

Psychological Trauma of Nurse-Midwives Following Shoulder Dystocia Complicated

By Neonatal Morbidity or Mortality

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DNP Clinical Inquiry Project Report & DNP Portfolio Approval

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Psychological Trauma of Nurse-Midwives Following Shoulder Dystocia Complicated By Neonatal Morbidity or Mortality

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Section I. The Clinical Problem

Shoulder Dystocia and Psychological Trauma of the Clinician

Shoulder dystocia, a significant cause of neonatal and maternal injury, is a serious obstetrical emergency that complicates between 0.2% and 4.0% of vaginal births in the United States. Shoulder dystocia occurs when the shoulders of the fetus fail to deliver spontaneously and additional maneuvers by the birth attendant are needed to facilitate the delivery of the body. Substantial neonatal injuries and rarely death occur in 4-40% of cases (American College of Obstetricians and Gynecologists (ACOG), 2002). Researchers have attempted to identify pregnant women at risk for shoulder dystocia, but the majority of shoulder dystocia occurs unexpectedly in women who do not have any identifiable risk factors (Lewis et al., 1998; Mazouni et al., 2006; Rouse & Owen, 1999). Litigation involving shoulder dystocia results in the fourth highest monetary awards in cases of obstetrical tort in the United States (Mavroforou, Koumantakis, & Michalodimitrakis, 2005).

Midwives and physicians are entrusted as gatekeepers for the safety and wellbeing of the mother and infant during the birth process. When an adverse outcome occurs, resulting in maternal and fetal morbidity and even mortality, the clinician suffers significant emotional distress ranging from feelings of empathy for the patient to professional bereavement over the situation occurring “under their watch”. Despite extensive literature searches, there is no research relating to provider emotional trauma following shoulder dystocia specifically, and very limited evidence on the emotional response of clinicians involved in adverse obstetrical outcomes. As a result of this gap in the literature, the incidence, prevalence, severity, and nature of the experience of the clinician remains unknown, although researchers have hypothesized that a significant number of providers who manage births complicated by shoulder dystocia, especially those involving serious fetal and or maternal morbidity or mortality, are significantly emotionally affected.

Background and Organizational Knowledge

The lack of research in this highly sensitive area is reflective of the pervasive cultural norm of a generalized denial within the medical profession regarding acknowledgment of the emotional toll suffered

by birth workers following perinatal death (Cowan & Wainwright, 2001). This lack of acknowledgment leads to isolation that may potentiate the adoption of maladaptive coping patterns, leading to burnout, depression, and other forms of emotional distress (Mander, 2008; Redinbaugh et al., 2003; Shanafelt, 2003). While midwifery is not rooted in medicine in the same manner as traditional western medical obstetrics, many CNM's are immersed in this culture within their hospital workplace. There was no research delineating the incidence of shoulder dystocia by birth setting (such as hospital, birth center, or home) or provider type (CNM, professional midwife, obstetrician, or family practice physician).

According to Rose, Bisson, Churchill, & Wessely, traumatic events have causal relationships with psychological morbidity (2009). The fear and stress surrounding potential and actual litigation and associated financial losses are correlated with higher levels of emotional exhaustion, decreased career satisfaction, and are cited as reasons for early retirement (Becker, Milad, & Klock, 2006; Hankins et. al., 2006). Provider burnout, with a reported prevalence of 25%-60% among specialist and generalist physicians, has been associated with suboptimal patient and self care (Becker et. al., 2006; Shanafelt & Habermann, 2002; Shanafelt, 2003). The significant psychological and physical health effects of post traumatic stress disorder (PTSD) on emergency first responders, such as paramedics, policemen, fire fighters, and emergency room personal has been well documented (Courtios & Gold, 2009; McCaslin et al., 2005; Rose et al., 2009).

Importance to Practice and Desired Outcomes

Despite great strides in the improvement of maternity care in the United States, some adverse obstetrical outcomes will inevitably occur. By examining this common yet often unspoken and isolating experience, this research will begin to lay a foundation upon which the development of educational and professional support models for individual clinician preparation and collegial camaraderie may be established. These models will focus on the integration of, processing, and recovery from an adverse outcome in a manner that minimizes the clinician's emotional and physical consequential morbidities while fostering their professional drive and ability to continue providing high quality care. The information gleaned from this research project is applicable to providers from the disciplines of

midwifery, nursing, and medicine facing other types of adverse obstetrical outcomes. As doctorally prepared advanced practice nurses, we effectively translate research into practice to facilitate positive changes in our healthcare systems and professional culture. As nursing educators and role models, we can teach future nurses, midwives, and residents to honor and accept their emotional grief by creating a supportive and empathetic environment that promotes healing.

Purpose Statement and Clinical Inquiry Question

The purpose of this qualitative research project was to explore the psychological experience of the nurse-midwife following the management of a hospital birth complicated by shoulder dystocia with an adverse neonatal outcome. The significant gap in the literature prohibits the development of an evidence-based model of how to psychologically prepare and guide clinicians, both as individuals and as sources of collegial support, following inevitable adverse obstetrical outcomes. My clinical inquiry question was: How do CNM's process, integrate, and recover from the psychological stress of managing shoulder dystocia complicated by neonatal morbidity or mortality?

Synthesis of Evidence

Introduction

Certified nurse-midwives (CNM's) strive to empower women and their families through their childbearing experiences by providing personalized care to meet their physiological, psychological, and emotional needs. Unfortunately, despite modern medical advances and the provisions of high quality care, some adverse obstetrical outcomes remain inevitable and unavoidable. This is often devastating to the patient as well as the CNM. There is very limited research on the emotional impacts of adverse outcomes on CNM's, and no research specifically examining how the CNM psychologically integrates, processes, and recovers following a shoulder dystocia resulting in neonatal morbidity or mortality. Due to the significant gaps in nurse-midwifery literature, research on physicians, nurses, emergency first responders and psychologists is also discussed to examine the effects of exposure to trauma, provider burnout, post traumatic stress disorder (PTSD), fear of and stress surrounding litigation, and the importance of collegial and professional support when faced with an adverse outcome.

Literature Review

Childbirth is often viewed as a monumental rite of passage in the lives of many women and their families throughout the world. Midwives establish a partnership with women during their pregnancies, and often gain a sense of mutuality that is earmarked by the essential components of empathy and caring (Kennedy et. al., 2004). The culture of midwifery is characterized by an ethic of service, conformity, and self-sacrifice, and the midwife rarely acknowledges her own need for emotional support (Kirkham, 1999; Kirkham & Stapleton, 2000). The midwife's sense of mutuality, deep sense of compassion, and her experience as a woman and mother herself predisposes midwives to experience vulnerability and overwhelming emotions that are difficult to manage when adverse outcomes occur during a birth (Henderson, 2001; Kennedy et.al., 2004; Mann, & Cowburn, 2005; & McIlkpatrick, 2007; Spichiger, Wallhagen, & Benner, 2005).

Birth attendants (physicians, nurse-midwives, and professional midwives) and the assisting registered nurses have standardized training in the acute management of shoulder dystocia, despite little objective evidence demonstrating that this training affects maternal and neonatal injuries (MacKenzie et al., 2007). Increased numbers of maneuvers utilized by the provider in attempting to resolve shoulder dystocia has been shown to be associated with higher rates of neonatal injury (Hoffman et al., 2011). Despite these dire statistics, the large number of prophylactic cesarean births needed to prevent a single case of shoulder dystocia resulting in a permanent fetal injury would result in significant maternal morbidity and be cost prohibitive (MacKenzie et al., 2007). While researchers vaguely allude to significant levels of provider stress during and immediately following the management of a shoulder dystocia, there is a gap in the literature where researchers have actually honed in on the acute or long term stress that the provider may experience in the aftermath of this potential catastrophe.

A traumatic event is defined by the Diagnostic and Statistical Manual of Mental Disorders III-R (DSM-III) as an event that is outside of the realm of the common human experience and consists of a serious threat to life or physical integrity (American Psychological Association (APA), 1980). Victims of trauma, often suffering physical and or psychological manifestations, frequently turn to medical

professionals for treatment (Courtois & Gold, 2009). Researchers have established a strong foundation of evidence that individuals exposed to trauma may suffer from a myriad of transient to long term physical and psychological disorders. These include depression, dissociation, acute stress disorder (ASD), post traumatic stress disorder (PTSD), anxiety disorder, and substance abuse (Agargun et al., 2003; APA, 1994; Carey, Stein, Zungu-Dirwayi, & Soraya, 2003; Ouimette & Brown, 2003; Phillips & Friedman, 2008; Schnurr & Green, 2004).

Researchers have documented the spillover effect of a traumatic workplace event affecting the personal and professional identities of many healthcare clinicians in the months and years following the incident (Goldblatt, Buchbinder, Eisikovits, & Arizon-Messinger, 2009; Heller & Watson, 2005; Kendall, 2007; Maytum, Heiman, & Garwick, 2004). In one of the only studies found examining the nurse midwife's reaction to stressful childbirth situations, Halperin et al. interviewed eighteen Israeli hospital-based midwives (2011). Differing from most obstetrical hospital units within the United States, Israeli CNM's provide all of the intrapartum nursing and midwifery care for the majority of the pregnant patients in the hospital, and obstetricians provide care for a select few. This may limit the applicability of these findings among most hospital-based CNM's in the United States, where midwives often work alongside obstetricians and family practice physicians, and every patient has at least one registered nurse in attendance. The subjects in Halperin's qualitative study had managed at least one life threatening clinical intrapartum situation including an infant or maternal death, a third or fourth degree laceration, hysterectomy, shoulder dystocia, and/or other complicated births. The authors did not delineate how many subjects had managed a shoulder dystocia, nor did they differentiate the responses of the participants based on the specific type of intrapartum crisis. The researchers found that these adverse intrapartum outcomes had a significant impact on the midwife's emotional wellbeing and coping mechanisms employed to manage the acute situation. The subjects described feelings of suddenness and shock, often accompanied by a sense of helplessness and failure. They described making the correct assessment and providing appropriate interventions as an imperative aspect of professional behavior. The perceptions of their midwifery colleagues and supervisors were crucial to their self image as being proficient or

incompetent in managing stressful events, and likewise, the degree of support or lack of support they received from this group affected their self image (Halperin et al., 2011). Hunter found that hospital-based midwives' primary reference group is their midwifery colleagues, where they glean individual feedback, emotional support, and serve as key contributors to their sense of occupational esteem (2004; 2005). Peer support was critical for emotional strengthening and professional approval, which are essential for the midwife's reflection surrounding and the emotional processing of her role within the event, and finally for the enhancement of her professional self image (Brunero, & Stein-Parbury, 2008; Halperin et al., 2011, Howard, 2008). The subjects in Halperin's study identified a lack of informal and formal organizational support for processing events that they categorized as extremely stressful.

In an effort to assist the involved staff in dealing with the emotional aftermath of traumatic workplace events, hospitals commonly hold a single "debriefing" session for staff within several days following the event. The purpose of these meetings is to promote emotional processing or catharsis by encouraging the recollection and reworking of the traumatic event, with the intention to prevent the onset of PTSD and reduce the threat of litigation by the staff or rescue workers over their own subsequent development of PTSD (Rose et al., 2009). The majority of the literature examines the effects of debriefing sessions among emergency first responders. According to a large meta-analysis of randomized controlled trials in 2009, reviewers found that single session individual "debriefings" did not prevent the onset of post traumatic stress disorder or reduce psychological trauma. On the contrary, they actually significantly increased the risk of PTSD in those attending a debriefing (Rose et al., 2009). There is no specific literature on the effectiveness of debriefing sessions and subsequent PTSD among birth workers.

The classic features of PTSD include intrusive reminders of the traumatic experience, avoidance of stimuli associated with the trauma, and experiential numbing and hyperarousal (DSM-IV, APA 1994). The strongest predictor of the development of PTSD in an individual exposed to trauma is the degree of peritraumatic dissociation, defined as an acute dissociative response at the time of the critical incident exposure (Marmar, Weiss, Meltzer, Ronfeldt, & Foreman, 1996; Ozer, Best, & Lipsey, 2003). These posttraumatic stress symptoms usually present within one month of the traumatic event and persist for

longer than four weeks. If the symptoms are present for less than three months, it is categorized as “acute”, and if they persist for longer than three months, it is designated as “chronic”.

A secondary diagnosis following a traumatic event is acute stress disorder (ASD), an acute onset of one or more of the main symptom clusters of PTSD that emerge within four weeks of the event but resolve within four weeks of their presentation. Researchers have found conflicting evidence suggesting that the diagnosis of ASD will predict later PTSD (Bryant, 2008; Elklit & Brink, 2004; Kasam-Adams & Winston 2004). The value in the diagnosis of ASD provides an opportunity for treatment of amply severe and potentially disabling symptoms, even though they may be short lived. (Gold & Courtis, 2009). The reported rate of comorbidities such as depression, dissociation disorder, anxiety disorder, substance abuse, or physical health maladies occur in up to 93% of individuals diagnosed with PTSD (Abram et. al., 2007). These disorders are also likely seen to a great extent in individuals with a history of trauma without clinical symptoms of PTSD (Gold & Courtis, 2009). Statistics pertaining to the prevalence and incidence of ASD and PTSD among midwives or birth clinicians who have managed adverse obstetrical outcomes was not found in the literature, although researchers have documented the presence of symptoms consistent with ASD and PTSD among their subjects (Halperin et al., 2011). It is likely that clinicians enduring ASD or PTSD also may be affected by the associated comorbidities as well.

The psychological trauma response and coping mechanisms of the CNM (or MD) who have managed an adverse obstetrical outcome has been minimally studied. From other disciplines, it is known that depression is common among individuals with a history of trauma, and some researchers have found that it is more prevalent than PTSD among those exposed to trauma (Carey, Stein, Zungu-Dirwayi, & Soraya, 2003; Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, & Best, 2003; McQuaid, Pedrelli, McCahill, & Stein, 2001). Other researchers have found that depression and PTSD frequently occur simultaneously (Bleigh, Koslowsky, Dolev, & Lerer, 1997; Stein & Kennedy, 2001). Anxiety disorders, such as panic disorder (Leskin & Sheikh, 2002), generalized anxiety disorder, agoraphobia (Maes, Mylle, Delmeire, Altamura, 2000), and obsessive compulsive disorder (Breslau, Davis, Andreski, & Peterson, 1991) have all been associated with a history of trauma exposure. Substance abuse, as a means to

modulate and numb distressing emotions and reoccurring symptoms, has been reported among first responders with PTSD, beginning in the aftermath of the event (Stewart, 2004; Ouimette & Brown, 2003).

Shoulder dystocia is among the top four highest monetary awards in cases of obstetrical tort in the United States (Mavroforou et al., 2005). Obstetrical medicine appears to have taken on a “zero tolerance” rule for adverse outcomes, regardless of the role or contributions of the healthcare team (Hankins et al., 2003). Physicians and nurses involved in litigation report extreme emotional distress during the legal process (an average of 4.5 years), including intense feelings of defensiveness, isolation, shame, and being stigmatized by colleagues (ACOG, 2008; Dove et al., 2010; McCaffrey et al., 2008). While the responsibility of providing high quality care in cases where the health of the mother and fetus may be at stake is stressful, the additional fear and threat of potential litigation in the day-to-day practice may become overwhelming. Eighty-nine percent of obstetricians and at least 25% percent of CNM’s report being named in a litigation event at some point in their careers (ACOG, 2008; McCool, Guidera, Stenson, & Dauphinee, 2007). In 2009, tort cases in the United States accounted for 1.74% of the gross domestic product, averaging \$808.00 per person (Towers Watson, 2010). Researchers have found that obstetricians are retiring earlier than intended due to stress caused by litigation, the fear of litigation, or the cost of malpractice insurance (ACOG, 2005). In a study by Becker, Milad, and Klock (2006), ninety-six percent of residents interviewed had concerns about malpractice and thirty-five percent of these pursued a fellowship for the sole reason of malpractice concerns. Higher levels of malpractice concerns correlated with higher levels of emotional exhaustion and decreased career satisfaction.

Medical residents exposed to situational, personal and professional stress are at higher risk of developing burnout (Becker et al., 2006). Burnout is characterized by high emotional exhaustion, high depersonalization, and low sense of personal accomplishment. Individuals in the helping professions, such as nurses, teachers, social workers, physicians, and midwives are more susceptible to burnout because they provide intense levels of personalized care in adverse situations, often without emotional gratification and or appreciation (Maslach, Jackson, & Letier, 1996; Beaver, Sharp, & Cotsonis, 1986).

The lack of research in this highly sensitive area is reflective of the pervasive medical cultural norm of a generalized “denial within the profession” regarding an acknowledgment of the emotional toll suffered by birth workers following perinatal death (Cowan & Wainwright, 2001). While this trait has not been directly attributed to CNM’s in the literature, hospital-based midwives and CNM’s in shared MD/CNM collaborative practices work closely with physicians and hospital administration and operate within this culture. This phenomenon is further described as a deeply seeded “conspiracy of silence”, where attending physicians do not routinely discuss strong emotional responses to patient deaths and trauma with their interns and residents, conveying the trait of depersonalization and modeling how such events should be handled. This isolation may potentiate the adoption of maladaptive coping patterns, leading to burnout, depression, and other forms of emotional distress (Redinbaugh et al., 2003; Mander, 2008; Shanafelt et. al., 2003).

Summary

Exposure to psychological trauma is associated with anxiety, depression, isolation, PTSD, substance abuse, decreased job satisfaction, fear of litigation, and maladaptive coping mechanisms among healthcare professionals. There is a significant gap in the literature describing how CNM’s process, integrate, and recover from the emotional stress of managing a shoulder dystocia that is complicated by neonatal morbidity or mortality. This lack of professional research and acknowledgment further marginalizes the affected clinician by prohibiting the development of an evidenced based model of how to psychologically prepare and guide clinicians, both as individuals and as sources of collegial support, following inevitable adverse obstetrical outcomes. Through increased knowledge around this highly sensitive experience, evidenced-based interventions and supportive safeguards can be developed with the ultimate goal of minimizing potential co-morbidities, stress, burnout, PTSD, and professional isolation while maintaining CNM job satisfaction and performance. Although this qualitative study has focused solely on CNM’s and shoulder dystocia, the information gleaned will likely be applicable to many adverse obstetrical outcomes and professionals in other healthcare disciplines.

Section II. Methods

Clinical Inquiry Design

The purpose of the clinical inquiry project was to explore the common lived experience of the psychological process of the certified nurse midwife who has managed a shoulder dystocia with an adverse neonatal outcome. The information obtained has provided a deeper understanding of the emotional needs of the clinician during and after this time of potential crisis. This insight may be used to contribute to a foundation upon which professional support systems are established to minimize emotional stress, co-morbidities, and professional isolation. Consistent with the goal of gaining further insight and a deeper understanding of individual clinician's experiences, the researcher utilized a retrospective qualitative design, sampling methods, data collection and analysis to generate hypotheses and ideas through inductive reasoning (Greenhalgh, 2007). An iterative approach known as progressive focusing was followed. This allowed the researcher to alter the methods and hypotheses as the research progressed while remaining sensitive to the richness and variability of the subject matter (Mays & Pope, 1999; Silverman, 1990). According to Green and Britten, this technique supports the holistic perspective that "preserves the complexities of human behavior" (1998).

The study design included confidential telephone interviews with hospital based CNM's who have managed a shoulder dystocia with an associated neonatal morbidity or mortality within the last twenty-five years. The researcher collected data through semi-structured telephone interviews. A survey design was not conducted for several reasons. A written survey would allow the participant to reflect, process, and even censor their response. Respondents might not complete and return the questionnaire if the process is seen as burdensome to the participant. While some subjects might be more comfortable responding to a survey with a limited number of pre-conceived answers to select, the researcher chose to utilize thematic analysis in the data analysis for the purpose of maintaining high levels of rich and authentic data, and to generate ideas derived from within the interview data through inductive reasoning (Mays & Pope, 1999).

An alternative to telephone interviews were face-to-face interviews. The researcher chose not to conduct in-person interviews for several reasons. Logistically, interviewing CNM's within a two hour radius of the researcher's location would pose additional limitations to the study, including limiting the sample size and limiting the geographic heterogeneity of the sample, the patient population, and the pervasive medical culture in the area. Face-to-face interviews may also diminish the sense of security that often accompanies the safeguard of confidentiality. The researcher has many midwifery acquaintances within the two-hour radius. Personally knowing the participant could unintentionally influence the objectivity of the researcher, as well as inadvertently inhibit the subject's freedom to share in an uncensored manner. Confidential telephone interviews were conducted to encourage the participant to share candidly and uninhibited, and to alleviate fear of violating HIPAA regulations.

A potential conflict of interest was investigator bias. The researcher is currently a practicing CNM who has managed shoulder dystocia and other adverse outcomes. To minimize the effect of researcher bias, two other CNM's and a clinical psychologist/psychoanalyst also independently analyzed and interpreted the transcribed interviews, as well as the primary researcher's analysis.

Setting

The CNM's participating in the study have practiced as hospital-based nurse-midwives within the United States within the past twenty-five years. There are very few, if any, formal CNM support organizations in the U.S., whose primary or secondary focus is to assist CNM's through the psychological aftermath of managing adverse obstetrical outcomes, such as shoulder dystocia. Most hospitals in the United States have a risk management department and some have pastoral or general counseling services available to conduct an isolated debriefing session with the involved staff and providers. It is not common to have an established program intended to support providers through these troublesome clinical situations on an on-going basis, should the clinician have persistent symptoms of lasting stress stemming from the incident. One of goals of this study was to assess how participants perceive support within their workplace or among their colleagues.

The research interviews took place via telephone, when the interviewer (an experienced CNM) was in a quiet, private location, and the participant was in the location of her choice. The interviews were audio-recorded on the interviewer's private cellular phone. Her cellular phone was password protected and only accessible by her. Within several days of each interview, the entire interview was transcribed verbatim onto her personal computer and the interview was erased from her phone. The computer was also password protected. The interviews were transcribed in the home of the researcher, where the conversations were not overheard by non-involved parties. The transcribed interviews were stored on a flash drive, which are stored in a locked drawer in the office at Samaritan OBGYN in Corvallis, Oregon. The transcribed interviews were also printed and shared with the two other independent coders for analysis purposes. When the printed copies were not being reviewed, they were stored in the same locked drawer with the flash drive. After coding, analysis, and the findings were documented in the research paper, all transcripts and the flash drive were destroyed.

Sample

The convenience sample consisted of five hospital-based CNM's who have managed a shoulder dystocia with an accompanying neonatal morbidity or mortality within the previous twenty-five years. A small sample size was chosen for this research project due to the feasibility of completing the study within the projected timeframe by a single researcher and two assistant analyzers, with an anticipated completion date in May, 2012. The participant's timeframe was originally limited to having had the event within the preceding two years to increase homogeneity within the sample population, but there was an insufficient number of participants recruited. The researcher then modified with inclusion criteria to include births that had occurred within the previous twenty-five years.

Study participants were recruited from an online discussion forum posting (see Appendix A) on the American College of Nurse Midwives website (www.midwife.org). This discussion forum is open to all members of the American College of Nurse Midwives (ACNM) who also participate in the website's *emidwife* discussion groups. Since the sample was recruited through the ACNM website, most of the participants were members or in some way affiliated with ACNM. The benefit of recruiting through

this national organization is that the study has the broad geographic draw of many nurse-midwives across the United States. Not all CNM's are members of ACNM, participate in the emidwife discussion group, or visit the ACNM website on a regular basis. This potentially created some sampling bias and may limit the applicability of the findings to CNM's affiliated with ACNM.

The specific five inclusion criteria for the study were:

- a) CNM was actively practicing as a hospital-based midwife at the time of the birth,
- b) CNM was the primary birth attendant or co-managed the shoulder dystocia,
- c) the associated fetal condition was temporary or permanent,
- d) the birth occurred in a hospital within the United States, and
- e) the participant has a solid support person readily accessible should she develop emotional distress following the interview.

Exclusion criteria include:

- a) If a potential participant states or implies that she does not have a solid support system readily available should she need it if she becomes emotional distraught following the interview,
- c) If the CNM is uncomfortable with the interview being audio-taped,
- d) If the birth occurred greater than 25 years prior to the interview,
- e) If the birth occurred outside of the hospital setting or outside of the United States, or
- f) If the infant did not have a complicating morbidity or mortality associated with the birth.

Description of Study

More research is needed examining the emotional experience and needs of the obstetrical provider who manages adverse outcomes, such as a complicated shoulder dystocia. The significant gap in the research greatly contributes to the lack of established formal support systems within the hospital or midwifery groups, as well as the lack of evidenced based curriculum to teach students how to best support colleagues and themselves when they encounter these situations. The purpose of this clinical research project was to explore the common emotional experience of midwives who have had a recent complicated shoulder dystocia.

To gain more insight into this area from experienced midwives, the study participants were recruited through a posting on the American College of Nurse Midwives (ACNM) website (Appendix A). The forum posting explained the purpose and confidential nature of the study, the expected time commitment (30-60 minutes), eligibility criteria, and the researcher's contact information. A copy of the IRB consent form was included in the body of the email (for the participant to review prior to the interview, see Appendix B). Interested participants were instructed to call the given telephone number to schedule a convenient date and time for the interview. To increase the level of confidentiality, subjects were instructed to leave only their contact telephone number (no name or other identifying information was obtained).

Measures

Prior to beginning the formal interviews for this project, the researcher conducted two off-the-record interviews and transcriptions with known CNM colleagues to determine if the questions were well understood and how they were answered to assess reliability, validity, and the subject burden. For the purpose of recruitment ease for these off-the-record interviews, the researcher did not impose the timeframe of having had the incident within the previous twenty-five years.

The primary researcher had worked as a CNM for eight years and had managed shoulder dystocia, as well as other adverse pregnancy outcomes. She made every attempt to remain objective and unbiased during the interview and data evaluation. To minimize potential unintended bias and strengthen the validity and interrater reliability, two seasoned CNM colleagues, familiar with qualitative research, and a clinical psychoanalyst, specializing in psychological trauma, reviewed the transcribed interviews. They independently identified themes, and reviewed the written analysis/interpretations of the researcher. Based on their identified themes and interpretations, they provided constructive feedback conferring, disputing, or expanding on the researcher's interpretations. Systematic data analysis utilizing the inductive thematic analysis process, described by Braun and Clark (2006), was performed.

Data Collection Procedures

Prior to beginning the interview, the researcher assessed the participant's eligibility and explained the purpose of the study (see Appendix C). The researcher verbally reiterated that no identifiable data would be gathered about the participant or patient involved in the birth, thus preserving their HIPAA (Health Insurance Portability and Accountability Act) protection, and explained that the interview would be audio-recorded after the subject had given her verbal consent. She explained that the purpose of this research study was to examine the midwife's emotional experience surrounding this situation, and acknowledged that resurfacing strong memories can sometimes cause clinicians to relive some of the pain and distress that they endured close to when the situation occurred. This may result in persistent troublesome symptoms, such as nightmares, anxiety, or feelings of depression, isolation, or anger.

Following the above preface, the interviewer asked the participant if they had a readily accessible support person if they began to have any of these symptoms following the interview. If they did not, she kindly explained that participating in the interview could cause them emotional pain and distress, and advised them that she was unable to continue to interview because she did not want to place them in a vulnerable state without adequate emotional support readily available. If they indicated that they did have an adequate support person readily available and indicated that they would like to continue with the interview, the researcher proceeded with their verbal informed consent.

The researcher then explained that in an attempt to maintain their full confidentiality, she obtained verbal consents instead of written signed consents. She reminded them that the consent was attached to the body of the forum posting, and encouraged them to review it again online prior to proceeding with the interview if they had not previously done so. If they chose to provide verbal consent, she proceeded with completing the informed consent.

The researcher read the consent form to the participant in a clear and easily understandable manner, and asked the participant if they had any questions. She informed them of the option to stop the interview at any time during the interview, simply by hanging up or by verbally indicating that they would like to stop the interview. Each participant was assigned a number based on the order in which the subjects were interviewed, and from the time of interview, they were only identified by this number. The

interviewer asked several demographic questions used for descriptive purposes: age, years of professional practice at the time of the birth, and geographic region (see Appendix D). The open-ended interview questions were intended to elicit candid and uninhibited responses describing the emotional experience of the CNM and its impact on her personal and professional life, both positively and negatively (see Appendix E). She inquired what helped and what hindered them through this experience. She asked them if there was anything else they would like to share. Finally, she asked them what the health outcome was for the infant (if known).

The researcher concluded the interview by sincerely thanking them for their willingness to share and participate. She reminded them again that bringing up these often painful memories can trigger unanticipated negative emotional responses that may be persistent. She asked the participant if they were feeling comfortable ending the conversation, and reminded them to call their trusted support person if they started to have a difficult time with anxiety or troublesome thoughts. If they felt that they needed additional support, she suggested a local counselor, trusted midwife friend, or a crisis hotline.

Analytic Methods

The researcher used progressive focusing during the actual interviews and the content analysis. Inductive thematic analysis to interpret the data was utilized to identify patterns, themes, and sub-themes. This framework was chosen because it allows for the coding and analysis of data without attempting to make it fit into a pre-existing or preconceived frame (Braun & Clark, 2006). After transcribing the data verbatim, an initial set of codes was manually derived and the data was organized into meaningful groups. The groups were then further analyzed for the presence of themes and subthemes. A summary of the themes identified by the individual participants is presented in table 2. Thematic mapping was undertaken, and the final evaluation provides an insightful analysis of the experiences described by the subjects (Braun & Clark, 2006). A final rich thematic description of the data set is presented.

Protection of Human Subjects/Ethics

Participating in the study held potential benefits to the subjects. The highly confidential nature of clinical practice prohibits clinicians from sharing their account of the event in an uninhibited manner.

While the interviewer did not ask detailed questions about the specifics of the clinical management, the safety implied by the confidential nature of the interview allowed the participant to express emotions about the event that she may have previously suppressed, due to fear of violating HIPAA, an unsupportive work environment, fear of malpractice implications, not wanting to appear inadequate or vulnerable to colleagues, or feeling that other people would simply not understand.

Verbal consent, rather than the traditional written informed consent, was obtained to provide the option of complete confidentiality for the subject. The researcher recognizes the imperative and sensitive nature of the topic, and the potential reluctance of the participant to partake in the study out of fear of exposure. The written informed consent was included in the body of the discussion group recruitment posting (appendix B), and it was verbally read over the phone to the participant prior to beginning her interview. The subject was notified that she could stop the interview at any time prior to or during the interview, simply by hanging up the phone or notifying the interviewer that she did not wish to proceed. The participant could also choose not to answer any of the interview questions.

Due to the wide gap in the research examining provider trauma following adverse obstetrical outcomes (specifically CNM trauma following a shoulder dystocia), many CNM's welcomed the opportunity to share their experience in an unfiltered, nonjudgmental forum where they did not have to worry about the consequences. They recognized the value of shedding light into these often unspoken but emotionally wrenching experiences, in hopes of developing and improving a formal support system for all birth attendants.

The most evident risk to the CNM's participating in this study was that the interview could re-trigger psychological pain and distress. Rose, Bisson, Churchill, & Wessely suggested that performing a single debriefing session actually could cause an increase in post-traumatic stress disorder (2009). A statement warning subjects about this possibility was included in the recruitment posting as well as during the initial part of the telephone conversation (see appendix A). Along with eligibility, the researcher determined if a participant had a support system in place and declined to complete the interview if they

did not as the nature of the study might bring up difficult emotions that persisted for an indeterminate length of time.

Transparency regarding adherence to established ethical standards was assured through the project's approval by the Institutional Review Board (IRB) at Oregon Health & Sciences. The board conducted a strenuous and comprehensive review of the study with the primary aim of assuring that human subjects were protected and the investigator conducting research in an ethical manner.

Plan for Dissemination to Key Stakeholders

The findings will be presented in a publishable paper, eligible for submission to a peer reviewed research journal. The researcher hopes that increasing awareness and acknowledgment of this sensitive topic and highlighting the need for larger studies examining the psychological impact on providers will contribute to the knowledge base for the development of evidenced-based professional support services for CNM's following their involvement in adverse obstetrical outcomes. This information may be incorporated into the curriculum of CNM training programs to better prepare faculty and students to effectively support themselves and colleagues who have experienced an adverse outcome, and to decrease the shroud of isolation the CNM may experience when she/he manages a birth complicated by an adverse obstetrical outcome.

Research Project Timeline

Fall Quarter 2011	November 21st: Defended proposal and received approval of advisory committee.
Winter Quarter 2012	Applied for IRB Approval
Spring Quarter 2012	Recruited study participants, conducted interviews and completed data analysis. Presented findings in paper and powerpoint to DNP faculty, advisory committee, peers and students.

Section III: Results

Sample

By the completion of the research, five telephone interviews were conducted. Demographic characteristics of the participants are presented in Table 1. The final neonatal outcomes cited by the participant group included two permanent brachial plexus injuries (with one case of litigation), one neonate transfer to a neonatal intensive care unit with possible encephalopathy (long term prognosis unknown), one fetal demise, and one case of severe brain damage and cessation of life support at one month of age. A detailed synopsis of the recruitment process is outlined in Appendix F. Nineteen CNM's responded that they were willing to participate via unsolicited emails to the researcher in response to the recruitment posting on the ACNM discussion email listserve. The researcher encouraged these midwives to anonymously call the researcher to set up an interview time. Seven participants actually called the researcher, and five met the inclusion criteria.

Findings

During the initial phone conversation, there was a brief description of the objectives of the study. After confirming eligibility and obtaining verbal consent, the researcher conducted the interview. The findings of this study are based on participants' answers to the questions listed in appendix E and the thematic analysis described by Braun and Clark was used (2006).

After the interviews were transcribed verbatim, the researcher carefully combed through each interview using thematic analysis and derived an initial set of codes. The data was then organized into meaningful groups. The groups were then further analyzed for the presence of themes and subthemes. Thematic mapping was undertaken. The final evaluation provides an insightful analysis of the basic themes with direct quotes from the midwives that best demonstrate these themes.

While the researcher had originally planned to examine the three components of processing, integrating, and recovery separately, it became clear through the participant's responses and the data analysis that separating the concepts of processing and integrating was nearly impossible and less important than identifying the descriptive themes. All of the respondents verbalized similar concepts, and though there was much overlap between the questions and responses, definite themes emerged.

Themes

The most salient themes the researcher identified as being prevalent in the hours to weeks following the birth were: fear, grief, blame, anger, shame and guilt. See Figures 1 and 2, for a summary of the themes and sub-themes that characterize the course of the participants' processing and integrating. The participants identified peer support as having the single greatest influence on their healing, and many spoke of a need for enhanced peer support within the nurse-midwifery professional community. One participant commented that she wished she had been educated in her midwifery training on how to personally emotionally process difficult births. The importance of the unique midwife/client bond was viewed as a vital component of the recovery process by several of the participants. All of the midwives spoke of eventually emerging with restored confidence, but they shared that some emotions surrounding these births will remain with them forever. See Figure 3 for a summary of the themes that characterize the recovery process for the participants.

Theme 1: Fear All of the participants spoke of fear during and following the birth. Most described remaining very calm, professional, and skilled in managing the actual delivery of the baby. In the hours to months (and in some cases years) following the birth though, they describe suffering significant amounts of fear and hopelessness, fear of having another dystocia, fear of litigation, and fear of judgment from their peers. Fear was a pervasive theme throughout all of the interviews.

General Fear and Helplessness

All of the participants discussed a generalized sense of fear, helplessness, shock and disbelief in the immediate period following the birth.

I had only been practicing for a month- it was my 13th birth since I graduated. Scared...and I don't know, almost helpless that we couldn't get it, I don't know how to put it into words, mostly scared and helpless that everything I was doing wasn't working... definitely anxiety and fear... helplessness seeing a baby turning blue and dying in front of you, really, and you not being able to fix it... I cried every time I talked about it for a few days, and I was scared to go on call again, and um, definitely feelings of inadequacy and that um, I don't know, that maybe I shouldn't have done midwifery...

Several of the midwives spoke of difficulty sleeping, and reliving the birth repetitively in their minds over the next several days to weeks as they worked to process and integrate the experience:

After the event of course I just had sort of that fear reaction that's hard to let go of so I was just sort of reliving over and over again that feeling, of that sort of terror feeling that occurred during the shoulder dystocia. You know- that feeling that woke me up during the middle of the night and kind of just reliving it over and over again. It lasted...I think a couple of weeks, probably. And I'm usually pretty good at letting go of things but it just was really hard to let go of and I found myself looking it up, going to websites and talking to friends who are midwives about it. Ways to manage a severe shoulder dystocia and just, you know, did I do the right thing, kind of processing it in my head over and over.

Fear of another dystocia: Most of the midwives describe still experiencing fear of another shoulder dystocia while they are currently attending births or providing care for women. One midwife, whose dystocia occurred within the last two years, commented:

Going into the next few births I was scared that it was going to happen again and so I was over-prepared for all of the them- I had extra nurses in the room for every birth it seemed like...When I see a patient that looks similar I get anxious and second guess myself and want a doctor at least close by so it still effects me emotionally more so with anxiousness... it brings back those memories of it and thinking that it could happen again.

The fear did not seem to completely resolve for the midwife, despite the passage of many years. Another midwife, whose birth occurred over twenty years ago, reflected:

It's still my ultimate horror, it's still my ultimate fear, a bad shoulder, and I still feel like there's always that moment between the head and the birth of the baby that there's often this moment when my breath catches and I just sort of have to talk myself down. I think that lasts forever...I mean, it's been a long time. I don't think that goes away.

Fear of Judgment From Peers : A repetitive theme among the participants was the distressing sense of judgment or perceived incompetence from fellow midwives, physicians, or hospital staff.

... somehow the provider is blamed when there is a poor outcome and that is really difficult...

Because I think that we put a lot of blame on ourselves already. But then to have that shame from other people in the community, midwives within the community, it really was difficult.

One of the midwives spoke of needing to be very selective about whom to seek out for support, and her instinctual hesitancy to share, out of the fear of judgment from peers.

I've always felt like you can't tell just anybody... And I don't even know exactly where that comes from or whether that's real, whether people wouldn't be accepting. I think that's my own stuff, my own underlying guilt or fear... and I think that's one of the hardest things is that you have to be really picky about who you do tell...

One midwife spoke of the loneliness and professional isolation that she faced in this difficult situation.

Our family is not medical people and they just do not understand the true emotions that go with these kinds of processes even if they try, and sometimes it is very lonely, and sometimes we go to maybe a hospital meeting and sometimes it feels like people are pointing fingers as if we had done something wrong, and um I feel like I am not the person that should be defending myself, and we all do the best we can, and I am good at what I do, and if someone who was not there is critical of the situation, that angered me.

Fear of Litigation: The participants reported significant fear of litigation immediately following the birth. One CNM described feeling ashamed and selfish for fearing litigation soon after the birth instead of completely focusing on the family.

Part of me, part of me that I am not, um, proud of, at all, was afraid for myself, and I have to say that I was fearful of being sued and it's not that I felt that I had done anything wrong, because I felt that I was doing everything absolutely correctly.

The participants also described a residual fear of litigation, with several indicating that they still worry about this frequently. One of the midwives identified this fear as being the most significant hindering factor in her process of healing.

I still fear a lawsuit from it and I feel like until that time passes where there could be a lawsuit. I think I'll always worry about the situation and it has definitely hindered my healing ...

Theme #2: Grief. All of the CNM's described their own feelings of great concern and genuine grief for the baby and the family.

I think just talking to the mother and empathizing with what she was going through with her baby... I think that made it harder, just thinking about that baby and that family and that they had to endure some hardship after it. But that's the only thing that makes it harder, thinking about that family.

Theme #3: Shame, Guilt, Blame & Anger. Almost all of the midwives recalled heartbreaking feelings of shame, guilt, blame, and anger as they worked to integrate and process the delivery. One midwife described the shame that she experienced:

I guess the best way I could describe it would be devastated.. It was um, it just shook me to my core and I, it was the first time I think in my professional life that I felt totally vulnerable and ah, like, I just remember saying over and over that my hands failed me and I'd never had that experience before...

All of them described initial feelings of guilt:

...and guilt I think also, afterwards wondering was there something different that I think I could have done or recognized because I knew it was going to be a difficult delivery, I had no idea it was going to be the dystocia that it was and so I was wondering if I had missed something.

Another remembers the intense feelings of self blame:

She (referring to the mother) never blamed me which was hard in some ways because there was part of me that wanted her to blame me. There was part of me that just wanted somebody to just blame me and tell me I was bad but that didn't happen, and it definitely never came from her.

Several of the participants recalled the anger felt towards the situation and other members of the health team.

I had had some suspicions that it was going to be a difficult delivery and had contacted my physician as well as the nursing staff for additional assistance... the physician did not come to the birth and the nurses that were with me were not experienced nurses... I was angry about not having the assistance that should have been there to help me, especially because I had told them ahead of time that I had expected it and expected certain people to be in the room with me...

Another midwife spoke of the patient's anger towards her, and her own struggle with anger at the situation.

I was angry that this patient had risk factors and she had been offered a C-section but she didn't have it and I felt like I kind of had walked into the situation because I had not managed most of the labor. So... when I saw the patient back postpartum the patient herself was angry at me, she was not angry at anyone else, but she made several comments to where she was angry at me and thought that I had done something wrong and had kind of focused her energy, her anger at the situation on me. So that was very difficult for me and I was angry at the situation...

The themes that underlie the course of integrating and processing the experience included fear, grief, guilt, shame, blame and anger. In one form or another, all of the participants spoke of the important influences that facilitated their emotional ability to move forward and begin the healing process. Four themes that described the concept of recovery were identified: peer support, the importance of the midwife-client relationship, accepting the inherent unpredictability of birth, and restored confidence.

Theme #1: Greatest Comfort and Support: Our Peers All of the midwives interviewed echoed that peer support was the most powerful influence and a key supporter was vital in their healing process. For two participants, their physician colleagues provided their greatest sources of emotional support:

I would say the reaction of the people that were with me, 2 family practice docs who came in afterwards, you know, after...um, the baby died. And after the baby died um, they came afterwards and there was never any, there was never any blame. They just let me cry, people just

let me tell the story over and over and over again, and I needed to tell the story over and over again. I think that that's what got me through, there was never any blame and people just let me rehash it.

Several of the participants described reaching out to other midwives for support:

I have a couple of midwife friends who had had shoulder dystocias similar to mine and that helped tremendously. It's difficult as a midwife because nobody really totally understands- many people who aren't in this profession don't understand the responsibility and the gravity of what we do, and the emotional, how we feel emotionally very responsible even when we're not. So having those couple of midwife friends really helped tremendously. I don't know that I would've continued to practice after that if I wouldn't have had that support.

A participant described the greatest support she received came unexpectedly from the homebirth midwives online...

I felt like I needed validation soon after it happened, you know. I even went on- which I never look at, Midwifery Today, just to kind of review... and they were talking about exactly what I was feeling so that made me feel like I had a camaraderie with the other midwives who had been through it. I had to go to the homebirth midwives community in that moment, I'm not aware that there was any place in my midwifery college. It seems like the home birth midwives are able to speak more freely, where nurse midwives are trying to uphold a little more professionalism. In nurse midwifery people have to uphold a certain decorum about what they talk about in a public forum.

Another participant also discussed the general sense of inadequate formal support for healthcare providers following adverse outcomes:

It can be an isolating profession when things don't go the way that we expect them to go...

In one way or another, all of the midwives surmised that they wished there had been or currently was a safe and protected forum for CNM's to give and receive emotional support following adverse clinical outcomes.

Theme #2: The importance of the midwife-client relationship. One of the hallmarks of midwifery is our close bond with our patients. Several of the midwives reflected that this bond with the mother was crucial in their own healing and ability to move forward.

...she so totally trusted me and never blamed me and that made it harder in some ways but also easier in others in that it really, really reinforced for me the value of having a relationship with the women you're attending. Because she knew, she trusted me and she knew that I did everything in my power and so there was never, she never blamed me.

Another midwife echoed these sentiments:

Because of my relationship with the patient, because we were communicating with each other during it, during the shoulder dystocia, I felt like that connection that we had, really helped it be a better outcome than it could have been.

She went on to say:

They're bringing a lawsuit now- I'm not named in the lawsuit and that's another thing that really sort of boosts my ego a little bit and my confidence in the event of the birth because the family specifically did not name me in the lawsuit... which sort of restores my confidence that if we connect with women and have a relationship with them, they'll understand that we try to do everything we can to help them and their baby.

Theme 7. Being reminded to accept the inherent unpredictability of birth. Several of the CNM's spoke of coming to accept the fact that regardless of knowledge, training or skill, practitioners would still be faced with unforeseen complications caused by variables outside of their control.

... when I hear people say things like "shoulder dystocia shouldn't happen" or "if you do xyz then it just shouldn't happen" I think that that's the kind of thing that we need to get rid of as a profession because just by making that statement you are putting guilt and blame on people and I think we as a profession and a group, we midwives need to recognize that bad things happen even with wonderful practice, even with very seasoned people and even with a lot of skill, bad things

still happen... it's really about, shit happens. We really fool ourselves into thinking that we have a lot more control than we do.

Coming full circle... Theme 3: Restored Confidence. All of the midwives described varying degrees of restoring their confidence in their abilities and the incredible value in midwifery for our patients.

... it reminds me and reinforces the important job that we have to do and it also reminds me that in something like a shoulder dystocia, it is all up to me- I am the one that has to do and I just don't have a choice and I know what I have to do and I know that I can do it, and... um... I take charge and I do it.

One midwife talked about how she found healing through supporting the other staff who were traumatized.

I spoke to individual nurses afterwards and it was very traumatic for the nurses. Many of them had never experienced something like that before so I was able to you know help the nurses understand this is how you help and this is the process what we go through. I am an educator anyway and so for me to be able to assist them and help them process what we did and what went right and what went wrong, I think it helped me with the processing of it...

Relief at seeing improved outcomes for the babies and mothers also greatly helped.

Um, well I did see the patient six weeks out and I think that's when I, that helps me process things as well because they did seem to be on the mend and doing better so that kind of made me feel better about it.

The midwife who had the loss very early in her career reflected:

...after the first few (referring to births following the dystocia) it made me feel like I was more confident when I would get another shoulder dystocia and I could feel the baby was coming and it helped me feel more confident that it wasn't like the last one, so after the initial healing from the event I did feel more confident professionally.

Most of the midwives reflected on a sentiment that the birth and its subsequent emotional sequelae has left a lasting imprint on their general feelings surrounding attending births.

Well, I've had in my years a couple of instances that have been very difficult and um... I think each one of these has taken a little bit of the joy out of being a midwife for me.... each one has had a grim effect...

Another midwife said:

Over the next few months I was more... more fearful, more cautious, and um, just in general did not enjoy being at a birth as much.

Finally, a third midwife sadly reflected:

It did really change the way that I did feel about birth though and that I felt like I didn't trust birth as much the way that I had quite before and I really had a long time when I felt like I didn't even want to do births anymore. Just that the stress of the possibility of that happening would be too much and I was questioning you know, why I even did this job. And if it was the profession for me.

This study clearly demonstrated the importance of processing, integrating, and healing after an event such as a shoulder dystocia that had an accompanying neonatal injury. All of the midwives spoke of their significant need to be heard, validated, and supported in a safe forum.

Section IV: Discussion

Interpretation

Midwives are significantly psychologically affected by managing births that are complicated by shoulder dystocia involving neonatal injuries and require support to heal. Even from the small sample of interviews collected, it is evident that there are common emotions and concerns which come up again and again for midwives facing this difficult situation. Study participants described being fearful and anxious weeks, months, and even years after the shoulder dystocia. Their experiences of processing and integrating following the birth were characterized by fear, grief, shame, guilt, anger, and blame. They suffered pervasive feelings of fearfulness, not only for their patients but also for their professional careers.

It was clear throughout the interviews that peer support and acceptance, with the freedom to “tell their story” multiple times in an uninhibited manner, to supporters who are able to truly understand, empathize, and provide guidance is essential as they move forward on their path of healing. The importance of the midwife-client relationship, accepting the unpredictability of the birth, and finally restoring their confidence in themselves and in the value of the midwifery emerged as themes that facilitated healing from the birth. Professional and personal responsibility are essential to any healthcare provider but until it is more widely accepted and recognized that, in the words of one midwife, “shit happens”, practitioners will continue to feel shamed, isolated, fearful, and anxious, and will have difficulty integrating their traumatic experiences because their feelings have been stifled and invalidated by a lack of formal support and an attitude of implied culpability. These conclusions support the earlier findings reported by Halperin et al (2011) and Hunter (2004, 2005).

Macro and/or Micro Financial Considerations

The cost of the study was limited to the cost of the cellular phone calls, which was assumed by the researcher. To conduct the larger research studies that are necessary upon which to base changes in current educational curriculum and for the development and establishment of formal support services within the national organization of the American College of Nurse Midwives, grant funding will need to be pursued. The researcher suspects that the psychological effects endured by the CNM may affect her productivity at work, increase the need for her own utilization of health services, and possibly contribute to provider burnout. These costs and effects were not evaluated in this study.

Situational Analysis and Context

The process and course of carrying out the clinical inquiry project was both educational and challenging. Due to the lack of research within this specific area, concepts from similar bodies of knowledge (i.e. PTSD among emergency first responders, etc) were utilized to guide the research process. The recruitment process was the most challenging aspect of the process. Advertising the study in a widely viewed list serve discussion group initially elicited many unanticipated supportive postings from midwives who expressed a desire to participate, but most whose experiences fell outside of the initial

inclusion criteria (their birth occurred greater than two years ago). Within a few days, a discussion ensued among listserv members that questioned whether true shoulder dystocia actually occurred, if it was preventable, and if it was the result of poor anticipation/skill of the birth attendant. To maintain an unbiased and objective stance, the researcher did not actively participate in this discussion other than posting that she was still seeking participants for the study and that this public discussion reaffirmed her belief that support for midwives following difficult births, regardless of the surrounding circumstances, was vital within our profession. The researcher suspects that this discussion thread may have indirectly discouraged eligible midwives from participating by possibly eliciting feelings of fear, shame and isolation, and peer judgment that they associated with the discussion thread. One of the participants did share in her interview that she felt that some of the comments within that discussion thread further isolated midwives who had managed such situations.

Outcomes

The final goal of this small clinical inquiry project was achieved through the exploration of how five CNM's psychologically processed, integrated, and recovered from the stress of managing a hospital birth complicated by shoulder dystocia with an adverse neonatal outcome.

Limitations

While many concepts and sentiments were illuminated in this initial study, more research is needed for the development of professional and educational support organizations or implementations. This study was limited to CNM's who had delivered in a hospital and the results may not be applicable to direct entry midwives, CNM's practicing outside of the hospital setting, outside of the United States, or CNM's who are not members of the ACNM discussion groups. The inclusion criteria allowed for a wide range of time span that the birth occurred (within the past twenty-five years). The experience and perception of a CNM whose event occurred two years ago versus the CNM whose birth occurred twenty-five years ago may differ. The participant sample size was very small and the results may not be generalizable to many CNM's following this difficult situation, or other adverse events that are not specific to a complicated shoulder dystocia.

Conclusions

As midwives, most of us would not consider leaving one of our pregnant women to carry the heavy burden of a significant loss during her pregnancy on her own. Yet when CNM's have an untoward outcome, many feel left to bear the burden alone in isolation. The pervasiveness of the belief that providers should be able to directly control every patient's outcome using a combination of skill and knowledge is one that can be damaging in the long-run. Acknowledging and providing emotional support to midwives following difficult birth experiences is a crucial element within their healing process. This study has shown that the often prevailing attitude of professional silence and subsequent neglect of midwives' emotional struggles does a disservice to both healthcare providers and patients. Creating change within the culture of nurse-midwifery, beginning within the roots of education, to one that fosters relationships of support and acceptance among midwives around traumatic births will begin to lay this much needed groundwork. By providing a voice for the psychological trauma that midwives silently endure when adverse events occur, an environment of providing the permission to feel will be established and this will help to facilitate healing.

There is very limited research examining the psychological toll that midwives and other birth workers endure following adverse outcomes, and no research that is specific to a complicated shoulder dystocia. A substantial gap in the literature remains. Through the collection of rich data in this study, the need for larger studies encompassing other types of birth workers and adverse outcomes has been made apparent. Future research should include a larger sample size, midwives that practice outside of the hospital setting, midwives that practice outside of the United States, and midwives who have managed other types of adverse obstetrical outcomes (other than shoulder dystocia). There is clearly a need for enhanced education and preparation for midwives on how to best support each other and ourselves when adverse outcomes occur. There is a desire for a formal support system of some type, where providers can turn for professional validation, sharing of stories, opinions, and insights, and safe and confidential emotional processing.

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[1.pdfhttp://www.towerswatson.com/viewpoints/3424](http://www.towerswatson.com/viewpoints/3424)

VII. Appendices

Appendix A

Recruitment for Study Subjects

OHSU CNM Research Study: CNM's Participants Needed

Description and Purpose: A small qualitative study examining the short-term and longer-term emotional effects on the CNM associated with managing a shoulder dystocia that was complicated by adverse neonatal outcomes. Currently, there is a significant lack of research on the CNM's psychological impact endured when adverse obstetrical outcomes occur, such as complicated shoulder dystocia, and very little evidenced-based research on how to best support colleagues or ourselves when adverse obstetrical outcomes occur. Increasing the knowledge in the area will assist midwifery educators develop evidenced-based curricula to incorporate into midwifery education, and will be applicable in the development of a professional support program that may be employed to provide assistance and support for practicing midwives who find themselves in these unfortunate situations.

Seeking Interview Participants: I am seeking to interview CNM's who, within the past twenty-five years, have managed a shoulder dystocia that was complicated by a temporary or permanent neonatal morbidity and/or mortality. The birth should have occurred in a hospital within the United States.

What It Involves: Participants will be confidentially interviewed over the telephone, with an expected time commitment of 30-60 minutes. The focus of the interview will be centered on the emotional experience of the primary birth attendant in the hours to months following the event. *The researcher recognizes that the topic of this interview may be emotionally distressing for participants in the hours or weeks after the interview, and ask that you only choose to participate if you have ready access to a strong support person or counseling should you feel that this is needed.*

*The researcher acknowledges the sensitive nature of this topic and the participant's need to maintain the utmost sense of privacy and confidentiality. You will **NOT** be asked to provide the interviewer with any*

identifiable information, including your name, state in which you reside, or email address. You will not be asked for any information that may be used to identify patients or other parties potentially involved. You will be asked to leave a message with your phone number so that the researcher may contact you to arrange a convenient time to conduct the interview. Your phone number will be destroyed immediately after the interview has taken place. All telephone interviews will be recorded for research purposes only. You are free to choose to end the interview and withdraw from the study at any time before, during, or after the telephone interview, or free to choose to refrain from answering any questions asked during the interview.

To ensure your complete confidentiality, you are asked to follow the instructions below to participate in the study.

Instructions:

1. Read the attached informed consent form and identify at least one personal support person in whom you trust and are able to easily access in case you are feeling depressed or distressed after the interview.
2. Select a date and time from those set forth below when you have 30-60 minutes available to talk in a comfortable location of your choice.
3. Call 541-740-2266. Please leave a message stating a) your time zone (Pacific, Mountain, Central, or Eastern), b) two different days/times to reach you to arrange for a convenient time/day for the interview to take place.

For descriptive demographic purposes, you will be asked for the following information:

- which region of the United States you practice in (Western, Midwest, Southern, Midwestern, Northeastern, or Eastern),
- how long you had been in practice when the birth occurred (0-2 years, 3-5 years, 6-10 years, or greater than 10 years).
- Your current age range (21-30 yrs old; 31-40 yrs old; 41-50 yrs old; 51-60 yrs old; 61-70 yrs old; and over the age of 70 years)

To maintain high levels of confidentiality, the attached document is a printable consent form that has been approved by the Internal Review Board at Oregon Health & Sciences University. Please read it carefully in its entirety prior to calling the above phone number. By choosing to participate in the study, it is assumed that you are providing your informed consent. At the beginning of the telephone interview, you will be asked to provide verbal consent as well, and the consent form will be reviewed again.

About the Researchers: My name is Katherine Robins and I am a Doctoral of Nursing Practice student at Oregon Health & Sciences in Portland, Oregon and have been a practicing CNM for seven years. I am a co-investigator and the interviewer in this study, and am working closely with Dr. Maggie Shaw, PhD, CNM (OHSU) and Dr. Suzan Ulrich, PhD, CNM (Frontier Midwifery School) for the purposes of conducting this study. If you have any questions or concerns regarding this study, please feel free to contact me at robinsk@ohsu.edu, or call at 541-768-5550.

Appendix B**Oregon Health & Science University**

Consent Form

IRB#: 8244

Protocol Approval Date: 4-4-2012

Participant #: _____

**OREGON HEALTH & SCIENCE UNIVERSITY
Consent Form**

TITLE: The Psychological Effects of Shoulder Dystocia Complicated By Neonatal Morbidity or Mortality on Nurse-Midwives

PRINCIPAL INVESTIGATOR: Maggie Shaw, CNN, PhD
Phone: 503-494-5864

CO-INVESTIGATOR: Katherine Robins, CNM, MN
Phone: 541-768-5550

Purpose:

You have been invited to be in this research study because you are a Certified Nurse Midwife (CNM) and have managed a hospital based birth complicated by a shoulder dystocia that resulted in a temporary or permanent adverse neonatal outcome.

The purpose of this research study is to increase understanding of the psychological experience of the nurse-midwife following the management of a hospital birth complicated by shoulder dystocia with an adverse neonatal outcome. We are trying to examine how CNM's process, integrate, and recover from the psychological stress of managing shoulder dystocia complicated by neonatal morbidity or mortality.

To qualify for this study, you must meet the following criteria:

1. Be a Certified Nurse-Midwife who has managed a hospital birth with a shoulder dystocia that was further complicated by temporary or permanent neonatal morbidity or mortality.
 - The birth must have occurred in a hospital setting in the United States within the last twenty-five years.
2. Have ready access to a supportive friend, family member, counselor, or someone you feel comfortable and safe talking to/about the issues raised in this study, if needed.

This study requires one telephone interview that will take approximately 30-60 minutes to complete.

There will be up to eight participants enrolled in the study.

Procedures:

A one-on-one confidential telephone interview will be done in a single session that will last between thirty and sixty minutes. During this interview, questions will be asked regarding your personal experience, as a CNM, surrounding emotional processing, healing from, and moving forward (both personally and professionally) following this difficult experience. You will not be asked for any identifiable information that may identify you or your patient, nor will you be asked for any details of the actual birth. You will be asked about the final neonatal outcome at the conclusion of the interview. The interview will be taped and these tapes will not be shared with anyone. The tapes will be destroyed within one week of the interview. However, a final report that may contain anonymous quotations will be available at the end of the study.

If you have any questions regarding this study now or in the future, contact Maggie Shaw at (503) 494-5864 or Katie Robins at (541) 740-2266.

Risks and Discomforts:

Sometimes conversations that remind us of very difficult times in our lives can bring up unexpected emotions that are really hard to deal with in the hours or even days after the conversation. Bringing these feelings to the surface rarely may trigger feelings of anxiety, depression, sadness, and anger for some people. For this reason, we are asking you to participate only if you have access to a strong support system should this interview cause unanticipated distress. You may refuse to answer any of the questions that you do not wish to answer. If the questions make you very upset, we will help you find a counselor.

Although we have made every effort to protect your identity, there is a minimal risk of loss of confidentiality.

Benefits:

You may or may not personally benefit from being in this study. However, by serving as a subject, you may help us learn how to benefit other CNM's in the future.

Alternatives:

You may choose not to be in this study. If you would like to discuss your experience outside of this study, you could choose to seek professional assistance from a colleague or counselor.

Confidentiality:

Your name will not be readily known to the researcher or used during the interview. Instead, we will identify you by participant number. Only the primary investigator, Maggie Shaw, and the co-investigator, Katherine Robins, will be able to access your information.

You will be asked to give verbal consent for your participation in this study. You will be asked if you would like a hard copy of this consent form. If so, the researcher will write your name and address directly onto an envelope and mail it to you immediately following the interview. Your contact information will not be retained.

Except as described above, you will never be asked for your name or identifiable information, other than your telephone number, which will be used to arrange an interview time. Immediately following the

interview, your phone number and any other identifying information will be permanently erased. Your interview will be tape-recorded and the recordings will be transcribed within one week of the interview. The tape recordings will then be destroyed. At the completion of the project, all transcriptions will be destroyed.

Costs:

There will be no cost to you to participate in this study. The researcher will call you, to minimize any long-distance costs.

Liability:

If you believe you have been injured or harmed while participating in this research and require immediate treatment, contact Maggie Shaw, CNM, PhD at 503-560-5563 or Katherine Robins, CNM, MN at 541-768-5550.

You have not waived your legal rights by reading and verbally consenting to this form. If you are harmed by the study procedures, you will be treated. Oregon Health & Science University does not offer to pay for the cost of the treatment. Any claim you make against Oregon Health & Science University may be limited by the Oregon Tort Claims Act (ORS 30.260 through 30.300). If you have questions on this subject, please call the OHSU Research Integrity Office at (503) 494-7887.

Participation:

If you have any questions regarding your rights as a research subject, you may contact the OHSU Research Integrity Office at (503) 494-7887.

You do not have to join this or any research study. If you do join, and later change your mind, you may quit at any time. If you refuse to join or withdraw early from the study, there will be no penalty or loss of any benefits to which you are otherwise entitled.

If the researchers publish the results of this research, they will do so in a way that does not identify you unless you allow this in writing.

To participate in this study, you must provide verbal consent. You may withdraw your consent to participate at any time. If requested, we will mail you a copy of this form.

Signatures:

The researcher's signature below indicates that the investigator has read you this entire form and that you have agreed to be in this study.

OREGON HEALTH & SCIENCE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
PHONE NUMBER (503) 494-7887

CONSENT/AUTHORIZATION FORM APPROVAL DATE

APR. 4, 2012

**Do not sign this form after the
Expiration date of: 04-03-2013**

Signature of Person
Obtaining Consent

Print Name of Person
Obtaining Consent

Date

Appendix C

Script for Telephone Interview

Introduction

“Hello, my name is Katherine Robins. I am currently attending the Doctorate of Nursing Practice program at OHSU in Portland, Oregon. I have been a CNM for the past seven years and currently practice in a collaborative group at Good Samaritan Regional Medical Center in Corvallis, Oregon. My research is focusing on the psychological experience of CNM’s who have managed a shoulder dystocia that was complicated a temporary or permanent neonatal injury. There is very little research examining the effects of adverse obstetrical outcomes on the attending CNM, and very few support resources available to assist CNM’s who have been in this situation.”

“ I am conducting confidential telephone interviews with midwives, and will not be asking you for any identifying information. I am not going to ask your name, the city or state that you live in, or phone number. For research purposes, I am going to record the interview, but I will be the only one with access to the call and will destroy the recording immediately after I have transcribed the interview. After the data analysis, all records of the interview will be destroyed.”

“The interview will take an estimated 30-60 minutes. Is it a good time to proceed now? If not, do you have another time that may work better?” (*The interviewer and the participant will arrange a convenient time for the candidate to call again.*)

Eligibility Determination

**If the participant answers “no” to any of the following questions, then the participant will be thanked for their time and willingness to participate, and the interview will be ended.*

1. “Are you a CNM who has managed a hospital birth with a shoulder dystocia that was further complicated by temporary or permanent neonatal morbidity or mortality?”

If “yes”, then proceed to next question. If “no”, then interview will be ended.

2. “Did the birth occur in a hospital setting in the United States within the last two years?”

If “yes”, then proceed to next question. If “no”, then interview will be ended.

3. “Sometimes conversations that remind us of very difficult times in our lives can bring up unexpected emotions that are really hard to deal with in the hours or even days after the conversation. Bringing these feelings to the surface may trigger feelings of anxiety, depression, sadness, and anger in many of us. Do you have ready access to a supportive friend, family member, counselor, or someone you feel comfortable and safe talking to if you find that you are having a difficult time?” *If the participant answers “no” or is ambivalent, then I will kindly suggest that deeply delving into such sensitive material while they do not have access to a solid support system may be counterproductive or actually harmful to their emotional health, and I will thank them for their time and willingness to participate, but out of protection to them, I will not be able to proceed with the interview.*

If the participant has answered yes to all of the above questions, I will read them the informed consent and ask if they have any questions. I will remind them that a copy of the informed consent is also in the body of the recruitment posting if they wish to review it again prior to the interview. I will notify the participant that in lieu of actually signing the consent, I will be accepting their verbal consent to maintain high levels of confidentiality.

“At any time during this interview, you are free to decline answering any of the questions or ending the interview. Are you comfortable proceeding?” If the participant answers “yes”, then the interviewer will say, “I will begin recording the interview now.”

“To start, I have several demographic questions:

1. How long had you practiced as a CNM, when the birth occurred (0-2 yrs, 3-5 yrs, 6-10 yrs, or greater than 10 yrs)?
2. Which demographic region of the United States do you practice in (Western, Midwest, Southern, Northeastern, or Eastern)?

3. Your age category (21-30 yrs old; 31-40 yrs old; 41-50 yrs old; 51-60 yrs old; 61-70 yrs old; and over the age of 70 years).

“Now I would like you to recall your experience surrounding the birth.”

1. “Please describe how the experience affected you emotionally around the time of the event.”
2. “Tell me how this affected your life both positively and negatively?”
3. “You’ve talked about the emotional aspects of a shoulder dystocia with a poor outcome and the positive and negative aspects that affected your life; tell me what (else) helped you through this experience? What didn’t help?”
4. “Tell me anything else you think I should know.”
5. “What was the final outcome, as far as you know, for the baby?”
6. Closing statement: “I truly appreciate your willingness to share your story and insights around this difficult situation. Bringing up these memories can sometimes cause us to relive some of the pain that we endured close to when the situation occurred, and this can be difficult. Sometimes these conversations can trigger nightmares, anxiety, or feelings of depression or isolation all over again. I recognize that, as a midwife, it is sometimes hard to find and open up to support people who have not had a similar experience because they often are not able to fully comprehend and relate to the complexities we face in these types of situations. Are you feeling okay to end our conversation now? Do you feel like you have a trusted support person who is available for you now if you start to have a hard time with anxiety or troublesome thoughts after this discussion?”

“Thank you very much for your willingness to share. It is my hope that this information will bring to light the need for increased support to midwives as they process and heal from our own emotional distress that occurs when adverse outcomes occur. I sincerely appreciate your time.”

Appendix D

1. How long had you practiced as a CNM, when the birth occurred (0-2 yrs, 3-5 yrs, 6-10 yrs, or greater than 10 yrs)?
2. Which demographic region of the United States do you practice in (Western, Midwest, Southern, Northeastern, or Eastern)?
3. Your age category (21-30 yrs old; 31-40 yrs old; 41-50 yrs old; 51-60 yrs old; 61-70yrs old).

Table 1. Participant Demographic Data

Participant Number	Age Range	Number of years in practice at time	Geographic Region of United States
1.	51-60	6-10 yrs	Southern
2.	41-50	6-10 yrs	North Eastern
3.	51-60	3-5 yrs	Western
4.	31-40	6-10 yrs	Western
5.	21-30	0-2 yrs	Eastern

Table 2. **Participant's Themes**

	1	2	3	4	5
Generalized Fear and Hopelessness	X	X	X	X	X
Fear of Another Dystocia	x	X		X	X
Fear of Peer Judgment	x	X	X		X
Fear of Litigation		X	X	X	X
Grief	x	X	X	X	X
Shame	x	X	X		X
Blame	x	X	X		
Guilt	x	X	X		
Anger		X	X		
Peer Support	x	X	X	X	X
Midwife-Client Relationship	x				X
Accepting Unpredictability	x	X		X	X
Restored confidence	X		X	X	X

Appendix E.

Interview Questions

1. Please describe how the experience affected you emotionally around the time of the event.
2. Tell me how this affected your life both positively and negatively?
3. You've talked about the emotional aspects of a shoulder dystocia with a poor outcome and the positive and negative aspects that affected your life; tell me what (else) helped you through this experience? What didn't help?
4. Tell me anything else you think I should know.
5. What was the final health outcome for the baby?

Figure 1.

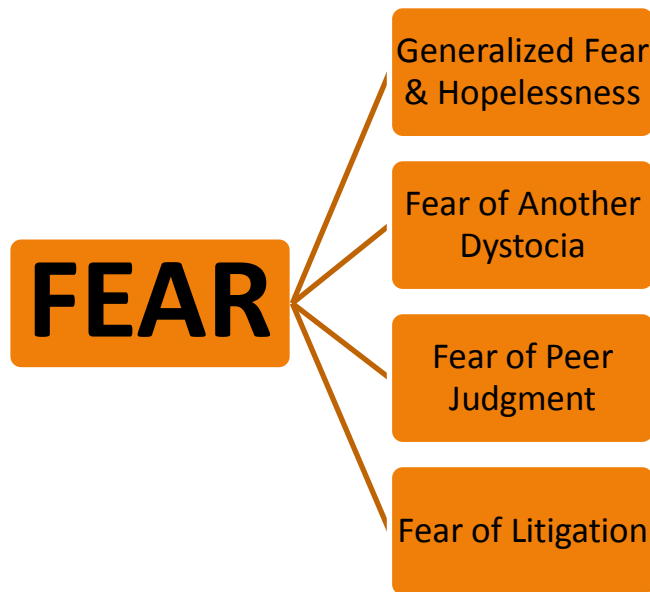


Figure 2

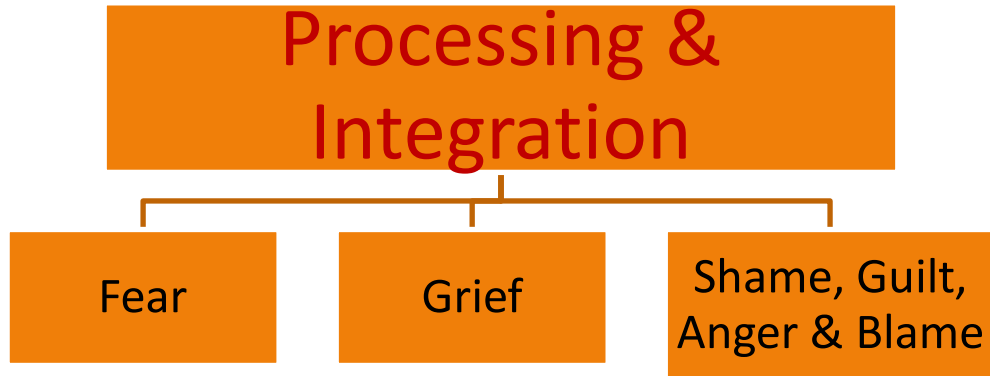
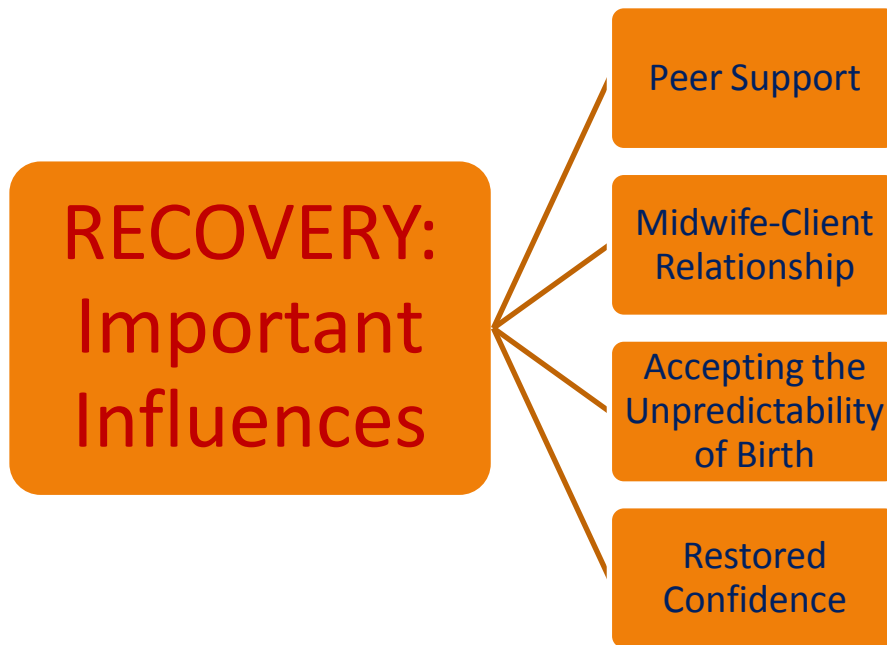


Figure 3



Appendix F.

The Recruitment Process

The initial eligibility criteria included births that occurred within the previous two years. Following the initial posting of the recruitment advertisement on the ACNM discussion listserv, two CNM's called to set up an interview but were excluded due to their births occurring prior than the previous two years. During the initial posting, when the initial inclusion criteria stated the birth should have occurred within the previous two years, the researcher received emails from sixteen CNM's who indicated that they would like to be included in the study, but were ineligible due to the timing of the event. One actual interview was conducted with a CNM whose event occurred within the previous two years. One CNM emailed to say that she would like to participate, but her birth occurred in an out of hospital setting. The researcher posted the initial recruitment flier twice on the American College of Nurse Midwives (ACNM) "clinical topics" and "research" listserv, and one recruitment email that was sent to the Oregon Affiliate of ACNM. In light of the inadequate response of eligible subjects following the initial recruiting efforts, the researcher received IRB and ACNM approval to expand the inclusion criteria to include births occurring within the previous twenty-five years. Following the expansion of the inclusion criteria to include births that occurred in the past twenty-five years, the researcher received email responses from nine CNM's indicating that they would now be willing to participate. Four CNM's then actually called the researcher. All met the inclusion criteria, and interviews were conducted after official verbal consents were obtained.

Executive Summary

CIP Executive Summary
Katherine Robins, RN, MN, CNM
Doctor of Nursing Practice Candidate, OHSU School of Nursing
May 29, 2012

Certified nurse-midwives (CNM's) strive to empower women and their families through their childbearing experiences by providing personalized care to meet their physiological, psychological, and emotional needs. Unfortunately, despite modern medical advances and receiving high quality care, some adverse obstetrical outcomes remain inevitable and unavoidable. This is often devastating to the patient as well as the CNM. Exposure to psychological trauma is associated with anxiety, depression, isolation, PTSD, substance abuse, decreased job satisfaction, fear of litigation, and maladaptive coping mechanisms among healthcare professionals. There is very limited research on the emotional impacts of adverse outcomes on CNM's, and no research specifically examining how the CNM psychologically integrates, processes, and recovers following a shoulder dystocia resulting in neonatal morbidity or mortality. This lack of professional research and acknowledgment further marginalizes the affected clinician by prohibiting the development of an evidenced based model of how to psychologically prepare and guide clinicians, both as individuals and as sources of collegial support, following inevitable adverse obstetrical outcomes.

The purpose of the clinical inquiry project was to explore the common lived experience of the psychological process of the certified nurse midwife who has managed a shoulder dystocia with an adverse neonatal outcome. The clinical inquiry question was: How do CNM's process, integrate, and recover from the psychological stress of managing shoulder dystocia complicated by neonatal morbidity or mortality? Consistent with the goal of gaining further insight and a deeper understanding of individual clinician's experiences, the researcher utilized a retrospective qualitative design with convenience sampling methods to recruit five CNM participants from the American College of Nurse Midwives website. The study was IRB (Oregon Health & Science University) and ACNM approved. Confidential telephone interviews were conducted and transcribed verbatim. Data collection and analysis generated through inductive reasoning (as described by Braun & Clark, 2006) revealed several themes that described the course of integration and processing the experience, and several themes that underlie and facilitate healing. Fear was a pervasive theme throughout the interviews, and subthemes of generalized fear and helplessness, fear of another dystocia, fear of litigation, and fear of peer judgment were identified. Grief, Shame, Blame, Anger, and Guilt also emerged as themes characterizing the integration of and processing surrounding the management these difficult deliveries. Themes describing the participant's course of recovery included peer support, the importance of the midwife-client relationship, accepting the inherent unpredictability of birth, and restored confidence.

The results of this study have shown that CNM's significantly are affected psychologically by managing births that are complicated by shoulder dystocia with an accompanying neonatal injury and they require support to heal from the experience. The study's limitations include small sample size, limited to CNMs who practice within the hospital setting in the United States, and it may not be generalizable to providers who do not fall under the inclusion criteria. Through the collection of rich data in this study, the need for larger studies encompassing other types of birth workers and adverse outcomes has been made apparent. Future research should include a larger sample size, midwives who practice outside of the hospital setting, midwives who practice outside of the United States, and midwives who have managed other types of adverse obstetrical outcomes (other than shoulder dystocia).

The often prevailing attitude of professional silence and subsequent neglect of midwives' emotional struggles does a disservice to both healthcare providers and patients. Acknowledging and providing emotional support to midwives following difficult birth experiences is a crucial element within their healing process. Creating change within the culture of nurse-midwifery, beginning within the roots

of education, to one that fosters relationships of support and acceptance among midwives around traumatic births will begin to lay this much needed groundwork. By providing a voice for the psychological trauma that midwives silently endure when adverse events occur, an environment of providing the permission to feel will be established and this will help to facilitate healing. There is clearly a need for enhanced education and preparation for midwives on how to best support each other and ourselves when adverse outcomes occur. There is a desire for a formal support system of some type, where providers can turn for professional validation, sharing of stories, opinions, and insights, and safe and confidential emotional processing.

Although this qualitative study focused solely on CNM's and shoulder dystocia, the information gleaned will likely be applicable to many adverse obstetrical outcomes and professionals in other healthcare disciplines. As doctorally prepared advanced practice nurses, we effectively translate research into practice to facilitate positive changes in our healthcare systems and professional culture. As nursing educators and role models, we can teach future nurses, midwives, and residents to honor and accept their emotional grief by creating a supportive and empathetic environment that promotes healing. Through increased knowledge around this highly sensitive experience, evidenced-based interventions and supportive safeguards can be developed with the ultimate goal of minimizing potential co-morbidities, stress, burnout, PTSD, and professional isolation while maintaining CNM job satisfaction and performance. These models will focus on the integration of, processing, and recovery from an adverse outcome in a manner that minimizes the clinician's emotional and physical consequential morbidities while fostering their professional drive and ability to continue providing high quality care.