

FATHER-SPECIFIC EDUCATION IN THE
INPATIENT SETTING

by

Pamela Alejandra Smith

A scholarly project submitted in partial fulfillment
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in

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DEDICATION

I would like to dedicate this project to my loving family. To my husband, Justin, for your encouragement, support, and love especially during the last four years. To my daughter, Hayden, for being my motivation and inspiration to continue through this difficult journey. To little Holden, for being one more reason to push through. And, to my whole family, friends, coworkers, and manager who have encouraged me, helped me out in numerous ways, and cheered for me through all graduate school. Thank you.

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ABSTRACT

The early postpartum period is an important period of time to prepare mothers and fathers for parenthood. Father's involvement in children's lives has shown to be beneficial for the child's health and the entire family dynamics too. Evidence shows that parental education increases knowledge and confidence levels in parents. Currently, the majority of educational efforts and programs target mothers, leaving men with none or minimal tools to succeed as fathers of a newborn. A major goal of Healthy People 2020 in relation to children's health is a ten percent reduction in infant and neonatal deaths. One key approach for reaching this goal includes increasing the amount of educational and community based programs for infant and child health to increase knowledge in parents (both mothers and fathers) of safe practices with infants and children.

This pre/post-quasi-experimental project was designed to evaluate gender specific education and changes in parental confidence level when exposed to educational literature. The project was implemented in the maternity unit at St. Vincent's Healthcare in Billings, Montana. With a total of 32 fathers as participants. Results of the project indicated an overall maintenance or improvement of parent confidence level evidenced by a maintenance or increase in Karitane Parenting Confidence Scale scores.

Results of the project are expected to facilitate fathers' responsiveness to baby and better bonding of baby to father in the immediate future. Outcomes are expected to lead to positive consequences in children's health and development. Results also indicate the educational intervention with fathers was overall successful in fulfilling the purpose of this scholarly project.

CHAPTER ONE – INTRODUCTION

Introduction

The postpartum period or time following the birth of a child is composed of three distinct stages: 1) the initial or acute period involving the first six to twelve hours postpartum, 2) the sub-acute period, which last two to six weeks, and 3) the delayed postpartum period, which can last up to six months post-birth (Romano, Cacciatore, Giordiano, & La Rosa, 2010). It is during the entire postpartum period that all family members adjust to the newborn. Early education to parents about what to expect during this period is important to prepare and protect families from potential stressors.

The postpartum period can often bring about changes and challenges to the entire family. This period is also a time of exhaustion that has been linked to maternal reduction in retention of information and content; and it is during this stage that maternal and paternal depression is initiated or increased (Swain, 2007). Fathers play an important role as supporters of the family during this stressful time. Education directed to fathers can increase paternal knowledge to care for their newborns, which is associated with parenting competence, parental psychological function, and positive child outcomes. Father-specific education in the postpartum period can help the entire family positively transition after the arrival of a new baby.

Currently, in most healthcare settings, education in the postpartum period is delivered primarily to mothers (National Fatherhood Initiative, 2016; Veskrna, 2010; National Responsible Fatherhood Clearinghouse, 2017). Healthcare providers and

systems should be aware that postpartum education is beneficial to all family members. Providing postpartum education strictly to mothers may be inadequate due to documented lower retention of content in mothers and increased exhaustion level in mothers caused by sleep deprivation experienced during this period of time. According to Healthy People (2018), 6.7 infant deaths per 1,000 live births occurred within the first year of life in 2006, and 4.4 neonatal deaths per 1,000 live births occurred within the first 28 days of life in 2007. It is expected that a ten percent reduction in these numbers will be reached by year 2020. The main solution for this specific goal is to increase the amount of educational and community-based programs for infant and child health to increase knowledge in parents of safe practices with infants and children (Healthy People, 2018).

Background

The era of the “new fatherhood” or the idea that fathers are more than just the economic providers was developed decades ago during the interwar period or Machine Age (LaRossa, 1997). It was during the Roaring Twenties and the Great Depression that the image of the father as a male role model became institutionalized and the importance of a father’s role in raising their children was recognized (LaRossa, 1997; Hays, 1998). Contemporarily, the value of fathers as role models remains. In 2008, President Barack Obama said to all American families regarding their background, “We need to realize that responsibility does not end at conception. We need them to realize that what makes them a man is not the ability to have a child- it’s the courage to raise one.” (Department of Health and Human Services, 2015). Raising children is not the sole responsibility of

mothers. Education in regard to newborns and children should be directed to both parents to encourage or enhance co-parenting strategies to maximize positive future outcomes in children.

Media and popular attention concentrates on maternal issues and offers a lesser focus on the experiences of dads (Postpartum Support international, 2017). For example, hospitals in the United States are required to provide and document education to parents following the birth of a child. Education required includes topics that address maternal and infant health but does not necessarily cover paternal health issues. Literature supports the evidence that changes (positive, negative, physical, and emotional) occur in fathers following the birth of a child. However, limited programs and information for fathers is available to prepare them for this transition or for the challenges of fatherhood.

Statement of the Problem

The benefits of early father involvement in infants' lives are well documented (Allen and Dally, 2007; Jones & Mosher, 2013; Cabrera, Fagan, & Ferrie, 2014; National Fatherhood Initiative, 2016). Nonetheless, parenting programs and discharge education in the postpartum period continue to primarily target mothers.

At St. Vincent Healthcare (Billings, Montana), it was noted by maternity nurses that important information in regards to the care of the newborn and postpartum period is developed and delivered targeting mothers. Education provided upon discharge in the maternity (postpartum) unit is provided primarily to mothers the day of discharge. Fathers are not required to be present for this educational session.

The problems with this educational process are: 1) fathers may never hear important information about how to care for their newborns, 2) fathers may never hear important information about how to be involved and help their partners in the postpartum period, 3) fathers may feel excluded in the plan of care for the family, and 4) mothers' feelings may worsen in relation to their isolation and increased responsibility.

Purpose Statement

The purpose of this scholarly project was to incorporate father-specific information to the current discharge education provided to families in the maternity unit at St. Vincent Healthcare. The intent of this work was to help fathers understand and increase the use of safe practices with their newborn, which is in concert with Healthy People 2020 goals to increase patient and families education to reduce infant and child mortality (Healthy People, 2018). The project also aimed to create a tool to be adapted among men as they transition into fatherhood.

Project Goals

Fathers are not offered the same opportunities as mothers for education during the postpartum period. Therefore, the specific aims for this project were: 1) to incorporate father-specific information as part of the discharge teaching of the maternity unit at St. Vincent Healthcare; and 2) to evaluate father parenting confidence changes following intervention using the Karitane Parenting Confidence Scale (KPCS).

It is expected that by increasing involvement of fathers in discharge education, we can facilitate a successful transition for the expanding family. This scholarly project could provide organizations (beyond St. Vincent Healthcare) with an evidence-based and gender-specific document (tool) that is aligned with the institution's approved information and guidelines from the Department of Human Services (DHS), the Centers of Disease and Control (CDC) and the World Health Organization (WHO).

Significance of the Problem

Most organizations that belong to the Sisters of Charity of Leavenworth offer a father-specific class that provides education in preparation to the birth of a child. The education delivered in these classes is beneficial to new and experienced fathers. St. Vincent Healthcare (Billings, Montana) previously offered this father-specific education. However, it is no longer offered at this location due to low father attendance and decreased popularity. It is speculated by unit managers at St. Vincent Healthcare that the lack of instructors to teach the class also played a role in the discontinuation of the class. The class touched on topics such as the gatekeeper phenomenon, troubleshooter's guide to crying babies, caring for new moms, what to expect during the postpartum period, working/ family balance, and father's role as a protector. Prior to this scholarly project, no class or educational information was offered in preparation of fatherhood at St. Vincent Healthcare (Billings, Montana).

According to multiple organizations, including the National Responsible Fatherhood Clearinghouse, The Centers of Disease Control and Prevention (CDC), and

the World Health Organization (WHO), educating both fathers and mothers is essential for parents to develop an identity as a parent as early as possible and to be able to meet all of the infant's needs (CDC, 2017; WHO, 2007; National Responsible Fatherhood Clearinghouse, 2018). The unification of the previously offered class' curriculum with current recommendations of evidence-based sources, such as the CDC and the WHO, in an educational document given to fathers during the postpartum period and prior to discharge of the maternity unit may be the key to providing accurate and consistent education to all (new and existing) fathers in the inpatient setting.

The overall aim of this scholarly project effort was to improve care provided by healthcare staff in the organization. By increasing the gender-specific written and face-to-face education provided to fathers during the postpartum period, fathers can be better prepared for the challenges that early parenthood brings.

CHAPTER TWO – LITERATURE REVIEW

Literature Review

A comprehensive review of the literature was performed through online university library database searches until saturation of information occurred. During the research, assistance was provided from research librarians at Montana State University (MSU). Database researched included: CINAHL, Medline, PubMed, Psych Info, and Cochrane review. No limit was placed in the date of publication to capture some key classical pieces as well as the most current literature. The following terms were utilized: father, fatherhood, postpartum, education, parenting education, parenting programs, and level of confidence. Articles from nursing, education, psychology, medicine, and sociology were reviewed and selected for this project.

A systematic review conducted with ten articles from 1980 to 2007 performed by Kurth (2011) noted a relationship between crying infants and maternal tiredness, especially in the period of zero to three months postpartum. Soothing the infant while attempting to cope with their own tiredness and exhaustion is a struggle for many new parents. In the four qualitative studies included in this systematic review, it was noted that mothers described difficulties in concentration, reduced patience, increased frustration, feelings of incompetence or guilt, resentment, and even fear of becoming aggressive toward their infant (Kurth, 2011). As in women, the postpartum period is a time that also affects men. The transition to fatherhood can be described as complex and

demanding, and can have a negative impact on men's health (Lara, Navarro & Navarrete, 2010; Philpott, 2016).

During the postpartum period, fathers note an absence of routine, which may bring about changes and stresses. Much like in mothers, fathers also experience sleep disturbance, fatigue, relationship strain, and financial worries (McCoy, 2012). Recent shifts in traditional roles have resulted in the expectation that men will play an equal and direct role in caring for their children. However, education for fathers is not being provided in the same manner as women (Veskrna, 2010). Consequently, this creates a challenging environment for properly preparing men to feel adequately equipped as they transition into fatherhood (Veskrna, 2010).

Since the institutionalization of the "new fatherhood" (as identified in the literature), multiple studies have been conducted to analyze the degree to which fathers' involvement affects children's lives. Fathers' involvement in their children's lives has been linked to better problem solving, higher intelligence quotient (IQ), higher economic levels, higher educational achievements, and lower levels of behavioral problems in the lives of children (Allen & Daly, 2007; McMunn, et al, 2017). Additionally, children with low or no father involvement are at greater risk of poverty, undesired pregnancies, behavioral problems, substance abuse, other types of abuse, and neglect (Allen & Daly, 2007; National Fatherhood Initiative, 2016). Furthermore, literature supports that children without father involvement have higher rates of mortality, incarceration, crime, high school dropouts, and obesity. (National Fatherhood Initiative, 2016).

Fathers' involvement has been noted to vary depending on age, marital status, knowledge, and ethnicities (Jones & Mosher, 2013; Cabrera, Fagan, & Ferrie, 2014). Overall, fathers with higher educational status have been linked to a higher involvement with their children (Jones & Mosher, 2013). Parenthood education classes have been shown to increase the parenting knowledge in both mothers and fathers (Wilson, Gonzalez, Romero, & Cerbana, 2010; Winter, Morawska, & Sanders, 2011; Weiner, Billamay, Patridge, & Martinez, 2011; Skeleton, 2014; Mann, Pearl, & Behle, 2004). Parenting education increases fathers' involvement. Education may be an important tool to use for two key reasons: 1) to ensure parental reflective functioning and effectively parenting to develop a secure attachment in infants; and 2) to ensure a better relationship later in childhood, and in adolescence (Barlow, et al., 2014). Education for parents also helps improve parental responsiveness to the child and parent-child interaction which are essential in raising a child and effectively being involved in children's lives (Barlow & Coren, 2001).

Parent training programs from 48 randomized-controlled trials were found to have short-term improvements in depression, anxiety, anger, confidence, and satisfaction with the partner relationship (Barlow, et. al., 2014). More specific to fathers, education during the prenatal or postnatal period has shown a statistically significant short-term improvement in paternal stress, which overall can have positive consequences for the later psychological health of the child (Barlow, et. al., 2014). Frank, Keown, Dittman, and Sanders (2015) noted increased parenting confidence in fathers and mothers, which

helped improve parents' involvement in children's lives and led to less dysfunctional parenting practices following parenting education.

According to a recent study, demographic predictors for parenthood programs completion include: education beyond high school, stable employment, stable mental health, and abstinence from alcohol and illegal drugs (Rostad, et. al., 2017). Prenatal education and involvement helps fathers' expectations and behaviors, and these are associated with higher levels of engagement at years one and three of the child's age (Cabrera, Fagan, & Ferrie, 2014). However, even with existent evidence of the benefits of father's involvement, the importance of starting to educate, and encouraging involvement of fathers during the postpartum period, postpartum classes continue to target mothers with topics tailored to meet a mother's needs (Rostad, et al, 2017).

It is important to understand what motivates fathers to receive education in the postpartum period to better develop resources they will use. In recent studies, some of the reasons why fathers showed interest in joining parenthood classes were: 1) the desire to improve current parenting behaviors, 2) the appeal of father-centered parenting programs, and 3) the documented results of parenting programs such as enriched father-child interactions, positive changes in children's behavior, and noted increased parenting knowledge (National Fatherhood Initiative, 2016).

Rostad and colleagues (2017) reported that in a study with 50 male caregivers, the main motivation for receiving parenting education was the interest to learn and obtain skills and methods to make them better parents. Frank, Keown, Dittmen, and Sanders (2014) explored fathers' preferences for parenting programs and found that topics that

built a positive parent-child relationship and increase children's confidence and social skills were preferred. Frank, Keown, Sanders (2015) also found that one of the most important things identified, in order to create education to meet father's expectations, is to obtain and understand father's perspectives and their needs (Frank, Keown, Dittman & Sanders, 2014).

According to research by Lundahl and Harris (2006) in the Virginia Child Protection Newsletter (2013), effective parent education promotes protective factors such as nurturing and attachment, knowledge of child development, understanding of child management techniques, and support for parents, which overall leads to positive outcomes in parents and children. In a meta-analysis of 77 parenting programs done by researchers at the Centers for Disease Control and Prevention (CDC), the three components that were related to better parent outcomes were: teaching parents emotional communication skills, teaching parents positive parent-child interaction skills, and requiring parents to practice strategies learned during program sessions (Virginia Child Protection Newsletter, 2003). There are several evidence-based programs for parents. Yet, choosing and implementing parenting education is not an easy task. Some of the things to consider during this process include: length, the equipment required, the time required for training prior to offering the program, and the program's focus and curriculum (Virginia Child Protection Newsletter, 2003).

Theoretical Underpinning

The Albert Bandura theory (1977) provided the conceptual framework to guide this cognitive project. The recently renamed “Social Cognitive Theory,” previously called “Social Learning Theory,” focuses on motivational factors and self-regulatory mechanisms during the learning process (Bandura, 1977). The process includes the following steps: attention, retention, reproduction, and motivation. Bandura (1977) sees human personality as an interaction between the environment and a person’s psychological processes. The theory also emphasizes the process of self-regulation (McLeod, 2016).

According to Bandura, providing important education during the postpartum period allows for retention and later reproduction of the skills and resources learned. Educating new fathers on possible challenges they may face after having a baby and providing them with tools to respond to these challenges makes the process of reacting to difficult situations easier by applying skills and information learned to daily lives.

CHAPTER THREE – METHODS

Methods

Studies have shown that higher levels of education are linked to increased confidence and involvement with children (Jones & Mosher, 2013; Cabrera, Fagan, & Ferrie, 2014; Barlow and Coren, 2001; Barlow, et. al., 2014; Frank, Keown, Dittman, and Sanders, 2014). Educating is a key component of the nursing scope of practice. Education is provided to all inpatient discharges to enhance rehabilitation, ensure adherence to plan of care, restore health, and facilitate healing. Education in the postpartum period is essential for better transition into parenthood and successful growth of the infant (CDC, 2017; WHO, 2007; WHO; 2013). Therefore, an increase in parental education given during the postpartum period was expected to help parents cope with challenges that arise during this time in a better way and recognize problems that arise in a timely manner.

Project Design

This project used a pre/post-quasi-experimental design to evaluate father's confidence when exposed to gender-specific educational literature (see appendix 4). The educational literature was developed primarily by the DNP student in conjunction with nurses in the maternity unit and in concert with St. Vincent Healthcare. A father-specific document/ literature was created at a sixth grade literacy level which is congruent with healthcare literature recommendations to enhance understanding among patients (Safeer & Keenan, 2005). The general outline of the educational document was created by the

DNP student using the book *Crash Course for Dads-to-Be* by Greg Bishop (2016). An outline was sent via email to all nurses, educators, supervisors, and managers for approval. All nurses were given the opportunity to express their opinions about the document, make suggestions, and add pertinent information. *Crash Course for Dads-to-Be* is a St. Vincent approved book that includes information offered in face-to-face classes at St. Joseph's Hospital (a sister hospital of St. Vincent Healthcare) ("Boot Camp for New Dads"). "Boot camp for New Dads" is a father-only class that touches on the following topics: gatekeeper phenomenon, troubleshooter's guide to crying babies, dad's toolbox, caring for new moms, what to expect during the postpartum period, working/family balance, and father's role as a protector. It is a renovated version of the previously taught and discontinued class at St. Vincent Healthcare. After complete modification and approval of the document based on the unit's needs, a 15 minute class (part of a mandatory staff meeting) was offered to orient staff to the educational material, scholarly project, and forms to be distributed for data collection.

A pre/post-assessment of the father-specific educational literature (document) was used. A pre-assessment of parenting confidence using the Karitane Parenting Confidence Scale (KPCS) (further described in *Instrument* section) was done to measure confidence level prior to reading father-specific educational literature (document). The literature was given to the participants during the postpartum period by their primary nurse during orientation to the room and distribution of other important paperwork to be completed prior to discharge. The literature presented to fathers addressed all questions included in the KPCS. A post-assessment score of the KPCS was obtained after father had reviewed

educational literature (document) entirely. A final feedback survey was given to parents to express feelings about the educational literature provided, as well as to obtain input from fathers to improve or modify the educational content. This feedback survey also provided fathers with the opportunity to be honest and report if they had the necessary time to read all the information. The pre/post-assessment of KPCS were compared, and feedback from the final survey was analyzed for future modifications of educational material.

Population and Sample

As noted in the literature, there is a positive relationship between education and confidence gained (Shrestha, Adachi, and Shrestha, 2016; Shrestha, Adachi, Petrini, Shrestha, & Khagi, 2016). Therefore, this project involved a pre/post-assessment of confidence gained, an indicator for comprehension of the educational literature provided, within a quasi-experiment design of new fathers at the maternity unit at St. Vincent Healthcare (Billings, Montana). The hospital is part of the Sisters of Charity of Leavenworth and is one of two major hospitals in the area. St. Vincent Healthcare serves the population in the Billings, northern Wyoming, and surrounding areas with the majority of its consumers being from Yellowstone County in Montana. An estimated 91% of the population served by this organization is Caucasian, followed by Hispanics (5.5%) and American Indian (4.6%) (U. S. Census Bureau, 2016). St. Vincent Healthcare has 201 beds available, and offers multiple specialty services such as cardiology, oncology, general surgery, orthopedics, level III Neonatal Intensive Care Unit (NICU),

Pediatric Intensive Care Unit (PICU), St. Vincent Children's Healthcare, and women's services (SCL Health.org, 2016). Based on 2015 statistics, St. Vincent Healthcare delivered about 1,584 babies (SCL Health, 2016).

Procedure for Data Collection

Approval to perform this study was obtained from project committee members, IRB at MSU, IRB at St. Vincent Healthcare, and maternity unit management. The project received exempt status. The purpose of the study, procedures and all materials involved were introduced to all nursing staff within the maternity unit in two face-to-face mandatory staff meetings held in the month of May 2018. Nursing roles including how to help participants complete their forms, explaining the purpose of study to participants, and how to collect paperwork were explained during the unit staff meeting. The information presented in the face-to-face encounters was reinforced with an email containing all project information needed including forms and exact procedures/ steps of the study to be carried out by staff. The DNP student answered all questions that arose from the management and staff regarding the study.

A father-specific tool (educational literature/document) was developed using the curriculum and book "Boot Camp for New Dads" class employed by St. Joseph, (Sisters of Leavenworth hospital) as a guide. Permission to use the material was obtained from the regional director for community health improvement and main user of "Boot Camp for New Dads". Information was completed as required to meet CDC, DHS, and WHO

recommendations on parent postpartum education, as well as specific needs identified by unit staff.

The DNP student provided close supervision during the first week that the data was collected to answer any questions from staff and to ensure that data was being collected in a consistent manner. Nursing staff was provided with the DNP student's (author of this paper) contact information, and all staff was encouraged to call, text, or email with any questions or issues that arose.

Prior to collecting any data, consent of participation in the study was obtained from fathers upon arrival to the maternity unit (approximately 2 hours after birth of infant) by the primary nurse during orientation to the room. Consented participants were assigned a folder with an identification number already predetermined for that folder. This identification number was written on the folder, and all four forms inside (pre-assessment, demographic sheet, post-assessment, and feedback survey) were to be completed by the participants. Nurses were in charge of obtaining consent from participants, explaining the steps to follow to complete all forms, reviewing all forms for completeness, and returning complete envelope (with forms enclosed) to the nursery (locked unit). Folders were picked up twice weekly from the nursery by the DNP student.

Step by Step Intervention

During the admission and orientation to the room in the maternity unit (approximately two hours after delivery), the already numbered envelope was presented to all fathers. After the study was explained and consent was obtained from participants,

the participant was instructed to complete the first two forms (numbered) in the folder (demographic sheet and pre-assessment). Following the aforementioned step, the parenting tool or father-specific educational literature/ document (appendix 4) was given to the participant (father of newborn). Fathers were instructed that they had the remaining length of their postpartum hospital stay to completely read the educational tool given to them. Fathers were also instructed that once they had a solid understanding of all material included, the last two forms (post-assessment and feedback survey) in the envelope needed to be completed.

Just prior to discharge, fathers provided the maternity unit or discharge nurse (person in charge of discharging them from hospital) with the envelope (and completed documents within). Fathers were encouraged to keep the educational material. All forms had to be completed by all participants regardless of limitations in reading the educational material. Nurses reviewed completeness of all four forms (demographic sheet, pre-assessment, post-assessment and feedback survey) and returned the envelope to the designated place (locked nursery in the unit).

Instrumentation

To better understand the characteristics of the participants, a demographic sheet created by the DNP student was utilized (See Appendix 2). The Karitane Parenting Confidence Scale (KPCS) (Appendix 1) was also used to assess parenting confidence among fathers (study participants). The tool is a 15-item self-rated scale that evaluates the parenting confidence of parents with children ages zero to twelve months. In previous

validation studies, the scale had a Cronbach's alpha coefficient for internal consistency of 0.87, even when translated in other languages such as Nepali, for example (Shrestha & Adachi, 2016). The scale has shown adequate reliability and validity and has been considered as a "suitable instrument" (Shrestha & Adachi, 2016; Črnčec, Barnett, & Matthey, 2008). The scale has also shown good test re-test reliability and acceptable correlations with other measures associated with stress and depression including Edinburgh Postnatal Depression, Maternal Efficacy Questionnaire, and Parenting Stress Index- short form (Črnčec, Barnett, & Matthey, 2008). The confidence level assessment via the KPCS was used as an indicator for fathers' knowledge gained from the educational literature (tool). Additionally, participant fathers completed a Feedback Survey (Appendix 3) to obtain input from fathers to improve or modify the educational literature. The surveys were designed so that minimal effort and time (about 5 minutes) were required from participants.

Ethical Considerations

The maternity unit (manager, educator, and nurses) at St. Vincent Healthcare, as well as the Montana State University Institutional Review Board (IRB) approved this project. Participation in the project was voluntary. All identification methods were deleted and a random assigned number was appointed to each participant instead. Informed consent was obtained from each participant after a full description of the study was provided and prior to gathering data.

Analysis

Data analysis was initiated by the DNP student shortly after the end of the data collection period and after ensuring completeness of all envelopes. Statistical analysis was completed with the assistance of lead statistician Laurie Rugemer and in collaboration with Megan Higgs and Elizabeth Mery, members of the Statistical Consulting and Research Services at Montana State University.

CHAPTER FOUR – RESULTS

Description of Sample

The population sample for this project was recruited during the month of June 2018. From June 1st to June 30th, 2018 a total of 122 births were recorded in the maternity unit. However, only 32 responses from fathers were obtained for this effort. Participant inclusion criteria for inclusion in the project were: 1) first time fathers and experienced fathers, and 2) ability to speak and read in the English language. Participants were required to complete a demographic sheet and pre-assessment of parenting confidence (KPCS) prior to obtaining and reading the father-specific educational document. Participants filled out a post-assessment of the parenting confidence after reviewing the educational materials. At this time, participants were asked to complete a feedback survey regarding the receptivity of the educational content. KPCS scores were calculated and compared for pre and post-assessments. Conclusions were inferred after full comparison of demographics, scores from assessments, and feedback from participants regarding educational literature were obtained and analyzed. Collaboration with a statistician from Montana State University was requested for the development of data analysis.

Analysis of Data

The Karitane Parenting Confidence Scale, or parenting confidence scale used (Likert-type) was scored zero, one, two, or three depending on self-reported level of

confidence zero meaning not confident at all and three meaning very confident in that area. The scores were summed for all 15 questions on the assessment and a total score between 0-45 was calculated, with a higher score indicating a greater parenting confidence level. Based on the demographic analysis of the participants, all 32 participant fathers were either married or living with their partner at the time of baby's birth. The average age of fathers was 29.31 years of age ($s = 6.14$), and the average level of father's education in years was 13.97 ($s = 2.47$). From all the participants ($N = 32$), the majority ($n = 10$) reported a yearly income between \$25,000 and \$50,000 followed by ($n = 8$) \$50,000-\$75,000 and ($n = 8$) $> \$75,000$. Only 5 participants reported a yearly income of $< \$25,000$.

Of the 32 participants, 22 reported that their significant other had a vaginal delivery and 9 reported a cesarean section (C-section) during that exact hospital stay. One participant failed to report this information. Participants communicated that on average they had spent 58.3 minutes reviewing all the educational material ($s = 44.12$), with 28 of them stating that they had enough time during their hospital stay to read all information. The majority of fathers ($n = 24$) reported that they thought the information had been useful for the near future and 25 reported that they could use information learned with their own baby.

Prior to the initiation of the study, it was anticipated that after full review of the father-specific educational document (developed for this project), fathers' knowledge about the care of the newborn and of possible challenges in the postpartum period would increase. An increase was found to be true for all questions' average score in the KPCS

(see figure 1). An increase in overall parenting confidence scores in most participants was also noted after analysis of pre and post parenting confidence scores (see figures 2 and 3). The total average percentage improvement in parenting confidence scores from pre-assessments to post-assessments was 6.05 percent (see figure 2).

FIGURE 1: Difference in Pre and Post Scores by Question

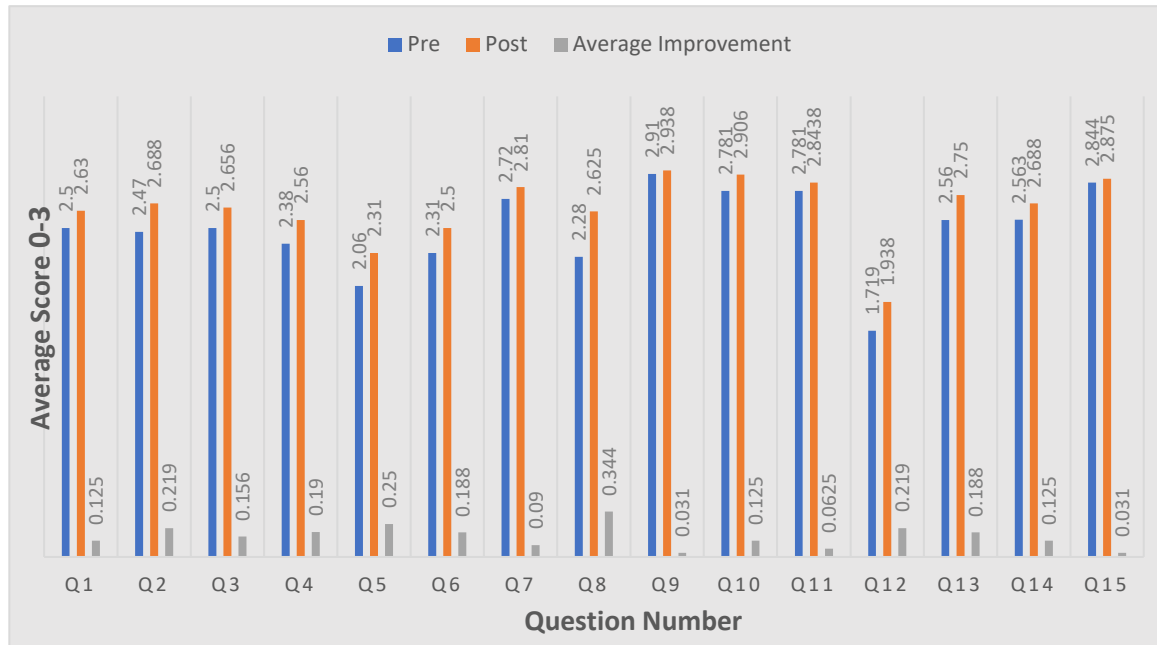


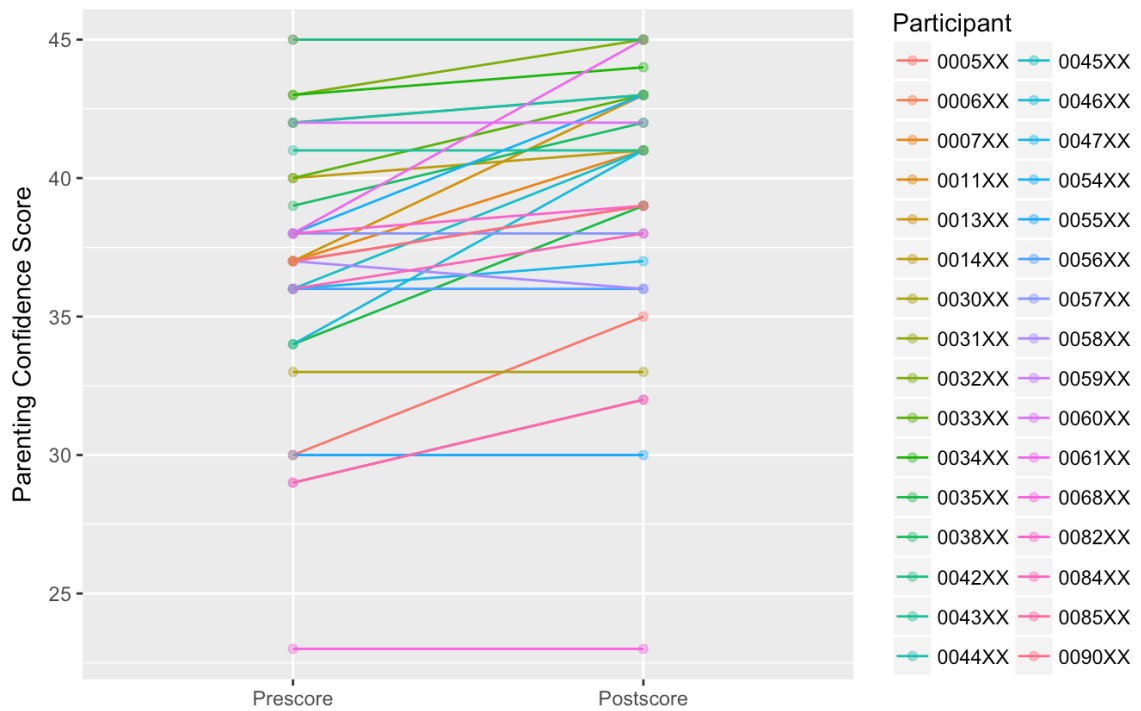
FIGURE 2: Participants Difference in Percentage for Pre and Post Scores.

Participant	Pre-score	Post-score	Points of difference	Difference in percentage
0060XX	42	42	0	0.00
0046XX	34	41	7	20.59
0045XX	36	41	5	13.89
0047XX	36	37	1	2.78
0055XX	30	30	0	0.00
0054XX	38	43	5	13.16
0061XX	38	45	7	18.42
0056XX	36	36	0	0.00
0059XX	29	32	3	10.34

Figure 2 Continued

0057XX	38	38	0	0.00
0068XX	23	23	0	0.00
0005XX	30	35	5	16.67
0058XX	37	36	-1	-2.70
0032XX	43	45	2	4.65
0007XX	37	41	4	10.81
0006XX	45	45	0	0.00
0011XX	37	39	2	5.41
0013XX	37	43	6	16.22
0014XX	40	41	1	2.50
0085XX	29	32	3	10.34
0082XX	38	39	1	2.63
0084XX	36	38	2	5.56
0038XX	39	42	3	7.69
0035XX	34	39	5	14.71
0090XX	37	39	2	5.41
0033XX	40	43	3	7.50
0043XX	41	41	0	0.00
0042XX	45	45	0	0.00
0034XX	43	44	1	2.33
0030XX	33	33	0	0.00
0031XX	42	43	1	2.38
0044XX	42	43	1	2.38
			Average Difference in Percentage	6.05

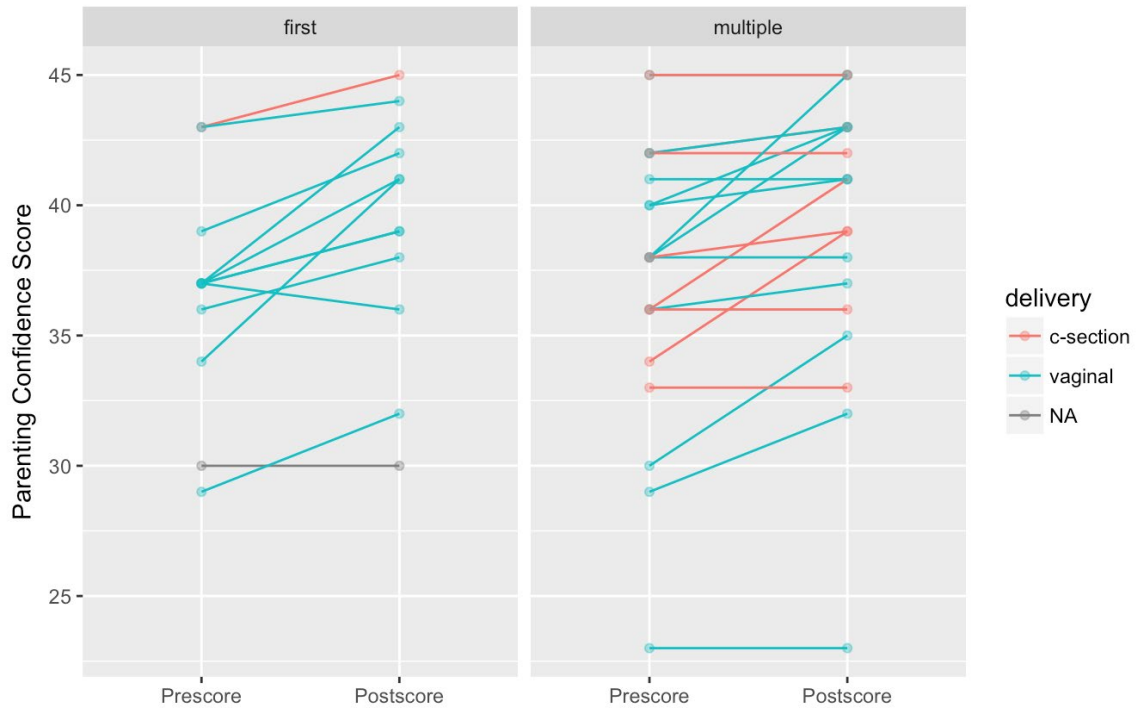
FIGURE 3: Pre and Post Parenting Confidence Scores Split by Participant



Twelve participants reported that this was their first baby while the remaining (n = 20) reported that they had other children at home in addition to this new baby.

Improvement or maintenance in parenting confidence level was experienced by most new and experienced fathers with the exception of one (see figure 4).

FIGURE 4: Pre and Post Parenting Confidence Scores, Split by Type of Delivery and Paneled by Whether It's a First Child or Not



Overall, an improvement from pre to post-scores was seen in both C-sections and vaginal deliveries, and in most participants regardless of their personal belief of usefulness of the education provided (see figures 5 and 6).

FIGURE 5: Difference in Participant Pre Post Score, Split by Type of Delivery, Usefulness of Education, and Income

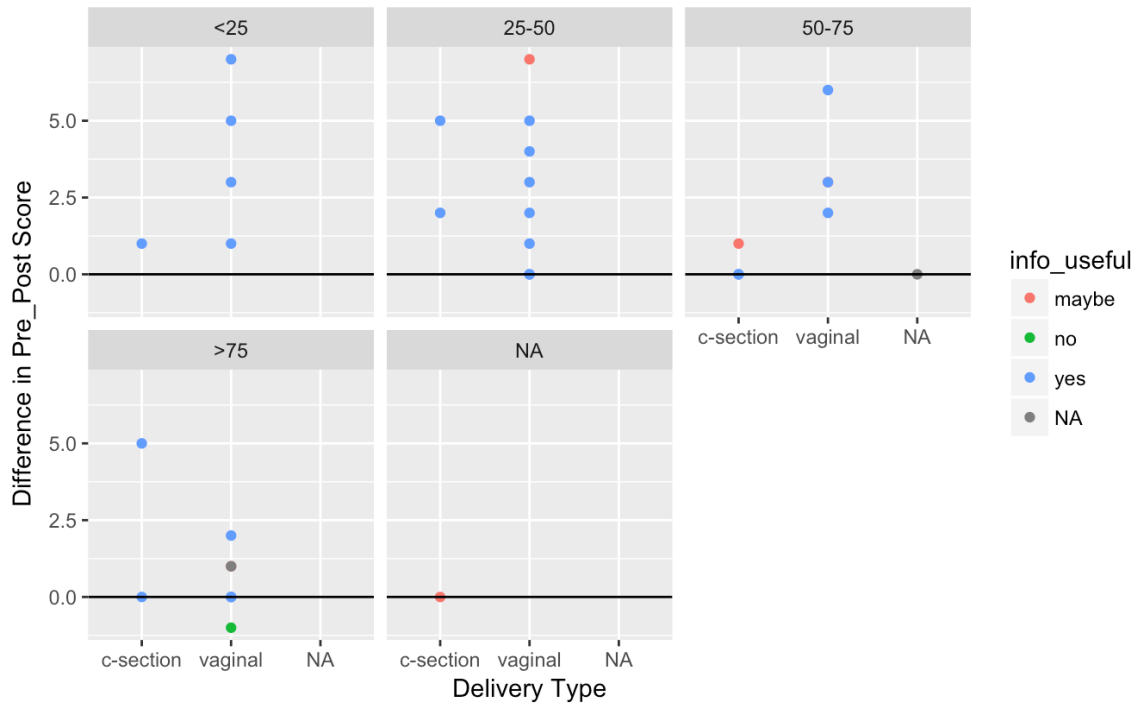


FIGURE 6: Scatterplot of Score Differences against Pre-Assessment Score

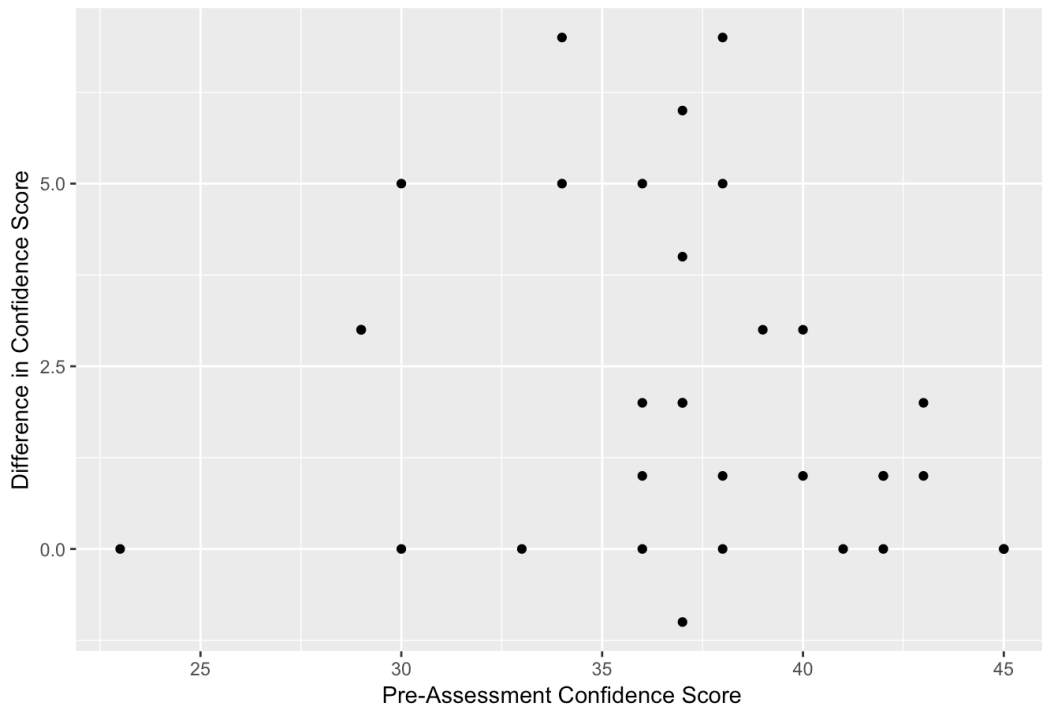


Figure 6 also helps to understand the relationship between pre-scores and differences in post-scores for participants. Participants with higher starting scores generally had less of an increase from pre to post-assessment due to limited but natural room for improvement. In addition, there was a participant that started with a score of 45, therefore, no difference was shown from pre to post-assessment.

Summary

As anticipated, average scores in post-assessments were higher for all questions in the KCPS and higher or equal than pre-assessment in the parental confidence scale overall score in all but one participant, regardless of demographic differences. The type of delivery of the baby (cesarean section vs vaginal delivery of the baby) did not seem to play a factor in parental confidence scale score (pre or post). This was true despite the longer stay that cesarean section families may have had (approximately 1-2 days longer), and potentially involving a longer period of time to review the educational material provided. In general, both new and experienced fathers benefitted from reading the educational material as evidenced by an increase in average score for every question, and by an increase or maintenance in confidence levels (KPCS score). This suggests that the level of experience in parenthood should not influence the amount of education provided in hospital stays during the postpartum period. The outcome for this project could help create awareness of the importance of providing gender-specific information during the hospital stay and as part of the discharge education to establish or increase paternal confidence levels.

CHAPTER FIVE – DISCUSSION AND CONCLUSION

Discussion of the Results

It was assumed that fathers of infants born by cesarean section will have a greater difference between scores due to a longer hospital stay. However, as previously stated in the summary of results, this assumption was not supported. In addition, it was hypothesized that a higher score would be recorded in most (if not all) completed post-test regardless of the experience level as fathers. Results showed that all questions had an increase in average scores of post-assessments. With the exception of one participant, all fathers obtained higher overall post-test scores. The aim of this project was to increase gender-specific education for fathers during the postpartum period. The aim was accomplished by providing education to fathers in the maternity unit soon after their baby was born. Another purpose of the project was to better prepare fathers for the challenges that early parenthood brings. Complete preparedness for fatherhood of participants was not evaluated in this study. However, as already mentioned, most participants did maintain or increase their parenthood confidence level and all questions' average score increased. Overall, (and aligned with literature cited) this can increase fathers' responsiveness to baby and bonding of baby to father and, therefore, leads to positive consequences in the child's health and development.

The data collected from the Feedback Survey included multiple comments thanking the project for promoting the inclusion of fathers-specific education in their postpartum stay. Twenty-eight participants stated that they would not change anything

about the educational tool. One father stated that a different scale should be used to evaluate confidence level, and another father expressed that he would like more information about sleep deprivation during the postpartum period in fathers and its effects. Four fathers expressed that they were grateful for the education provided to them, and one stated that even though it wasn't helpful for him, it created great discussion with his wife about fatherhood. During the time that the study was implemented, multiple nurses approached the DNP student with comments being provided by families and fathers about the project. These comments included being grateful for the education provided, and that the education was very helpful for their future. However, no written record of these shared comments were obtained.

Limitations of the Project

Three primary limitations to the project were identified. The first limitation identified was the low number of participants recorded ($N = 32$) in the study, even when the total amount of births in that specific month (June) was reported at 122. When an attempt was made to investigate the exact reasons for this, it was noted that there were some inconsistencies in procedures to introduce folders (including educational materials and forms) to the participants. These inconsistencies occurred despite the two educational and study preparational face-to-face sessions that included all staff and the emails that circulated for two weeks prior to initiation of the study. While some nurses reported they were introducing folders during admission to the maternity unit and orientation to the room, some said that they believed the folders were coming with the

participant when moved from the labor and delivery unit. It is important to note that not a single email, text, or call was received from nursing staff during the duration of the project. Also, no input or questions were received by the DNP student regarding the aforementioned issue. Additionally, no questions regarding this problem were raised by staff when the DNP student was on site to assess project progress, issues, or staff concerns.

The second limitation identified in relation to the project was that all information collected was self-reported. Thus responses may not be completely transparent as participants may lack introspective ability to accurately respond to questions, and may have differences in the interpretation of rating scales. Also, since the consent clearly stated that the overall purpose of the project was to increase the level of confidence in fathers after the presentation of educational material, it is important to recognize that participants may purposefully rate themselves higher or lower in order to support the goals of study. Further, because participants were volunteers and not a random sample of patients, these results cannot be generalized beyond the participants in this study.

A third limitation identified was that other factors external to project may have influenced the changes in the parenting confidence level of fathers such as the hospital stay itself, other hospital resources, and nursing education/ support. Thus moving forward, using a treatment and control group would produce greater clarity regarding the outcomes of the project.

Implications for Clinical Practice

Based on the data collected and results obtained, it was noted that the overall learning experience of the early postpartum period (hospital stay, nursing education, or gender-specific education) is beneficial to most fathers in terms of the parental confidence level. An increase or maintenance in parental education was noted in almost all participants regardless of yearly income, level of education, previous experience as fathers, or method of delivery for the newborn (length of hospital stay). While improvement or maintenance in parental confidence level was observed in most of the participants, it is unclear if other factors (hospital resources or nursing additional education) played a role in these improvements. However, most participants in this study thought that the father-specific education provided to them during the early postpartum period was useful overall for the immediate future and when taking on the role of fathers for their newborns.

Education during the hospitalization period is an important part of post-hospitalization success in relation to parenting in the home setting. Providing education to all involved members of the family can help promote positive effects such as child health outcomes and development by increasing parents skills and confidence level.

Recommendations for Future Research

This project's results, provided important information in relation to the use of father-specific education in the postpartum period, as well as its effects on parenthood confidence level. One recommendation is to repeat this project over a longer period of

time to obtain a larger sample size and reflect a wider breath of perspectives. Another is to reduce inconsistencies in implementation and delivery of educational material to strengthen the protocol (expectations of staff and guidance provided). To better accomplish a reduction in inconsistencies in implementation, a more extensive and in-depth preparation class for staff and unit management about the correct implementation of the project is recommended with designated “experts” (very well prepared/ knowledgeable staff in the topic and about the study) to be available on site in most if not all shifts. Finally, another recommendation is that future quality improvement projects should include a control group to mitigate the influence of other factors that may be aiding fathers in maintaining or improving their confidence level.

Conclusions

The benefits of fathers’ involvement in children and newborns is well established. However, the exclusion of fathers during postpartum education continues to be common practice. The presence of gender-specific education is an economic and quite feasible alternative to promote father involvement in newborns’ lives, to increase or maintain parental confidence level, and thereby expand parenthood skills to promote children’s health from an early age. The goal of this project was to increase gender-specific education during the postpartum period to better prepare fathers for the challenges that newborns may bring. The goal was largely achieved with results of the study indicating an improvement in average score for all questions and an improvement or maintenance of overall score for all but one participant regardless of yearly income, level of education, or

level of experience as fathers. A more extensive effort with a larger sample, better education to all parties involved in the project, and a control group has been recommended to better understand the effects of father-specific education in the inpatient setting during the early postpartum period has in parenting confidence level and preparedness to parenthood.

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APPENDICES

APPENDIX A

KARITANE PARENTING CONFIDENCE SCALE



KARITANE PARENTING CONFIDENCE SCALE
FOR PARENTS OF INFANTS

*Reference as: Črnčec, R., Barnett, B., & Matthey, S. (in press: 2008). Development of an instrument to assess perceived self-efficacy in the parents of infant. *Research in Nursing and Health*.*

Participant ID: _____

Today's date: _____

This scale has 15 items. Please underline the answer that comes closest to how you generally feel.

Here is an example already completed:

eg. I am confident about holding my baby

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

Office use only.

Page 1 _____

Page 2 _____+

Total _____

This would mean "I feel confident about holding my baby some of the time".

Please complete the other questions in the same way.

1. I am confident about feeding my baby

Not applicable (my partner feeds the baby)

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

2. I can settle my baby

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

3. I am confident about helping my baby to establish a good sleep routine

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

4. I know what to do when my baby cries

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

5. I understand what my baby is trying to tell me

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

6. I can soothe my baby when he / she is distressed

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

7. I am confident about playing with my baby

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

8. If my baby has a common cold or slight fever, I am confident about handling this

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

9. I feel sure that my partner will be there for me when I need support

Not applicable (I don't have a partner)

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

Reproductions of this scale must include the full scale title and reference and no alterations to wording or formatting.

Office use only:
 All items scored 0,1,2,3. N/A=2.

10. I am confident that my baby is doing well

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

11. I can make decisions about the care of my baby

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

12. Being a mother / father is very stressful for me

Yes, most of the time
 Yes, some of the time
 No, not very often
 No, hardly ever

13. I feel I am doing a good job as mother / father

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

14. Other people think I am doing a good job as a mother / father

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

15. I feel sure that people will be there for me when I need support

No, hardly ever
 No, not very often
 Yes, some of the time
 Yes, most of the time

APPENDIX B

DEMOGRAPHIC INFORMATION SURVEY

Today's Date: _____

Participant ID: _____

Type of Delivery: vaginal _____ cesarean section _____

Demographic Information

1. **Age:** _____
2. **Marital Status :** _____ married/ live with partner _____ single/ live separate
3. **Highest number of years that you attended school** _____
4. **Country of origin:** _____
Country where your parents were born: _____
Number of years You have lived in Montana: _____
5. **Language spoken at home:** ____ English only ____ English and other language
Please specify what other language you speak at home: _____
6. **Occupation:** _____
Do you work: ____ Full time ____ Part time ____ Unemployed
____ Disabled ____ Retired
7. **Would you say you earn:**
____ less than \$25,000 /yr ____ \$25,000-50,000/yr
____ \$50,000-75,000/yr ____ more than \$75,000/yr
8. **Number of children:** _____ **Ages of children:** _____
9. **Number of brothers and sisters:** _____
Where are you in the birth order? (Example: 4th out of 5 children) _____
10. **From 0-10 how involved was your mother in your life as a child?** _____
11. **From 0-10, how involved was your father in your life as a child?** _____
12. **Have you ever attended a parenting class?** YES ____ NO ____
If you attended a class, did you find it helpful? YES ____ NO ____

APPENDIX C

FEEDBACK SURVEY

Participant's ID:

Today's date:

Type of delivery: Vaginal _____ Cesarean section _____

Feedback Survey

1. How long did it take you to go through the educational material? _____ hours
2. Did you find this information useful?
 - Yes
 - No
 - Maybe
3. Did you have enough time to read and understand the material?
 - Yes
 - No
 - Maybe
4. Do you think you would use it with your baby?
 - Yes
 - No
 - Maybe
5. What is the one thing you think would improve this educational information?
 - I wouldn't change anything
 - I have no suggestions
 - Other: in a few words tell us what could be improved (for example: more information or more basic English, or other languages like Spanish, etc.).

APPENDIX D

EDUCATIONAL TOOL

COURSE FOR DADS

Strategies for Surviving the First Weeks

Make sleep a Priority: Fatigue is the first and toughest challenge faced by new parents. Babies start with six to eight sleep/awake cycles per day compared to our one. Sleep deprivation can cause irritability and even disorientation, all of which increases the chances of postpartum blues or postpartum depression. Did you know that postpartum depression can also occur in men? One in every 10 fathers experience symptoms of depression following the birth of a child. Watch for symptoms (in mom and yourself) of frustration and irritability, weight gain or loss, isolation from family and friends, easily stressed, problems with concentration, fatigue, feeling sad or crying, and loss of interest in work or hobbies. Reach out to family, friends, and support groups as needed.

- Provide opportunities for your partner to sleep several hours during the day by taking full charge of the baby.
- Trade shifts with mom so you can sleep.
- Grab a nap when your baby is sleeping on your watch.
- Stock up on sleep when relatives are around to take shifts.
- Work out an arrangement for night in which you can share the load most efficiently.
- Blow off non-essential tasks to concentrate on your new or growing family.



How to get out of the house?

Basic sanity requires that you leave the confines of your house as soon as possible. Dads need to take the initiative because a new mom is generally just trying to get through the day and may not get out of her bathrobe for two weeks. Getting out also overcomes the “stuck at home with the baby” inertia that can otherwise set in for years, and sets in motion an active, outgoing family lifestyle.

- Pack baby in the stroller and take a walk around the block
- Place baby in a soft front carrier facing you and go for a walk or a short hike.
- Put baby in a car (appropriately strapped) for a ride around town
- Make it a habit. Take baby with you regularly, and figure out how to keep the baby's sleep schedule while out and about. Baby will remind you of the feeding schedule; just bring all supplies necessarily for feeds.
- When going out to restaurants, work around her fussy times, walk around with baby while waiting for dinner, and if baby gets fussy, take a walk outside to calm him/ her down. If this doesn't work, ask to have your food to go and try again another day.

Caring for a new Baby



Changing Diapers

Have all supplies you need. Keep one hand on baby at all times. For girls wipe front to back. For boys keep a clean diaper over his tummy and penis to avoid getting peed on.

When done wiping, fasten new diaper snugly and fold top down below his umbilical cord stump. Wash your hands or use sanitizer when done.

Umbilical Care

Umbilical cord stumps need to be kept clean and dry before they fall off in one to three weeks. Do not get it wet!

Bathing

For the first weeks, give him sponge baths to avoid getting cord stump wet. Use mild soaps. Check water temperature carefully. Wash head to toe to avoid contamination.

Rinse thoroughly and dress him/her in a clean outfit. Never leave baby alone!

Feeding with a bottle

Sit baby on your lap and recline baby's head slightly so that baby is cradled in one of your arms. Support baby's head at all times. If gagging occurs, pull nipple back a little. Burp after each feed supporting baby's head and using a burp cloth. Support baby with one arm and pat with the other one. If nothing happens after a few minutes, change his position up over your shoulder and try again. If nothing happens, he likely does not need to burp.

Swaddling

Practice, practice, and practice! Spread a blanket on a flat surface, place baby diagonally on the blanket with the head on one corner, with one hand bring the bottom corner up to her chin so the legs are tucked in. With the other hand, pull a side corner snugly over baby and tuck it between baby's back and blanket. Pull other corner over baby and tuck it in. A wearable blanket or sleep sack will do the trick as well.

Ways to Calm a Crying Baby

Feeding	Bicycle baby's legs
Changing diaper	Hold, walk and rock
Burping	Frontpack or sling
Infant swing	Stroller
Swaddling	Bouncy seats
Allow sucking	White noise
Music	Distraction
	Bath or massage
	Ride in the car

When nothing else works:
Call the Fussy Baby Network warmline
at 1888-431-BABY (2229)
Or visit Fussybabynetwork.org
Colichelp.com

Keeping Baby Safe

- No smoking around baby
- No small objects for baby
- Baby proof your home
- Avoid using sun protection until baby is 6 months of age
- Never stray more than an arm's length from your baby while he/she is bathing.
- Avoid giving baby salty foods
- No honey until baby is a year old
- Set the water heater to 120 degrees F to avoid scalding
- Check smoke detectors and install them as needed
- Get a fire extinguisher and inspect existent ones
- Cover radiators/ space heaters
- Bolt bookshelves and other tall cabinets to walls.
- Close and lock doors, cabinets, and access to stairs
- Post emergency phone numbers
- Adopt a Baby's Eye" view (frequently assess your environment). Try crawling around and discover "unwanted" items
- Never put baby on high surfaces
- Keep a first aid kit handy
- Read about and learn Infant CPR and choking basics
- Introduce pets slowly and never leave baby alone with pet
- Call 911 if baby is not breathing, baby is unconscious, baby has been injured, baby has a serious bleeding, baby is experiencing a seizure, baby is choking on something you cannot help him/ her expel, baby has clear fluid from nose, ear, or mouth, baby has fallen more than 5 feet onto a hard surface, or if baby is experiencing a condition you feel is life or limb threatening.
- Go to the ER to evaluate head injuries, for x-rays and possible broken bones, when a cut may need stitches, when baby has a high fever (100.4 F or higher if younger than two months and 101F if older than two months) or other serious illness, and if any other condition that you may feel need emergent care.
- Keep the poison Control Center 1-800-222-1222

- Follow your instincts!

Caring For New Moms

No advice from veteran dads is more commonly heard or strongly held than “take care of mom; no matter what, give her all the support you can”.

So how can dads help?

- Quickly learn to change diapers, burp, and calm your baby. Show mom that you are a reliable partner.
- Coordinate help for the first few weeks after arriving home.
- Help mom get some sleep by assuming full responsibility of baby or by occupying/ entertaining your other children.
- Support mom in this difficult time, and let her know that you don’t expect her to be a fairy tale mom.
- In the middle of the night, when the baby is crying and both of you are dead tired, find the strength to get up and handle the baby to allow mom to sleep.
- Support mom by calling her when you are away from home, proving an impromptu backrub, or by allowing little time each day to talk about something other than the baby.
- Reassure and encourage mom during difficult times or when feelings of incompetency or guilt strike.



Romancing a New Mom

- Understand that you are starting over (start on a fresh courtship)
 - Communication is Critical
 - Tell her your Dream (Share your dreams)
 - Encourage and Respect her as a Mom
 - Do your job as a Father
 - Get out Together with your Baby on Weekends
 - Give mom Time Alone
 - Engage in Adult Conversation
- Help her Re-Engage her Mind (watch a movie, read a book, take up a hobby)
 - Eat Together
 - Exercise Together
- Bring out the list to remind you of ways to take “mom and dad time”

Be A Super Dad!

The benefits of father's involvement in children's lives are enormous.

Studies have shown that fathers involvement can make a difference in:

- Children's intelligence quotient (IQ)
 - Behavioral problems
 - School performance
- Educational achievements
- Tendency for addiction
 - Incarceration rates
 - Pregnancy rates
 - And much more!!

SO....BE INVOLVED!!

Fathers are vital!

Dads are powerful and real super heroes.

Use your power!



APPENDIX E

MSU IRB APPROVAL AND STUDENT CONSENT



INSTITUTIONAL REVIEW BOARD
For the Protection of Human Subjects
FWA 00000165

902 University Blvd. Room 127
 c/o Microbiology & Immunology
 Montana State University
 Bozeman, MT 59718
 Telephone: 406-994-6763
 FAX: 406-994-4505
 Email: msirb@montana.edu

Chair: Mark Quinn
 406-994-4707
mquinn@montana.edu
Administrator:
 Cheryl Johnson
 406-994-1706
cherylj@montana.edu

MEMORANDUM

TO: Pamela Smith and Sandra Benavides-Vaeillo
FROM: Mark Quinn *Mark Quinn*
 Chair, Institutional Review Board for the Protection of Human Subjects
DATE: April 24, 2018
RE: "Father Specific Tool in the Inpatient Setting" [PS042418-EX]

The above research, described in your submission of April 23, 2018, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal regulations, Part 46, section 101. The specific paragraph which applies to your research is:

- ☐ (b) (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- ☒ (b) (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.
- ☐ (b) (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
- ☐ (b) (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.
- ☐ (b) (5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.
- ☐ (b) (6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.

APPENDIX F

STATISTICAL REPORT

APPROVED
MSU IRB



Father Specific Education During the Postpartum Period (DRAFT)

Lead Statistician:
Laurie Rugemer

Director:
Megan Higgs

Contributions From:
Elizabeth Mery

This material is provided to communicate advice from SCRS statisticians based on our best understanding of your research needs. We encourage you to use this report in discussions with colleagues. Please do not publish any portion of this material without permission ©Laurie Rugemer

When you make use of our work for publications or presentations, please be sure to acknowledge the funding we receive from NIGMS using the following: "Research reported in this publication was supported by Institutional Development Awards (IDeA) from the National Institute of General Medical Sciences of the National Institutes of Health under Awards P20GM103474, 5U54GM104944, U54GM115371, and 5P20GM104417. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health."

Prepared for Pamela Smith

July 19, 2018

1 Study Overview

Pamela Smith is a DNP student at MSU-Billings. Her research project investigates the relationship between father specific education during the immediate postpartum period and the parenting confidence of new fathers. Specifically, her study focused on parenting confidence for new fathers in the maternity ward at St. Vincent's hospital in Billings, MT. During the month of June, 2018, all new fathers at St. Vincent's maternity ward were asked to participate in this study. Of the 122 babies born during that period, 32 fathers participated.

For the study design, maternity nurses gave consenting fathers a demographic survey and pre-test confidence assessment. They were then given educational materials specifically developed for new fathers. After they completed the reading, they were then given a post-test confidence assessment (identical to the pre-test assessment). The confidence assessment given is the Karitane Parenting Confidence Scale. Each likert-type question on the assessment has responses that are given scores of 0, 1, 2 or 3. These scores are added up for all 15 questions on the assessment and a total score between 0-45 is calculated, with a higher score indicating higher parenting confidence.

1.1 Research Questions

1. What are the demographics of those who completed the surveys?
2. Was the information helpful? Did it improve father confidence for as measured by the instrument used?
3. What could be done differently to help them increase their confidence?
4. How could delivery of the information be improved?
 - Education materials
 - Administering of surveys

SCRS focused our work on questions 1 and 2 through summary statistics and visualizations of the sample data.

1.2 Study Limitations

- Because participants were volunteers and not a random sample of patients, these results cannot be generalized beyond the participants.
- Causal statements, i.e. “the educational materials caused changes in confidence levels” should not be made in study conclusions. There may be other factors involved in the changes in confidence that we cannot account for, such as hospital resources and support. We also have no information about what happens to confidence in the absence of the packet, as all participants received the educational materials.
- It is unclear why certain fathers did not participate in the study. This may be due to inconsistencies in the implementation of the education packet and it may be worth discussing this more with the nurses involved in the study. What changes to the education of the nurses and other participating staff may help with this in the future? Also, was the packet only offered to heterosexual couples with a father present? Were there also homosexual couples or single mothers, etc who were not included in the study?

2 Demographic Summary Statistics

All 32 participants are married.

2.1 Father’s Age (years)

Min	Q1	Median	Q3	Max	Average	SD	No. Participants	Missing
10	26.75	30	33.25	40	29.31	6.14	32	0

2.2 Father’s Education (years)

Min	Q1	Median	Q3	Max	Average	SD	No. Participants	Missing
10	12	13	16	20	13.97	2.47	32	0

2.3 Father’s Number of Siblings

Min	Q1	Median	Q3	Max	Average	SD	No. Participants	Missing
0	1	2	3.25	9	2.69	2.02	32	0

2.4 Father's Income (thousands)

Income	No. Participants
<25	5
25-50	10
50-75	8
>75	8
NA	1

2.5 Type of Delivery

Delivery Type	No. Participants
c-section	9
vaginal	22
NA	1

3 Feedback Survey Summaries

3.1 Time Spent Reviewing Material

Min	Q1	Median	Q3	Max	Average	SD	No. Participants	Missing
15	30	60	60	240	58.3	44.14486	30	2

3.2 Usefulness of Information

Useful Info?	Response
maybe	5
no	1
yes	24
NA	2

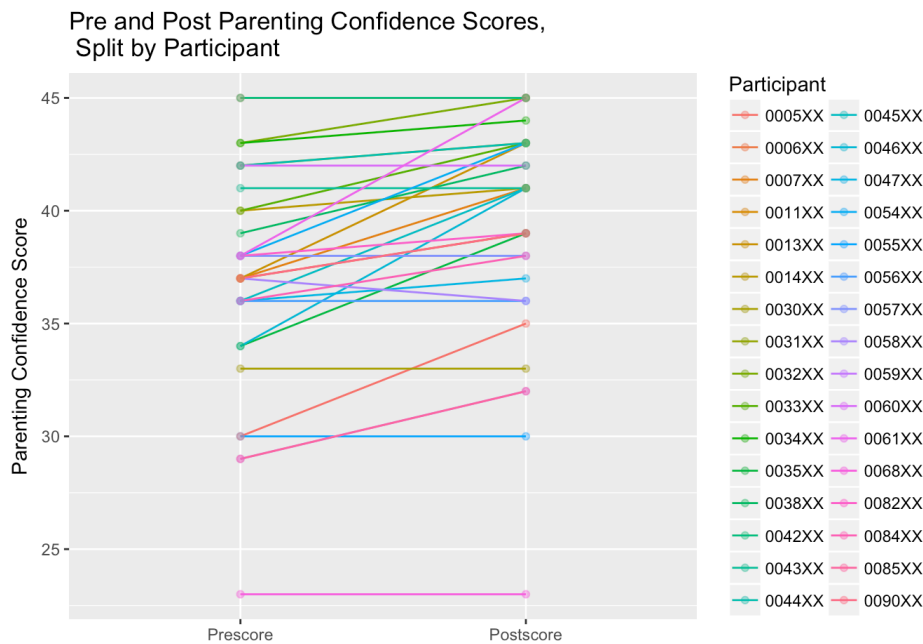
3.3 Future Use of Information with Baby

Use with baby?	Response
maybe	5
yes	25
NA	2

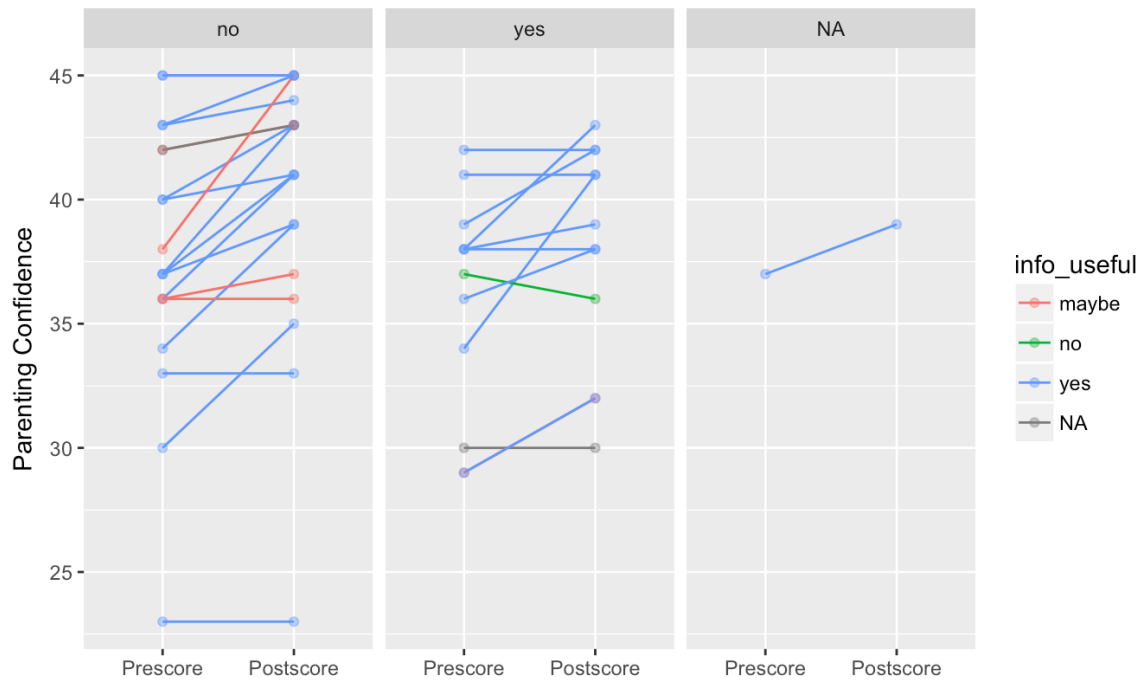
3.4 Enough Time to Read Information

Enough Time?	Response
maybe	2
yes	28
NA	2

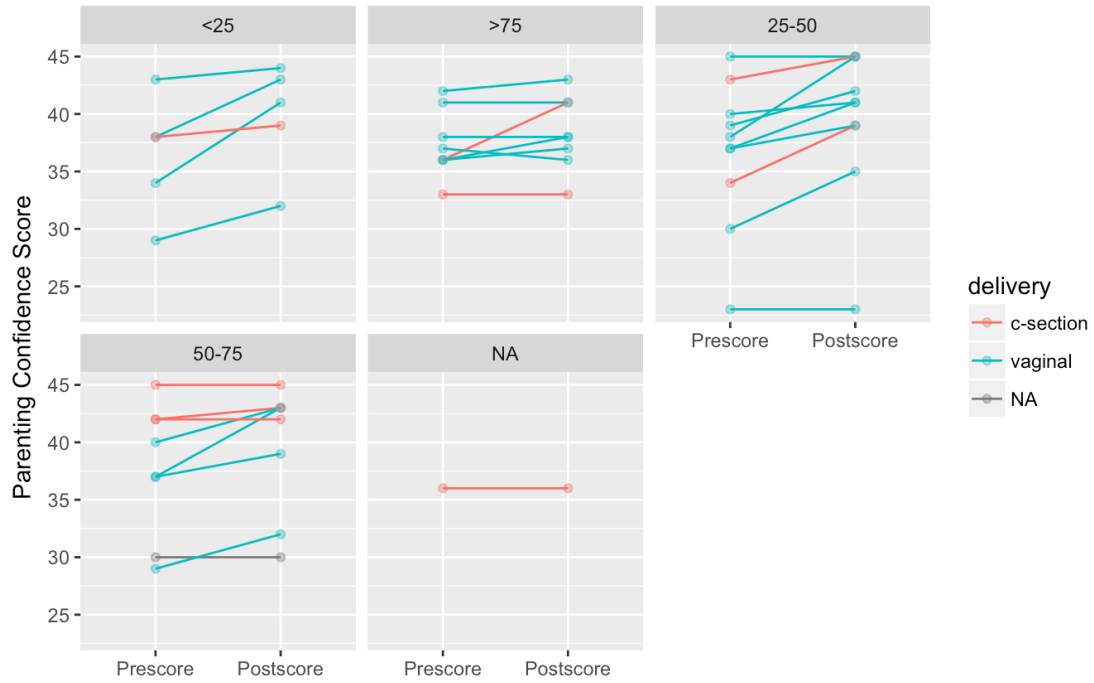
4 Data Visualization for Pre and Post Confidence Scores, Split by Demographic Information



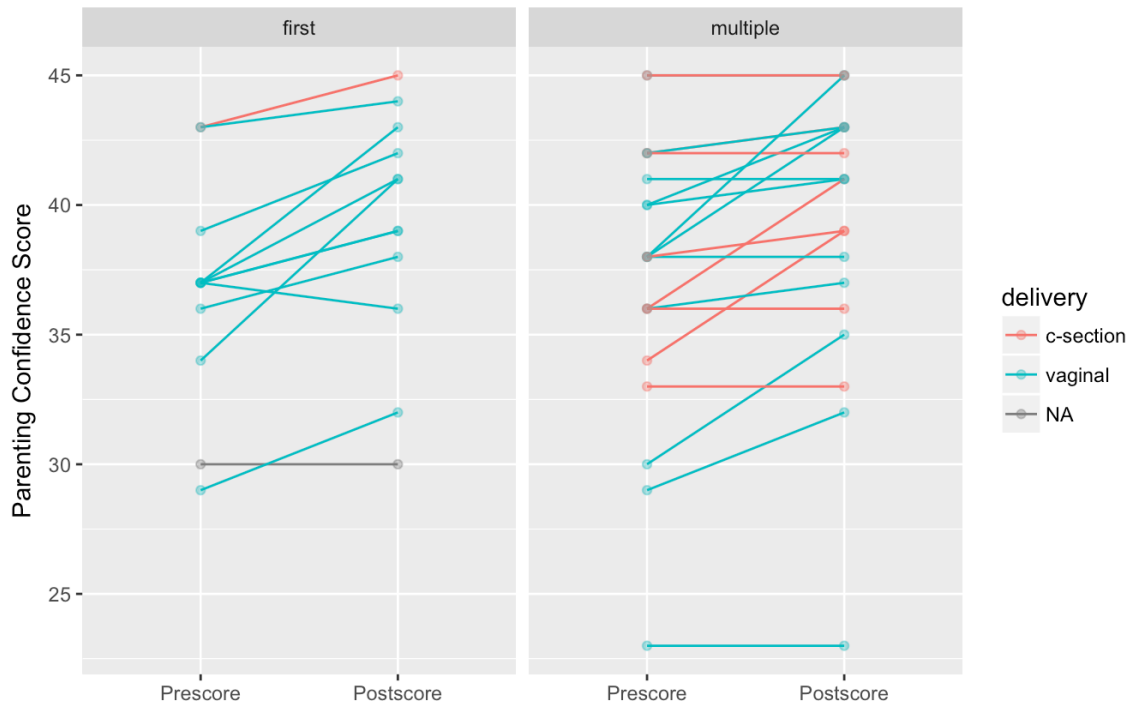
Pre and Post Parenting Confidence Scores,
Split by whether or not educational info was useful
and paneled by previous parenting class



Pre and Post Parenting Confidence Scores,
Split by Type of Delivery and paneled by income



Pre and Post Parenting Confidence Scores,
Split by Type of Delivery and paneled by whether it's a first child or not



5 Differences

Because the study consisted of taking pre and post confidence scores for each participant, taking the difference between these scores (post-pre) and exploring those differences will be a valuable way to look for changes in confidence and a first step in developing a reasonable analysis strategy.

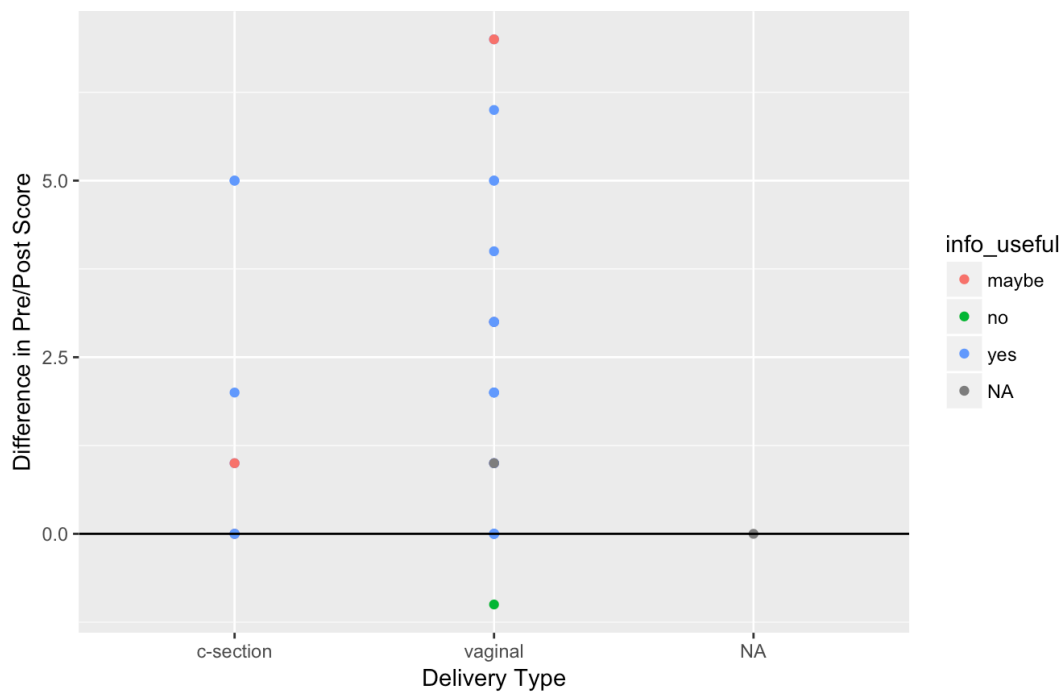
5.1 Summary Statistics of Differences in Scores

Min	Q1	Median	Q3	Max	Average	SD	No. Participants	Missing
-1	0	1.5	3.25	7	2.16	2.27	32	0

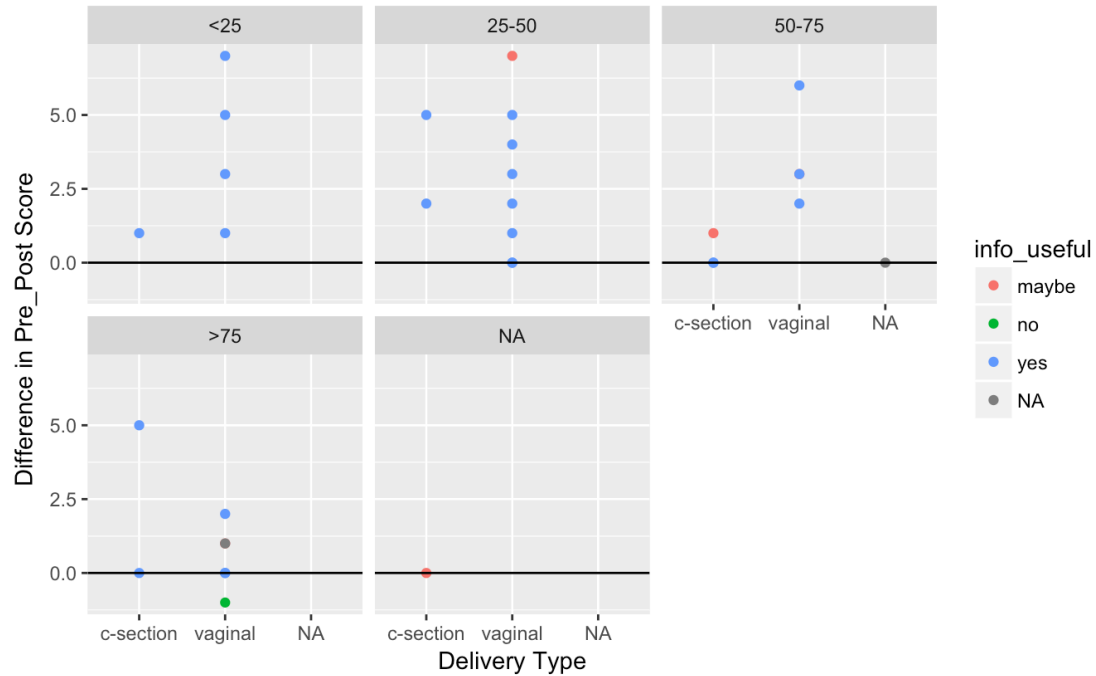
These summary statistics are aggregated for all participants and do not take any demographic information into account.

5.2 Plots of Differences in Scores

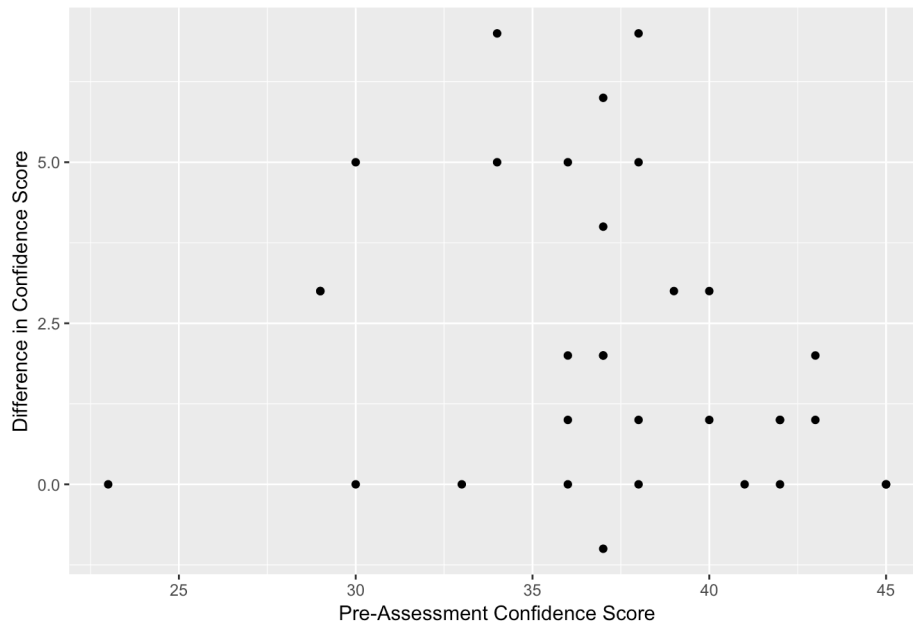
Difference in Participant Pre/Post Score, split by Type of Delivery and Usefulness (black line indicates no difference)



Difference in Participant Pre_Post Score,
split by Type of Delivery, Usefulness of Education, and Income
(black line indicates no difference)



Scatterplot of Score Differences against Pre-Assessment Score



From the plot above we can investigate the question: what is the relationship between the pre-score and difference in scores for the participants? This is interesting to look at to see, for example, if participants with higher starting scores generally had less increases from pre to post assessment. When thinking about the differences, it is important to look at the individual points like this (for example, there is one participant who started with a score of 45 and therefore cannot show a difference from pre to post assessment.)

6 References

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