last 15 years. A picture is emerging of a group of women who are living with the long term negative sequalae of traumatic births, enduring consequences such as longer term mental health problems (Beck, 2004a; Forssen, 2012), compromised maternal infant relationships (Nicholls and Ayers, 2007), poorer quality marital relationships (Ayers et al, 2006) concomitant depression in partners (Nicholls and Ayers, 2007) and challenges to future reproductive decisions (Fenech and Thomson, 2014). These women may be left without access to appropriate services that can offer treatment or support, because the distress they are experiencing does not fit the diagnoses available. Not all women experience all these issues, but experiencing long term distress, and enduring consequences, is one of the defining differences between a traumatic birth, and other closely related concepts such as a bad birth or a difficult birth. Because women who have experienced a traumatic birth may experience a variety of different enduring sequalae, the adaptation to the Walker and Avant (2011) model was deemed appropriate, in order to include a range of potential consequences, as well as the necessary consequences.

The literature emerging from the study of traumatic birth is breaking new ground, and dealing with concepts which have not been acknowledged previously. At the moment, a variety of terms are used to describe the experience of a traumatic birth, and they are used interchangeably (Kitzinger and Kitzinger, 2007; Ayers et al, 2008; Beck and Watson, 2010). 'Traumatic birth' is used quite loosely in the literature, to describe a number of different, but related, experiences. These include physical injury to mothers and babies and psychological responses to the events of or care received during birth.

The recognition that bystanders, especially women's partners and health professionals, may also experience traumatic births challenges the idea, posited in some literature, that mothers find birth traumatic because of unrealistic expectations (Shub et al, 2012).

Examining the literature, it becomes apparent that trauma in the form of physical injury can lead to a birth being traumatic, but it is not a necessary condition (Kitzinger, 2006; Thomson and Downe, 2010). In the case of physical injury to either the mother or baby, the experience becomes traumatic because of the psychological distress caused by the injury (Ayers and Harris, 2012). In other cases, the experience has not involved any physical injury, but something has occurred during the birth which has been deeply disturbing and distressing, usually to the mother (Beck and Watson, 2010; Ayers and Harris, 2012). It is also the case that women who have previously experienced a traumatic event, including sexual abuse or a previous traumatic birth, can experience events during birth as traumatic, because they remind them of the previous traumatic experience. This potential is made more probable if the woman perceives the care she receives to be insensitive (Gottfried, Lev-Wiesel, Hallak & Lang-Franco, 2015).

Models of the causal factors in traumatic birth are beginning to emerge. There are a number of predisposing factors identified by Soet et al (2003), expanded on by Slade (2007), and subsequently discussed as a predictive model by O'Donovan et al (2014). These predisposing factors make it more likely that a woman will experience birth as traumatic. An operative birth has long been recognised as a factor which may influence whether a birth is traumatic or not, as has delivering a very premature baby, where there are concerns for survival and long-term disability. A woman's previous experiences, including having been sexually abused or having experienced other traumatic events may also be a significant factor in how she responds to the events of birth (Gottfried, Lev-Wiesel, Hallak & Lang-Franco, 2015). However, the care received by a labouring woman has been observed to be one of the greatest factors in the incidence of traumatic birth (Soet et al, 2003). With the right care, women can experience deep distress and disturbance during the birth, including physical injury to themselves and their baby, and still not experience the birth as traumatic (Beck, 2004b). Conversely, women can have births in which no interventions were used, there was no physical injury to anyone, the birth might even have been at home, but the woman has still come away from the birth traumatised, because of poor care. The factors which make care good or bad are not fully explored in relation to traumatic birth, but themes that are emerging relate to the relationship between the midwife and the woman, whether the woman feels in control of decisions, and feels her wishes are respected (Elmir et al, 2010). Postnatal

care, and wider postnatal support, also appear to play a role in whether a woman who has experienced a traumatic birth goes onto develop a diagnosable psychological condition (Quinn, Spiby & Slade, 2015; lles &Pote, 2015; Ayers, Wright & Ford, 2015). The diversity of causal factors in a traumatic birth are one of the reasons that the adaptation of Walker and Avant's model was deemed appropriate, through the inclusion of potential antecedents to a traumatic birth.

This emerging picture of traumatic birth as a complex process in which there are opportunities for intervention to reduce or exacerbate trauma, challenges the literature which focuses on mode of delivery as the greatest signifier of traumatic birth. Women's subjective experiences of care may be more important in whether a birth is traumatic than any objective account of the events (Garthus-Niegel et al, 2013). Women's knowledge about and perceptions of their experience and their feelings may therefore be the most expert information available in identifying traumatic births. This potentially poses a challenge for predictive modelling and standardised tools to determine which women are at greater risk.

For the experience to be a traumatic birth, the distress must be long lasting, in some cases for years (Forssen, 2012). A birth which causes distress that is short-lived might be categorised as a difficult or negative birth, but is not a traumatic birth as defined in this analysis. What causes the distress to be short-lived or long-lasting is not fully understood, but may be about the care received, the way a woman processes the distress (Van Reenan and Van Rensburg, 2015), or an interplay of the two. Women who experience a traumatic birth may go on to develop associated psychological conditions, such as mood and anxiety disorders (Beck, 2009), PTSD/PTSS (Leeds and Hargraves, 2008). However, these conditions, and the nature of their relationship to a traumatic birth, are not well-recognised, and may be under-diagnosed (Leeds and Hargraves, 2008). Conversely a birth can be traumatic, and the mother may experience sub-clinical distress, but not develop a subsequent psychological disorder (Elmir et al., 2010). There is no literature which systematically addresses the question of why some women experience a traumatic birth, and suffer distress, whilst others subsequently develop associated psychological conditions, but it may point to the spectrum nature of traumatic birth.

Objectively, in incidences of traumatic birth, the single physical event present in all cases is that a baby

has been born. The trauma comes from the mother's subjective response of some form of psychological distress, which is enduring. For some women this results in a diagnosable psychological condition, for others it does not. For those women for whom a traumatic birth does not result in a diagnosable psychological condition, experiencing a traumatic birth may still have significant, negative and long-lasting consequences.

The definition of traumatic birth arrived at in this analysis challenges the medical model of a traumatic birth as being primarily related to the mode of delivery. It also poses challenges to a rigid interpretation of traumatic birth as necessarily resulting in a diagnosable mental health difficulty, such as PTSD or post-natal depression. That a group of women exist who may experience after effects from a traumatic birth, whilst not being diagnosed with a specific psychological condition is a point which is beginning to be explicitly recognised in the literature (Coates et al, 2014). This analysis has shown that some women may experience birth as traumatic, and have long lasting consequences from this trauma. Their distress may be based either on the events that have occurred during the birth, or the care received, or an interplay of the two. The trauma may result in a diagnosable psychological condition, or it may not, but even in the absence of the development of such a condition, the consequences for the mother and those around her may be of a severity and duration which requires support. This group of women are currently under-represented in the literature on traumatic birth, and may not be able to access services which rely on the existing models of traumatic birth or diagnostic categories.

Conclusions

'Traumatic birth' is a term currently used widely yet inconsistently in the existing literature. This paper has sought to conceptualise the term 'traumatic birth'. Notwithstanding the complexities of the concept it seems feasible to conclude that a traumatic birth can be described as: The emergence of a baby from its mother in a way that involves events or care which cause deep distress or psychological disturbance, which may or may not involve physical injury, but resulting in psychological distress of an enduring nature'.

Appendix 1 – Literature used to inform definition of concept

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