

Use of Antenatal Perineal Massage on Primigravida to Reduce Perineal Trauma and Episiotomy during Vaginal Delivery at a Maternity Hospital in Saudi Arabia: A Mixed Method Inquiry

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ABSTRACT

The goal of this study is to determine the effectiveness of perineal massage in reducing cases of perineal and vaginal trauma. Perineal trauma refers to any injury to the perineum. To realize the goal, a sample of 100 primigravid women and 10 healthcare professionals will be used. The women will be divided into two groups, including the massage group and the control group. Women in the massage group will be subjected to perineal massage from the 34th week of their pregnancy. Women in the control group will not be subjected to these interventions. The relationship between perineal massage and the number of intact perineum following vaginal delivery will be determined. This will be used in determining whether perineal massage is an effective intervention in preventing perineal trauma. The healthcare professionals will be interviewed to provide more details about the ways in which perineal massage can be enhanced to reduce instances of perineal trauma during childbirth.

Keywords: Antenatal Perineal Massage, Primigravida, Perineal trauma, Vaginal Delivery, Maternity Hospital, Saudi Arabia.

INTRODUCTION

It is the goal of every woman to have an incident-free delivery. In preparation for this, one of the antenatal interventions commonly used is a perineal massage. It is a technique that women use to prepare the birth canal in readiness for a trauma-free vaginal delivery (Demirel and Golbasi 2015, p.184). Unfortunately, the effectiveness of this approach to reduce perineal trauma is riddled with controversies. This forms the basis for this study, which seeks to unravel the controversies surrounding the effectiveness of perineal massage in preventing perineal trauma.

To this effect, numerous researchers have been attracted to this topic in a bid to provide clear information about perineal trauma and the available interventions. Ugwu, Ifeikigwe, Obi, Eleje, and Ozumba (2018, p.184) argue that perineal trauma during vaginal delivery has severe consequences on women, including but not limited to persistent pain, painful sexual intercourse, and anal and urinary incontinence. These experiences negatively affect the quality of life of the affected woman. Unfortunately, it is an experience that is experienced by over 40 percent of women who undergoes vaginal delivery. Leon-Larios et al. (2017, p.78) observed that these experiences could be considerably reduced if pregnant women practised perineal

massage at least two times a week from the 34th week of their pregnancy. This is a perception that has been refuted by other researchers such as Zare, Pasha, and Faramuzi (2014, p.13) who argues that solely relying on a perineal massage cannot effectively address the problem of perineal trauma during childbirth. They add that there is a need to consider other interventions such as instrument assisted stretching to supplement perineal massage.

The primary objective of this study is to use of antenatal perineal massage on primigravida to lessen perineal trauma and episiotomy during vaginal delivery by 16% in the general birth population at maternity hospitals in Saudi Arabia. Over the years, several studies have directed their focus on the significance of antenatal perineal massage on primigravida but only a few of them have concentrated on how the method can be used to decrease the perineal trauma. For this rationale, limited information is available regarding how antenatal perineal massage can be used to reduce perineal trauma and episiotomy during vaginal delivery in Saudi Arabia paving the way for this research. In addition, the above contradictions are an indication of a gap in research pertaining to the effectiveness of perineal massage in preventing perineal trauma and lacerations. This research will help address these contradictions by providing explicit information about the effectiveness of perineal massage when administered from the 34th week. Additionally, any modifications that need to be made will be comprehensively described. This information will be beneficial because it will help reduce cases of perineal trauma and thus improving the quality of life of women. These women would have otherwise been devastated by the short-term and severe long-term consequences of perineal trauma.

STATEMENT OF THE PROBLEM

It is estimated that 90 percent of women experience injuries or tearing during childbirth. While some of these injuries are minor and easily manageable, others are severe and might result in long-term consequences such as urine and faecal incontinence, and painful intercourse (Demirel and Golbasi 2015, p.184). There have been efforts to have proactive rather than reactive interventions. Unfortunately, the degree of effectiveness of these interventions is not clear. This is because different researchers have different opinions about their effectiveness. Perineal massage, as one of the most common proactive interventions, has been a centre of controversy. It is not yet clearly known if it can help prevent perineal trauma or not or even the measures that can improve its effectiveness.

Purpose/ context of the study

This study seeks to determine the effectiveness of perineal massage in preventing perineal injuries when administered from the 34th week of pregnancy. This will be done by comparing the intervention group and the control group. The intervention group will be subjected to perineal massage from the 34th week into their pregnancy. The control group will not be subjected to the test. This will be done to establish if actually, perineal massage decreases the likelihood of perineal trauma or injuries experienced during the 2nd stage of labour and during childbirth as well.

Core research Question

A core research question serves as the main reference point for a researcher. The study will be guided by the following main research question:

Does antenatal perineal massage on primigravida reduce the degree of perineal trauma and episiotomy experienced during vaginal delivery?

Objectives

According to Creswell (2014, p.35), research objectives ensure that a researcher remains focused on realizing the aim of a study. The study will be guided by the following objectives:

- To determine the prevalence of perineal trauma during the 2nd stage of labour and during childbirth.
- To determine the main factors that contribute to perineal trauma and lacerations during vaginal delivery.
- To determine the effectiveness of perineal massage administered from the 34th week of pregnancy in reducing cases of perineal trauma and lacerations during childbirth.
- To recommend improvement measures to perineal massage towards reducing perineal trauma further.

Significance of the study

According to Brownson, Colditz, & Proctor (2018, p.44), a study is significant if it helps address a given research problem. In line with this, the findings of this study will serve to boost the antenatal interventions geared towards reducing the number of cases of perineal and vaginal injuries. Despite the numerous interventions currently used by midwives such as warm compresses, instrument-assisted stretching, perineal massage, and exercising the pelvic floor muscles, the cases of perineal trauma are significantly high. This is disturbing, especially in cases where the women have to withstand the long-term consequences of perineal trauma. It is because of some of these experiences that an increasing number of women are turning to caesarean sections (CS) as their preferred mode of delivery. CS has its own share of negative consequences as well (Geranmayeh et al. 2012, p.79). The proposed study will, therefore, help increase the number of women who have intact perineum following a vaginal delivery. This is an aspect likely to have a positive perception of childbirth.

Unit of Analysis

The analysis of this study is pegged on the relationship between a perineal massage from the 34th week of pregnancy and the occurrence of perineal trauma. In other words, the study will seek to determine if the perineal massage reduces the chances of perineal trauma, increases, or has no effect. It is based on this that it will be possible to determine whether it is an effective intervention or not.

Structure of the Proposal

This proposal is structured into a number of chapters. The sections are described below:

Chapter 1: Introduction

This chapter contains the basic information about the proposal on which other chapters are founded. The chapter provides an overview of perineal trauma and massage, explains the controversies surrounding the effectiveness of perineal massage, and how the study will help address these controversies. The chapter has also provided the problem statement, the core research question, and the objectives of the study.

Chapter 2: a Literature review

This chapter provides a detailed review of the studies conducted by other researchers. This is done with the goal of identifying gaps in the works of others. This forms the basis for advanced research. The chapter begins by providing a definition of perineal trauma. Subsequently, it

provides a detailed exploration of the works of others, a comparative analysis of the different studies, and a chapter summary.

Conceptual Framework

This section details the assumptions and relationships among different concepts in the study. Specifically, the section expounds on the “interactive forces” conceptual framework. It provides a detailed explanation of how the study relates to the framework. This is by relating perineal massage to the outcomes of a vaginal delivery.

Chapter 3: Methodology

This chapter explains in detail the methods, techniques, and procedures to be used during the study. Since the methodology considerably influences the reliability of the study findings, the choices for the methods, techniques, and procedures have been justified.

Data Analysis

This section explains the steps that will be followed in getting meaning from the collected data. It describes both the quantitative and qualitative data analysis methods.

Evaluation

This is a section that explains how the success of the study will be measured. In other words, it explains the metrics that the researcher will use in establishing whether the goals of the study have been met or not.

Discussion

This section provides a discussion of the main purpose of the study. It does this with reference to the literature review section since there is no primary data which has been collected to this point. The section comprehensively details how the findings of the proposed study will improve what is already known regarding the study area: perineal trauma and massage. The main limitation of the study likely to influence the validity of findings has also been provided.

Implications for Research

In this section, the new information that the study will add is explored. A brief description of the problem and what is already known has been provided. This is what forms the basis of the ways in which the new study will improve this new information.

Conclusion

In Saudi Arabia today, little information is available regarding the effectiveness of antenatal perineal massage on Primigravida in the reduction of perineal trauma and episiotomy during vaginal delivery. For this reason, the current study focuses on determining the effectiveness of perineal massage in reducing cases of perineal and vaginal trauma. This section provides an overview of the main points in the proposal. It highlights the process that will be used and how this will help in addressing the research problem.

LITERATURE REVIEW

In the literature review, only articles, journals, books, and other academic sources with key words such as Antenatal Perineal Massage, Episiotomy, Episiotomy, Perineal trauma and Primigravide women were included. All the academic sources lacking these key terms will be

excluded from the study regardless of whether they offer clinical information. On the other hand, the study will focus on databases such as BMJ Best practice, clinical practice research datalink, PubMed Central and Pubmeth. In addition, the study will also focus on medical search engines such as HubMed. Articles that were published within the years 2014-2019 were included.

Perineal traumas are not uncommon, especially to first-time mothers. The consequences are dire and include, but not limited to infections, bleeding, painful intercourse, suturing, persistent perineal pain, weakened pelvic floor muscles and urine incontinence (Mohamed, Ella, Hassan and Khedr 2017, p.90). It is because of the severity of these consequences that various interventions have been explored. Perineal massage is one of such interventions. In this chapter, a detailed review of the works of other researchers with regard to the effectiveness of perineal massage in mitigating vaginal trauma has been provided. Specifically, the chapter is divided into four sections including the definition of perineal trauma, the context of the study, the effectiveness of perineal massage in preventing perineal trauma, a comparative analysis of various studies and a chapter summary.

Definition of Perineal Trauma

According to Zare, Pasha, and Faramuzi (2014, p.11), vaginal trauma refers to any form of injury to the vagina. It can occur from spontaneous obstetric lacerations, episiotomy, or both. Episiotomy refers to the tearing of the perineum muscles. Considering the definition and the reasons for the occurrence of perineal trauma, it is evident that it can have devastating consequences, especially to first-time mothers. In the following section, perineal trauma and the available prevention options have been explored in greater detail.

Context of the study

This research focuses on the effects of perineal massage on perineal trauma in the Kingdom of Saudi Arabia (KSA). The study setting is An Urban cities in Saudi Arabia with a population of over 1 million. The study will involve pregnant women admitted at the maternity hospitals in the city. This is motivated by the fact that Perineal trauma has continued to pose great pain and agony to the women in Saudi Arabia, and specifically in Riyadh. The kingdom is yet to achieve zero or negligible cases of trauma or lacerations based on the statistics obtained from the Security Forces Hospital in Riyadh (Thaydi et al. 2018, p.56). This is one of the largest delivery points in the KSA with approximately 6000 deliveries per year. The prevalence rate of perineal trauma at the facility is 1.4 percent based on the data collected between 2011 and 2016. These statistics were drawn from 28325 patients who had vaginal delivery over this period. Out of this population, 406 patients representing 1.4 percent of all patients studied. The patients had different degrees of trauma, ranging from first degree to fourth-degree perineal tears (Thaydi et al. 2018, p.23).

The above statistics can be generalized to entire Saudi Arabia. 1.4 % is a significant number, and the current measures need to be improved further to achieve a lower percentage. This is especially the case considering the agony women have to experience following perineal trauma and tears during childbirth (Jiang, Qian, Carroli, and Garner 2017, p.62).

Current interventions and their drawbacks

Healthcare practitioners in the KSA have applied several interventions for perineal trauma. An episiotomy is one of the common interventions used in the country. Episiotomy involves enlarging the vagina to reduce stretching of the vaginal soft tissues during childbirth. However, this approach has not been effective because not all women experience perineal trauma or tears (Jiang, Qian, Carroli, and Garner 2017, p.49). Subjecting such women to episiotomy is unnecessary because there are complications associated with the procedure. Some of the complications include pain, wound, pain, and bleeding. This is a drawback which has resulted in the intervention being less used in the KSA (Jiang, Qian, Carroli and Garner 2017, p.52).

Pelvic floor exercise is another common practice in the KSA. This is a practice intended to strengthen the pelvic floor muscles. This reduces the likelihood of perineal tears or trauma during childbirth. However, this is an approach that is less reliable because the intervention is purely dependent on the pregnant woman's efforts. This means that in case the woman decides not to engage in the exercises, then perineal trauma and tears are highly likely to be experienced (Jiang, Qian, Carroli and Garner 2017, p.55).

Based on the drawbacks stated above, it is evident that the KSA health sector cannot achieve zero or negligible cases of perineal trauma through continued use of the above two methods. It is therefore important for focus on other approaches and specifically perineal trauma as a possible effective intervention.

Risk factors and consequences of perineal trauma

There are several factors that increase the risk of developing perineal trauma. Some of these factors are presented in a study conducted by Turki et al. (2016, p.7) titled, "Severe perineal lacerations during childbirth in Saudi women-a retrospective report from King Abdulaziz University Hospital." The goal of the study was to identify all the risk factors for perineal trauma. To realize this aim, a register of births at the King Abdulaziz University Hospital was reviewed. The period reviewed was between 2000 and 2011. The total number of reviewed cases was 38, 837. The statistical package for social sciences (SPSS) was used in determining the correlation between various factors and the risk of developing perineal trauma (Thaydi, Ghamdi, Chamsi and Mardawi, 2018, p.27). The findings demonstrated that there was an increase in the rate of severe perineal trauma in the selected duration. This increase was represented by 1.4% in the year 2000 to 1.9% by the year 2011. This is about 36% of perineal trauma out of the total overall births.

The findings revealed that there are numerous factors that increase the risk of perineal trauma. These factors include prolonged labour, young maternal age, episiotomy, macrosomia, and primiparity. These factors considerably increase the risk of 3rd and 4th-degree lacerations. Specifically, young maternal age is a major risk factor because the perineum is yet to develop fully. This greatly limits the flexibility of the perineum during childbirth hence increasing the likelihood of a trauma. A similar case is experienced when there is prolonged labour. This is because the perineum is exposed to prolonged stretching, and this considerably increases the likelihood of lacerations. From the result, it is apparent that perineal tear occurs in approximately 3% of women who deliver their first born and 0.8% in women who had previously had a child. Therefore, the true incidence of fast births may be as low as 11% of the total births. The risk is significantly reduced in cases where the delivery is fast. According to Zare, Pasha, and Faramuzi

(2014, p.13), fast birth may decrease the seriousness of perineal trauma (3&4-degree tear) and this may also reduce the rate of episiotomies during childbirth.

The occurrence of perineal trauma as a result of the above factors has been linked to both short-term and long-term complications. Examples of short-term problems include pain, need for suturing, and blood loss. Blood loss is particularly of great concern because it can result in death. On the other hand, some examples of long-term complications include pelvic organ prolapse, anal and urinary incontinence, and sexual dysfunction. In addition to these, the affected mother may feel disappointed and guilty because of the disconnection between expectations and reality. It is a condition that can negatively affect the social status of the involved mother (Pergialiotis et al. 2014, p.8).

To avoid the experiences described above, nurses and midwives play a very critical role in preventing negative birth experiences. Their focus is to effectively manage the perineum in order to reduce the likelihood of experiencing perineal trauma during childbirth. Some of the crucial roles played by nurses include providing antenatal education to pregnant women/mothers about the need for pelvic floor exercises and the antenatal perineal massage. Besides these exercises, the nurses are using a number of interventions during the 2nd stage of labour to lower the likelihood of perineal trauma. These include warm compresses, guided pushing method, vaginal lubricants, perineal massage at the time of labour, and manual perineal protection. Guided pushing is a method that is geared towards ensuring the birth process is not too fast to the extent of causing perineal or vaginal trauma (Pergialiotis et al. 2014, p.9). On the other hand, the use of lubricants helps to avoid tearing or injuries that may result from a rough delivery. Finally, the warm presses help in increasing the flexibility of pelvic muscles, hence considerably lowering the likelihood of injuries during childbirth. However, the effectiveness of these methods has remained contradictory (Pergialiotis et al. 2014, p.10). While some of the researchers argue that they are effective, others argue that they are not effective and thus propose other techniques that should be explored. In the next section, perineal massage has been explored in great detail because this is the focus of this study.

Effectiveness of Perineal Massage

The aim of perineal massage is to loosen the perineal muscles. These are the muscles found between the vagina and the perineum. Perineal massage makes the perineum accustomed to stretching and thus helping avoid trauma during delivery. It is a practice that has been observed in numerous cultures and recommended from the 34th week of pregnancy as proposed in the "The effect of perineal massage during the second stage of birth on nulliparous women perineal" by Shahoei et al., (2017, p.5588).

Perineal massage has been linked to numerous advantages, especially to first-time mothers. Some of the notable advantages include reduced pain and perineal trauma during vaginal delivery. The implication of this is that the exercise considerably helps women to quickly get back to their normal lives following a vaginal delivery. However, these benefits have not been universally accepted. There are numerous researchers who have delved on the effectiveness of perineal massage in preventing vaginal trauma in a bid to identify its effectiveness. Some of these researchers support the use of perineal massage to avoid perineal trauma while others have objected to term it non-beneficial (Pergialiotis et al., 2014, p.11). In the following section,

various studies highlighting the effectiveness and the inefficiencies of perineal massage have been provided.

Roa (2015, p.5) conducted a study titled "Interventions during the second stage of labour: an exploration of what may affect their use in Jeddah, Saudi Arabia." The goal of this study was to analyze the effectiveness of various interventions used by healthcare professionals in Saudi Arabia. The study focused on Jeddah city. To realize the study objectives, observation, interviews, and questionnaires were used for data collection. A total of 19 pregnant women drawn from King's Hospital and the City hospital were involved. The women were divided into two groups, the massage group, and the control group. The effects of perineal massage during the 2nd stage of labour were observed. Doctors drawn from the two hospitals were also engaged through interviews. The physicians were interviewed on the effects of perineal massage during vaginal delivery.

The study revealed a number of aspects of perineal massage in the context of the KSA. All the women in the massage group reported minimal pain during vaginal delivery. The women in this group also reported minimal lacerations as compared to the control group. These observations were confirmed by healthcare professionals. The doctors confirmed that perineal massage during the 2nd stage of labour considerably reduced incidents of perineal trauma. This is because the exercises increase the flexibility of the perineum allowing for sufficient stretching during childbirth (Pergialiotis et al., 2014, p.11).

Another study focusing on Saudi Arabia was conducted by Jahlan (2016) titled "Perspectives on Birthing services in Saudi Arabia." The goal of the study was to examine current birthing practices in KSA and the steps that need to be taken to enhance the quality of these services. To achieve this goal, data was collected from 300 respondents comprising of women who were about to give birth. An additional 59 questionnaires were filled by obstetricians, and 79 questionnaires were filled by nurses. These respondents were drawn from maternity hospitals in three cities, including Dammam, Jeddah, and Riyadh. A major finding in this study is that perineal massage was a common practice used by doctors, midwives, and nurses on women during vaginal delivery. The method is particularly used in between the pushing. The physicians noted that massaging the perineum makes them relaxed, and this increases their flexibility. The implication of this is that fewer lacerations and trauma are experienced in women that undergo perineal massage during childbirth. According to Mohamed, Ella, Hassan, and Khedr(2017, p.91), Perineal massage has been found to reduce the risk of tear by approximately 10% in women particularly those that require stitches. In this context, this study estimates that Perineal massage will reduce stage 3 & 4 Perineal trauma by about 16%.

Besides the above studies which focused specifically on Saudi Arabia, there are other researchers who focused on localities. The findings in these studies can also be generalized to the Saudi Arabia Context. Shahoei et al. (2017, p.5588) conducted such a study whose aim was to determine whether conducting perineal massage during childbirth reduced perineal trauma and other secondary problems. The study focused on answering three main questions, including, "Does perineal massage lower the severity and frequency of perineal trauma?", "Does perineal massage reduce post-delivery recovery time?" "Does perineal massage lower the frequency of various delivery-related complications such as dyspareunia, flatus, faecal incontinence, and perineal pain?" To respond to these questions, the researchers conducted

their study at the Aydin State Hospital in Turkey. A sample size of 396 randomly selected pregnant women was involved. The sample was divided into two major groups, including the experimental and the control groups. Each of the groups has 198 participants. The women had been pregnant between 37 and 42 weeks and were of between 18 to 35 years of age. An additional requirement was that all the women were expected to undergo vaginal delivery. After the cervix of the women in the experimental group dilated to at least 8cm, perineal massage was initiated. This was not done on the control group. The message was continued in between the pushes. The major finding of this study was that perineal massage does not have any advantages or disadvantages with regard to perineal trauma. The difference between the number of women who experienced trauma in the control and the experimental group was statistically insignificant. Besides perineal trauma, the study found that perineal massage had no effects on perineal pain or the time taken to heal perineal injuries after childbirth. Rather, the researchers found that the major risk factor of perineal trauma includes Valsalva pushing and birth weight. Based on the findings of this study, these are the two areas that pregnant women are supposed to observe to have intact perineum after vaginal delivery. Therefore, pregnant women cannot rely on perineal massage alone to avoid perineal trauma.

Another study whose findings revealed that perineal massage is not effective in preventing perineal trauma was conducted by Zare, Pasha, and Faramuzi (2014, p.10). The objective was to establish the effects of perineal massage on perineal laceration and trauma. The study involved 145 pregnant women admitted at the Eman Ali teaching centre. All the women were due for normal delivery. The women were divided into two groups, including the experimental group and the control group. The experimental and control groups comprised of 45 and 100 women, respectively. In the experimental group, all women were allowed to progress to full cervix dilatation. After they had achieved this state, the midwives inserted their fingers into the vagina and gently applied a sweeping movement. This involved stretching the perineum using a sterile lubricant for between five and ten minutes between mother's pushing. On the other hand, the midwives only applied Ritgen Maneuver in the control group. At the end of this experiment, a comparative analysis of the rate of uninjured perineum, laceration, and episiotomy were recorded for the two groups. Various statistical tests, including the Chi-Square and t-test, were conducted. A p-value below 0.05 was deemed insignificant. The cases of intact perineum for the experimental and control groups were 22.2% and 20.2% respectively. The cases of episiotomy for the experimental group and the control group were 44.4% and 49.3% respectively. Finally, the cases of lacerations for the experimental group and the control group were 33.3% and 28.3% respectively. Statistically, the differences between the experimental and the control groups were insignificant. The implication of this is that the use of a sterile lubricant in perineal massage has no benefit in reducing the cases of perineal trauma.

Onyebuchi, Sunday, Nnamdi, Uchenna, and Chukwuma (2018, p.1254) also conducted a study that sought to evaluate the effectiveness of perineal massage in addressing the problem of perineal trauma. The research was conducted at the University of Nigeria Teaching Hospital in Nigeria. A total of 108 primigravidae from the hospital was involved. The participants were divided into two groups, including the intervention group and the control group. The intervention group was subjected to the antenatal perineal massage while the control group was not subjected to it. The findings revealed that women in the intervention group were more likely to have an intact perineal after childbirth compared to the control group. The former group was 50.9% likely to have intact perineum compared to the latter groups 29.1%. On the

same note, the findings revealed that women in the intervention group were less prone to flatus incontinence than women in the control group. The percentages for the former and the latter groups were 8.3% and 26.0 % respectively. The study concluded that it is imperative for healthcare professionals to educate pregnant women about the need for antenatal perineal massage. This is especially important for first-time mothers who may be less aware of perineal trauma. Educating these women enables them to do the perineal massage on their own, and this considerably reduces the likelihood of developing perineal trauma. This is one of the ways of reducing cases of perineal trauma.

Aquino et al. (2018) conducted a similar study that sought to determine whether the application of perineal massage lowered the likelihood of developing perineal trauma. The researchers applied desk research whereby the studies were sourced from reputable databases such as Cochrane Library, ScienceDirect, EMBASE, Scopus, Prospero, and Medline. The search yielded nine trials. A total of 3374 women were analyzed in the trials. All the women were in at least 37th week of their pregnancy. The women were divided into two groups. One group received the message while the second group did not. The study found that the women who received the perineal massage were less likely to develop severe perineal trauma. Additionally, the incident of episiotomy was relatively lower in the massage group. The study concluded that massage from the 34th week of pregnancy significantly reduced the risk of the 3rd and 4th-degree lacerations. However, a water-soluble lubricant should be used when conducting the massages during the pushing time. Deviation from this would result in undesirable outcomes.

Finally, Freitas, Cabral, Pinto, Resende, and Baldon (2018, p.75), studied the effects of perineal massage versus instrument-assisted stretching. The overall goal was to determine which of the two methods is more effective in strengthening pelvic floor muscle, thus preventing tears during delivery. Randomly selected primiparous women were used in the study and divided into two groups. The first group, which was comprised of 13 women, was subjected to instrument assisted stretching. The second group comprising of 14 women, was subjected to perineal massage. The first and the second groups were subjected to their respective interventions for 15 and 10 minutes, respectively. This was repeated for eight sessions. Covariate analysis was used to compare the outcomes for the two groups. The findings revealed that there was an increase in the flexibility of the pelvic floor in both cases. There was no significant difference between the two groups. The study concluded that both perineal massage and instrument-assisted stretching are effective in preventing tearing of pelvic floors during childbirth. The implication of this conclusion is that perineal massage should be used alongside other approaches to increase the chances of having intact perineum following a vaginal delivery. Therefore, the study presents another solution that would help women and specifically first-time mothers, overcome perineal trauma and all other related secondary effects.

Comparative analysis of studies

The studies provided in the previous sector have several similarities and differences, as well. An outstanding feature in all of them is that perineal trauma is not uncommon in vaginal deliveries. Fortunately, perineal massage is one of the viable options to address the problem. However, one study has indicated that the successful application of perineal massage is dependent on the manner in which it is done. The study that stands out in this regard was conducted by Zare, Pasha, and Faramuzi (2014). These are the only studies which have

explored the topic in detail by considering cases where the message may fail to prevent perineal trauma. All the other studies have studied the topic in general, thus unanimously agreeing that perineal massage can prevent perineal trauma. Considering the different perspectives taken by the above researcher, there is one thing that is very evident: Perineal massage does not guarantee intact perineum after vaginal delivery. Rather, it only increases the chances of achieving one. The chances are also dependent on the manner in which it is done, and the time it is done. However, it is evident that most of the studies support perineal massage as an approach to lowering the likelihood of experiencing perineal trauma.

Besides using perineal massage, some of the studies suggest that there is a need to supplement the technique with other methods. These studies were done by Freitas, Cabral, Pinto, Resende, and Baldon (2018), Roa (2015), Jahlani (2016) and Shahoei et al. (2017). The studies acknowledge that perineal massage is effective in preventing perineal injury. However, they suggest that by using the method in combination with other methods, the chances of getting intact perineum after vaginal delivery are considerably increased. Mohamed, Ella, Hassan, and Khedr (2017) indicated that perineal massage had about 10% decrease in the risk of tear particularly those that require stitches. Specifically, their suggestion is that warm presses, instrument-assisted stretching, and pelvic wall exercises should be used as well. Considering these suggestions, it is evident that preventing tears and trauma during childbirth is a complicated topic. It entails considering other factors apart from the perineal techniques.

SUMMARY

Perineal trauma is not uncommon, especially to first-time mothers. This is a physically and psychologically traumatizing experience because the mothers are unprepared for such outcomes. To address this situation, midwives and nurses use various approaches, such as warm compresses, instrument-assisted stretching, and perineal massage, among others. Perineal massage, which is the focus of this paper, entails loosening the perineal muscles to allow for easy stretching during childbirth (Mohamed, Ella, Hassan, and Khedr, 2017). The effectiveness of this approach has been a centre of controversy from various researchers. While some of the researchers agree that perineal massage helps in reducing cases of episiotomy, lacerations, and trauma. The researchers supporting the application of perineal massage argue that it should be done after the 34th week of pregnancy. It helps enhance the flexibility of muscles as well as strengthening the pelvic floor. On the other hand, the researchers opposing the perineal massage argue that there are some better methods of avoiding perineal trauma such as well-guided pushing during childbirth. The third category of researchers argues that the message is not effective on its own. Rather, it should be supplemented by other methods such as exercising instrument assisted stretching and well-guided pushing. Despite the differences in the opinions of various researchers, it is evident the perineal massages are important in preventing perineal trauma. However, their effectiveness can be enhanced by using a combination of other methods.

Conceptual Framework

According to McCusker and Gunaydin (2015, p.540), it is invaluable to understand the conceptual framework on which a study is founded. This is because a conceptual framework helps establish the primary assumptions and relationships among different concepts in a study. This can, in turn, help identify any likely biases in a study.

This study is based on the “interactive forces” conceptual framework. This framework primarily describes how different factors that influence the outcome are related to one another (Bontrager 2018, p.33). It is a framework that describes the nature of the interaction between maternal choices, midwifery interventions, and the existing factors. The existing factors, including fetal and maternal factors, play a very crucial role in influencing outcomes. The implication of this is that the expectant mothers have a very crucial role to play in protecting the integrity of their perineum following vaginal childbirth. This is through various antenatal interventions and the maternal self-control during childbirth (Bontrager 2018, p.34). The description of this framework relates to this study because expectant women can improve their vaginal delivery experience through perineal massage from the 34th week of their pregnancy.

One of the primary assumptions in this conceptual framework is that nurses and midwives influence the degree of perineal trauma through the application of various management strategies Zare, Pasha, and Faramuzi (2014, p.12). They can do this either by omission or by direct intervention. Examples of omission strategies include spontaneous pushing and the hands-off approach. On the other hand, examples of direct intervention include the fetal head flexion and the perineal massage approach. The second assumption is that there are pre-existing factors in every woman which cannot be changed at delivery time and which influences the likelihood of perineal trauma. These include the fetal size, skin elasticity, ethnicity, and maternal age. These factors cannot be controlled by either the midwife or the woman. Therefore, these factors can influence the results and experiences of a vaginal delivery on their own (Bontrager 2018, p.37). However, it is assumed that women and the midwives can minimize the effects of these non-changeable factors through the choices they make both before and during the actual delivery process ((Thaydi et al 2018, p.49).

METHODOLOGY

This chapter details the methods, techniques, and procedures that will be used in the study. According to Brownson, Colditz, & Proctor (2018, p.46), the research methodology used in a given study significantly influences the reliability of findings. This means the choice of methods and techniques should guarantee the realization of highly accurate findings. The chapter is divided into several sections, including the research design, data collection, study subjects, sample size and sampling method, reliability and validity, potential barriers and pitfalls and ethical considerations.

Research Design

According to McCusker and Gunaydin (2015. P.541), a research design is basically a plan or template that a researcher intends to use in a study. Mixed methods research design will be used. The use of this approach is informed by two main considerations. First, vaginal delivery is a complex phenomenon. The use of qualitative design will give the researcher a way of easily dealing with this complex phenomenon. On the other hand, nursing as a practice in the medical field requires statistical evidence to prove or disprove a hypothesis. Therefore, these considerations justify the use of mixed research design.

DATA COLLECTION

This refers to the process of getting data from the study subjects (Hennink, Hutter & Bailey 2010, p.23). A questionnaire, interviews and experiments will be used during the study. The use of the three data collection methods is justified because of two major considerations. First,

experiments will entail actual testing of the effectiveness of perineal massage in preventing perineal trauma. This will result in fully confirmed and reliable findings. The collected data will be validated by the researcher and approved by the study participant to ensure that information is accurate and subject to the study. A description of the survey methods is detailed in appendices.

Interviews

According to Holloway and Galvin (2016, p.19), an interview is a one-on-one conversation between a researcher and a respondent for the sake of collecting data. Semi-structured interviews will be used in this study. The interviews will be conducted over the phone. The use of semi-structured interviews is informed by several considerations. First, interviews will enable the researcher to probe the respondents about their opinions with regard to the effectiveness of perineal massage in preventing perineal trauma.

The second advantage of interviews is that the researcher can explain questions to the respondents (Holloway and Galvin, 2016, p.21). This means the respondents respond to questions which they have fully understood. This will help enhance the consistency and the reliability of findings.

Finally, interviews have a higher response rate when compared to other data collection methods such as the questionnaires (Holloway and Galvin, 2016, p.24). This is because the researcher is present to guide the respondents in answering all the interview questions. The high response rate will be important in this study because it will ensure sufficient information is available.

Questionnaires

Snelson (2016, p.3) defines a questionnaire as a printed set of questions presented to a respondent by a researcher for data collection purposes. The questionnaire will be administered to expectant mothers awaiting deliveries in healthcare centers in the KSA. There are several benefits of a questionnaire that makes them suitable in this research. The first advantage is that questionnaires are administered simultaneously. This means a researcher can collect data from a large number of respondents within a very short period of time. This is a benefit that will enable the researcher to collect substantial data from healthcare professionals for analysis purposes. The information will be validated by a panel of experts who are familiar with the question under the study.

The second advantage is that questionnaires are standardized (Holloway and Galvin, 2016). Standardization means the same set of questions is presented to all respondents. This is a feature that increases the chances of getting consistent data and hence making the analysis process very easy. Consistency of findings is one of the aspects that the researcher will be keen about. This is because consistency is an indication of the reliability of the findings.

The final advantage of questionnaires that is essential in this study is confidentiality. This is particularly important because healthcare-related questions will be involved. Since questionnaires are confidential in nature, the respondents will provide all the requested information without the fear of being victimized.

Profile of Study Subjects

The study will involve primigravid women drawn from Saudi Arabia. The women will be expected to be of ages of between 20 and 35 years. The participants will also be required to be expecting vaginal delivery. This is important because the trauma being considered in the study is that arising from a vaginal delivery. Healthcare professionals in charge of birth centres and delivery units in Saudi Arabia will be involved in this study. The professionals will be expected to participate on a voluntary basis. By voluntarily participating in the study is a clear indication that the respondents are willing to provide all the effort needed towards the successful completion of the study. Therefore, the respondents with these qualities are the most suitable for this study because they are best placed to provide reliable answers.

Sample size and sampling method

A sampling method refers to the approach used by a researcher to get study subjects from a study population. Purposive sampling will be used in this study. According to Creswell (2013), purposive sampling entails selecting study subjects based on their expertise or knowledge level in a given area or field. Therefore, the researcher will select healthcare professionals based on their knowledge levels on matters relating to perineal massage and perineal trauma.

A sample of 100 primigravid women and ten healthcare professionals will be used. According to Creswell (2014), a sample size refers to the number of subjects drawn from the study population for participation in a study. Since the sample is representative of the population, the findings can be generalized to the entire population. The women will be divided into two groups of equal sizes. The two groups include the massage group and the control group. Unlike the massage group, the control group will not be subjected to any interventions.

Reliability and validity

Validity and reliability are two crucial aspects that will be observed during the study. This will be important in ensuring that the findings can be generalized to larger populations. The measures to ensure reliability and validity are provided below:

Reliability

Brownson, Colditz, & Proctor (2018) define reliability as the level to which an instrument gives consistent results. This means that the findings are reliable if they can be repeatedly produced under the same study conditions. A number of measures will be taken during the study to ensure reliable findings.

The first measure is the involvement of the most qualified respondents. This will increase the chances of collecting truthful information which will be replicated in the event that the study is repeated several times under the same conditions. The second measure is explaining the contents of the survey to the respondents in detail before giving them an opportunity to respond. Explaining questions to the respondents increases their understanding and eliminates any form of ambiguity. Ambiguity makes respondents provide different and inconsistent responses. Creswell (2014) argues that there is an increased need to make the questions as elaborate as possible for the survey participants to remove any form of ambiguity or lack of clarity that may lead to the unforthcoming responses being provided.

Validity

According to Brownson, Colditz, & Proctor (2018), validity refers to the degree or extent to which an instrument measures what it is supposed to measure. To ensure the validity of the instruments that will be used in the study, questionnaires and interview questions will be developed by a team of experts in the subject area. In this case, experts in perineal or vaginal trauma will be used in drafting the questions. The questions will then be piloted to a few respondents to test whether the nature of responses is actually what is expected. The results of the pilot phase will influence the type of adjustments to be made on the questionnaires and the interview questions. The entire process will be monitored and approved by a team of experts in the subject area and will be elaborated by the National Institutes of Health (NIH).

Potential barriers and Pitfalls

Ellington, Rizk, and Criso (2017) illustrate that a researcher should anticipate the potential barriers and pitfalls in a study. Anticipation enables the researcher to put in place countermeasures either to address the barriers and pitfalls or to reduce their implications on findings. One of the potential barriers is looking for a sufficient number of primigravid women. This is a problem because the target subjects have a right to determine whether they should do perineal massage or not. Specifically, the subjects that would not be subjected to the message may feel that the researcher is not mindful about them suffering perineal trauma and lacerations. This is a barrier that will be addressed by explaining to the respondents the reasons and the benefits of the study. Another barrier is the matter of the cultural tendencies that affect data collection methods. The need for privacy of Saudi Arabian women as per the provisions of their culture might be a hindrance to the collection of personal information that is private in nature. Although the use of informed consent forms might be significant, there is still a high probability of cultural affiliations playing a huge role in presenting potential barriers for the conduct of the research in the appropriate manner.

Self-reported data during the surveys is another major drawback that the researcher has to deal with. It is a difficult barrier to address because the researcher has no control over the accuracy of the responses provided. In this study, healthcare professionals and primigravid women will be asked a variety of questions. The truthfulness of this information will be largely dependent on the knowledge levels of the respondents and their willingness to provide accurate and detailed responses (Altaweli, McCourt, and Baron, 2014). However, to reduce the negative implications of this to the findings, the researcher will explain to the respondents on the need to provide correct information and the implication this will have on the study findings.

The final barrier is that there are other factors that are known to prevent perineal trauma, such as the instrument-assisted stretching, body mass, and exercising the pelvic floors. It is the goal of every woman to have an incident-free vaginal delivery. Therefore, the primigravidwomen in the control group may be using these are methods which are likely to affect the accuracy of the findings. To lower the likelihood of significant interference from these other methods, a high number of respondents will be used.

Ethical considerations

Ethics refers to an acceptable code of conduct (Holloway and Galvin, 2016). It is a requirement that should be observed in any research study to avoid conflicts that can compromise the reliability of findings. Several ethical considerations will be made in this study. The first

consideration will be informed consent that is included in the appendices. All the primigravid women who will be involved in this study will be comprehensively informed about what the study entails and the conditions for participation. They will be given some time to decide on whether to take part in the study based on the provided information. Consent forms will be provided to the study participants prior to carrying out the research in order to ensure that the respondents agree to terms and conditions of the study and that they are aware of the intention of the investigation (Snelson, 2016).

Confidentiality is another ethical consideration that will be protected during the study. The respondents will not be required to provide any identifying information during the surveys. The researchers will also not be expected to record any identifying information about their subjects. The reporting will also be done in such a way that it will not be possible to link responses to the respondents.

DATA ANALYSIS

According to Creswell (2014, p.27), data analysis is the process of getting meaning from research data. Qualitative and quantitative data analysis method will be used in this study. Qualitative data analysis will focus on interpreting non-numerical data. On the other hand, the quantitative data analysis methods will focus on interpreting and getting meaning from the numerical data. The section below details how the two data analysis techniques will be applied in this study.

The Statistical Package for Social Sciences (SPSS) will be used in this study. An analysis of variance (ANOVA) will be conducted on the datasets obtained from the two groups (massage group and the control group). The number of women with intact perineum from the control and the massage groups will be recorded down. The means between the groups will be determined. After the means have been computed, the significance of the difference in the means will be computed. The p-level of more than 0.5 will be interpreted to mean that the difference is significant (Snelson 2016, p.4). Otherwise, the difference will be insignificant. It is the significance or the insignificance of the differences in means that will be used in determining if perineal massage is effective in preventing perineal and vaginal trauma or not. On the other hand, content analysis will be used in the analysis of non-numeric data. The process will involve several stages. The first stage will be familiarizing with the collected data. This is important because the data will be collected from different respondents framed in different ways.

The second step will entail the identification of themes. Themes refer to common data patterns. The identification of the themes will be guided by the research objectives and questions (McCusker and Gunaydin, 2015, p.540). The third step is describing the themes in relation to the research objectives and research questions. In other words, the goal of the description will be explaining how the themes answer the research questions and meet the research objectives.

Evaluation

The success of this study will be examined from several fronts. The first aspect is the availability of primigravid women and their participation in the study. The women will be subjected to perineal massage intended to lower the chances of experiencing perineal trauma by 16% in stage 3 and 4 during childbirth. This is an exercise that women in the control group will not be subjected to. At the end of the exercise: childbirth, the experiences of women in the control and

massage group, will be compared and contrasted with the previous reported estimates. The successful completion of this exercise and the recording of the results is another metric that will be used to signal a successful completion of the study. It is based on these results that the researcher will determine if actually, perineal massage is an effective intervention in the reduction of perineal trauma by 10% of the total births in maternity hospitals in Saudi Arabia. In addition, the findings will be compared and contrasted with the findings from other previous studies in order to evaluate the effectiveness of the current methodology. The reliability of data will be evaluated based on the research objectives and questions of the current study where a small sample of data will be collected prior to the study to test for reliability and variability.

RESULTS

Based on the previous study findings, perineal trauma is a common phenomenon in the current delivery processes. However, this study will propose that perineal massage is one of the most effective approaches to reduce the risks of perineal trauma (stage 3&4 traumas) and episiotomy by 16% during vaginal delivery. The findings will indicate how Perineal massage on the perineum is accustomed to stretching and thus helps to avoid trauma during delivery. On the other hand, the study will link Perineal massage with numerous advantages, especially to first-time mothers where some of the projected benefits include reduced pain and perineal trauma during vaginal delivery. In the current study, the two groups are anticipated to demonstrate homogeneousness in terms clinical information. In this case, the research will explore how the second stage of delivery demonstrates reduced rate of perineal trauma as compared to the first time delivery. On the other hand, lowered risk of episiotomy and higher first-and second-rate of perineal tear will be observed in the massage group when it will be compared with the control group. Based on the observations and analysis, perineal massage will be associated with the overall reduction in the occurrence of trauma in women after delivery. However, women in the group practicing perineal massage will be anticipated to demonstrate a reduced risk of perineal trauma and less likelihood of episiotomy.

DISCUSSION

The goal of the proposed study is to explicitly determine whether the application of perineal massage from the 34th week lowers the chances of experiencing perineal trauma in women. Extensive research work has been done on the topic. Unfortunately, there have been contradicting findings in these studies. While the findings in some of the studies indicate that perineal massage is actually helpful in reducing the occurrence of perineal trauma, the findings in other studies state otherwise. For instance, the studies conducted by Shahoei et al. (2017) and Zare, Pasha, and Faramuzi (2014) have shown that prevention of perineal trauma goes beyond perineal massage. Based on the findings of these studies, the prevention of perineal trauma should take a multifaceted approach of which perineal massage is one of them. Other options that should be considered include factors such as the fetal size, skin elasticity; instrument assisted stretching, and exercising the pelvic floor muscles. The findings in the two studies show that it is only a consideration of all these factors that can effectively prevent perineal traumas. This contradicts the findings of other studies which depict perineal massage as solely being effective in preventing perineal trauma. The studies were conducted by Freitas, Cabral, Pinto, Resende, and Baldon (2018), Aquino et al. (2018), Onyebuchi et al. (2018), Seehusen and Meghan (2014), Leon-Larios et al., (2017), and Assheim, Nilsen, Reinart and Lukasse (2017). A common observation in these studies is that women should practice perineal massage from the 34th week in order to prevent perineal trauma during childbirth. This is the

only solution recommended in these studies and thus contradicting the findings in the first two studies whose findings support a multi-faceted approach to preventing perineal trauma.

Based on the contradictions provided in these studies, it is evident that there is great need to conduct a study that will provide a clear response on whether perineal massage is effective in preventing perineal trauma or not. Therefore, the results of the proposed study will serve to provide clarity on this issue. However, this will be determined by the availability of willing primigravid women to take part in the study by following the provided instructions. This is a major limitation because this is a healthcare-related study, and every woman would want a trauma-free delivery (Aquino et al., 2018). Therefore, women in control may feel that the researcher is not concerned about their wellbeing during childbirth. This is a limitation that will be addressed through intense sensitization and explanations about the importance of the study.

Implications for research

The findings of this research will have great implications for the existing information pool. A major implication is that unlike in the existing studies, there will be clarity about the effectiveness of perineal massage administered from the 34th week of pregnancy in preventing perineal or vaginal trauma. This means that women will have a clear guideline about the application of perineal massage. Another notable importance of the study is that it will provide any additional measures that will help to enhance the effectiveness of perineal massage even further. Currently, perineal massage does not guarantee intact perineum following childbirth. It only lowers the likelihood and the percentage of women that experience perineal trauma. Therefore, this study will be of great relevance in further reducing the percentage number of women that experience perineal trauma during delivery and all the resulting short-term and long-term effects.

CONCLUSIONS

The information provided in this proposal clearly shows that there is no consensus about the effectiveness of perineal massage in reducing the cases of perineal and vaginal trauma. This is an aspect that justifies the proposed study. It is a study that will determine whether perineal massage is effective and the measures which can help to increase the effectiveness further as proposed by Assheim, Nilsen, Reinart and Lukasse (2017). To realize these goals, the study will involve primigravid women from Saudi Arabia. The women will be divided into two groups, including the massage and the control group. The massage group will be subjected to perineal massage, while the control group will not be subjected to the message. The results from the two groups after childbirth will be used to determine whether the message reduced the cases of perineal massage or not. Besides these primigravid women, healthcare professionals will be subjected to a survey. The survey will focus on both the effectiveness of the perineal message and the ways in which this intervention can be improved further. This is very crucial towards improving the experiences that women have during childbirth (Aquino et al., 2018). It is also important in reducing both the short-term and long-term effects of perineal trauma. These arguments justify the worthiness of the proposed study.

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participants (100 primigravid women) who will devote their time for the completion of this study. I will also acknowledge the inclusion of all the healthcare professionals who will offer insightful and expertise that will significantly assist the study, although they may not second all the findings and conclusions of the anticipated research. I will also thank my supervisor for assisting with the guidance and comments that will significantly improve the methodology of the manuscript.

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APPENDIX

Questionnaire

SECTION ONE

DATE		
GENERAL INFORMATION OF RESIDENTS		
RESPONDENT INFORMATION	RESPONCE	CODES
Name of Districts		
Name of Ward		
Name of the street		
Age	18-25 25-30 30-40 40-50	1 2 3 4
Status	Married Unmarried	1 2

SECTION TWO

S/N	QUESTION	ANSWER	CODES
1	For how long have you been living in Saudi Arabia?		
2	How many times do you visit the hospital?		
3	Which health facility do you like? Public or private		
4	Do you have children?		
5	Do you know what perineal massage is?		
6	Have you ever practiced it? If yes, did it help during childbirth?		
7	Do you know what is perineal trauma		
8	Have you ever experienced its effect? If yes,		
9	How was the experience?		
10	Has any member of you house experienced perineal trauma?		
11	If yes; when?		
12	Do you think perineal massage can be used to reduce perineal trauma?		

Consent Form

[Informed Consent form for _____]

[Name of Principal Investigator]

[Name of Organization]

[Name of Sponsor]

[Name of Proposal and version]

PART I: Information Sheet

Introduction

Antenatal Perineal Massage is a technique that women use to prepare the birth canal in readiness for a trauma-free vaginal delivery. Unfortunately, the effectiveness of this approach to reduce perineal trauma is riddled with controversies. This forms the basis for this study, which seeks to unravel the controversies surrounding the effectiveness of perineal massage in preventing perineal trauma.

Purpose of the research

The current study objects to explore how the use of antenatal perineal massage on primigravida can lessen perineal trauma and episiotomy during vaginal delivery by 16% in the general birth population at maternity hospitals in Saudi Arabia.

Participant selection

The study will involve pregnant women admitted at the maternity hospitals in urban cities in Saudi Arabia with a population of over 1 million.

Do you know why we are asking you to take part in this study? Do you know what the study is about?(YES/NO)

If you decide not to take part in this research study, do you know what your options are? (YES/NO), Do you know that you do not have to take part in this research study, if you do not wish to? (YES/NO), Do you have any questions? (YES/NO)

PART II: Certificate of Consent

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Print Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

TIME FRAME TABLE

Activity	Inputs	Time Frame	Responsible Person	Anticipated Outputs	Progress Reporting (Complete for Progress Report Only)
Develop items for survey	Research techniques	1/07-4/07	The researcher	Availability of all items required	
Review and revise items with experts	Experts	1/07-4/07	The researcher and experts	Support provided to researcher as needed	
Pre-text variables and data with control group	Sample of target Representative population	4/07-7/07	The researcher and experts	Support provided to researcher as needed	
Prepare the site for study	Maternity hospitals	4/07-7/07	The researcher	All the participants and organizations informed and set for the study	
Recruit subjects and administer survey data collecting tools	Primigravida women	7/07-15/07	The researcher	Research Data obtained	
Data evaluation	primigravid women, control group	20/07-1/08	The researcher and experts	3 meetings held and evaluation data collected	
Analysis	non-numerical data numerical data, datasets	1/07-5/08	The researcher and experts	Support provided to researcher as needed	
Preparing representation of the findings	Research reporting techniques	1/07-5/08	The researcher	Careful representation conducted	