

ORIGINAL RESEARCH

OBSTETRIC ANESTHESIA

Exploring barriers to the effective painless labor: a qualitative study

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Abstract

Background: Studies have indicated that health professionals have already highlighted different factors responsible for painless labor. With the development of novel challenges from time to time, certain barriers may develop that need to be explored for effective painless labor. Such barriers even vary among different cultures and regions.

Purpose: This study was aimed to explore barriers to effective painless labor in context to Pakistani culture and socio-economic status.

Methodology: A qualitative research approach and exploratory-descriptive research design was used to explore the barriers to effective painless labor. The sample consisted of ten gynecologists with a minimum of five years of experience. Semi-structured interviews were conducted with the gynecologists from govt. and private hospitals in Punjab, Pakistan. The verbatims of the doctors were noted and transferred into nodes to create themes and categories through NVivo 11 plus software.

Results: The results indicated four master themes that emerged regarding barriers to effective painless labor i.e. Diseases, Improper Food and Nutrition, Professional Incompetency and Psychological Issues.

Conclusion: Exploratory-descriptive approach in exploring the barriers to effective painless labor indicated that the indigenous barriers are different and many in numbers as compared to the developed countries. This needs attention from the health care professionals and authorities to understand the dynamics which intensify the unnecessary labor.

Key words: Painless labor; Barriers; Qualitative research; NVivo; Pakistan

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1. Introduction

Pain is considered an unpleasant sensation due to tissue damage and is linked with an emotional and painful

experience. Among pains, Labor pain is rated high on the pain rating scale and is considered the most severe pain that the woman experienced in her lifetime. So, due to the

painful labor women wish for cesarean sections and is considered the main reason for increasing the c- sections in Pakistan tremendously. According to the Pakistan Demographic and Health Survey (PDHS) report, it is showed that the rate of cesarean increased by 22% in the year 2017-2018 in Pakistan.¹

Most of the researches indicated that labor pain occurs due to the contraction of the uterus which is a muscular organ. The opening of the cervix during labor depends on the contractions of the uterus that induces severe pain. But it is considered that many other factors hinder effective labor pain. The factors such related to the age, painful menstruation before pregnancy, maternal position during the labor, the weight of the mother and the fetus, education about the labor and delivery, regular Keagle exercises for the pregnant women, and other factors related to bio-psychosocial and cultural factors.²

So, considering age as a significant factor, it is reported in the study that younger age is linked with severe labor pain and it decreases as women grow up. It is because older women have fewer uterus contractions and have softer and less sensitive cervix openings that ease the labor pain.³ Another important barrier that is linked with effective labor pain is menstrual pain before pregnancy. The studies indicated that excessive menstrual pain is the release of prostaglandin that caused the uterus contractions and makes the cervix sensitive that affecting effective labor pain.⁴

Apart from this, nutrition or the proper diet is considered the essential ingredient for pregnant women. Insufficient diet, lack of vitamins doesn't only harm the mother or the child but are also linked with intensive labor pain. As the study indicated that the height/weight ratio of pregnant women affected the pelvic structure that created resistance or hinders the passage of the child from the birth canal. This process induces labor pain which is linked with the nutrition of the weight of the mother.⁵

Among the psychological factors, anxiety and fear influenced the labor pain of women at the time of delivery. Anxiety is an emotional factor that increases catecholamine levels, which may magnify pain by decreasing pelvic blood flow and increasing muscle tension.⁶ The researches also showed that anxiety at the time of labor makes the complications that tend to take more time for the cervical opening and takes more time for labor. Apart from this, the weight of the child, the maternal position at the time of labor, regular exercises during the pregnancy, and education regarding the labor or delivery of the baby are considered as the important factor that hinders effective labor and tend to the cesarean. Such biological and psychosocial factors may impact differently due to different socioeconomic and cultural variations in different regions. It is important to explore barriers to effective painless labor, especially in

a developing country. So, our aim of the study was to explore the barriers to effective painless labor in women in Pakistan. For this, the objectives of the study were:

2. Methodology

2.1. Research design: A qualitative research approach, and exploratory-descriptive research design was used to explore the barriers to effective painless labor.

2.2. Settings and participants: interviews were conducted from the ten working doctors from govt. and private hospitals in Punjab, Pakistan.

2.3. Sampling strategy: purposive sampling was used to collect the data in the present study.

2.4. Inclusion and exclusion criteria: participants who have a minimum of five years of experience, and only gynecologists were included in the study.

2.5. The procedure: Following all the ethical considerations, semi-structured interviews were conducted to explore the causes and barriers to effective painless labor. The interviews were taken from the 10 gynecologists which were from both the private and government hospitals. The verbatims of the participants were written with their permission and translated into statements afterward. The interviews were based on open-ended questions and the participants' responses were further probed for the clear identification of the barriers to effective painless labor.

2.5.1. Thematic Analysis: Thematic Analysis is the most common and extensively used method that is used in qualitative research for "Data Analysis". It is a process of identifying and highlighting the "Patterns", "Sequences" of huge data. In the present study, after taking interviews from the doctors who have been involved in caesarian sections, thematic analysis was done through Nvivo 11 software to generate codes, categories, and themes from the responses. Following steps were followed to reach thematic analysis.

2.5.2. Becoming familiar with the data and translation: First of all, the verbatim of the interview was written in neat form and transliterated, then the translation of the data was done in English to make it compatible with NVIVO software for management and analysis of the data.

2.5.3. Initial coding of the data: a process that is widely used for data analysis in qualitative research. It is used to organize data in such categories that can be easily understood by computer software. So for this study, the initial coding process was done by reviewing all the data that was obtained in form of interviews. The responses that doctors and gynecologists gave were analyzed by "Coding Process". The words that

come again and again were given certain codes so it becomes easy to handle a large amount of data systematically.

2.5.4. Themes emerging: A theme is an element that organizes a group of data into a few words or ideas that are easy for the researcher to answer the questions or problems that emerged while doing research.

2.5.5. Categories generation: Categories sum up the whole of the themes into a certain perspective that is easily understandable. By using NVivo 11 plus software, categories have emerged regarding barriers from different themes.

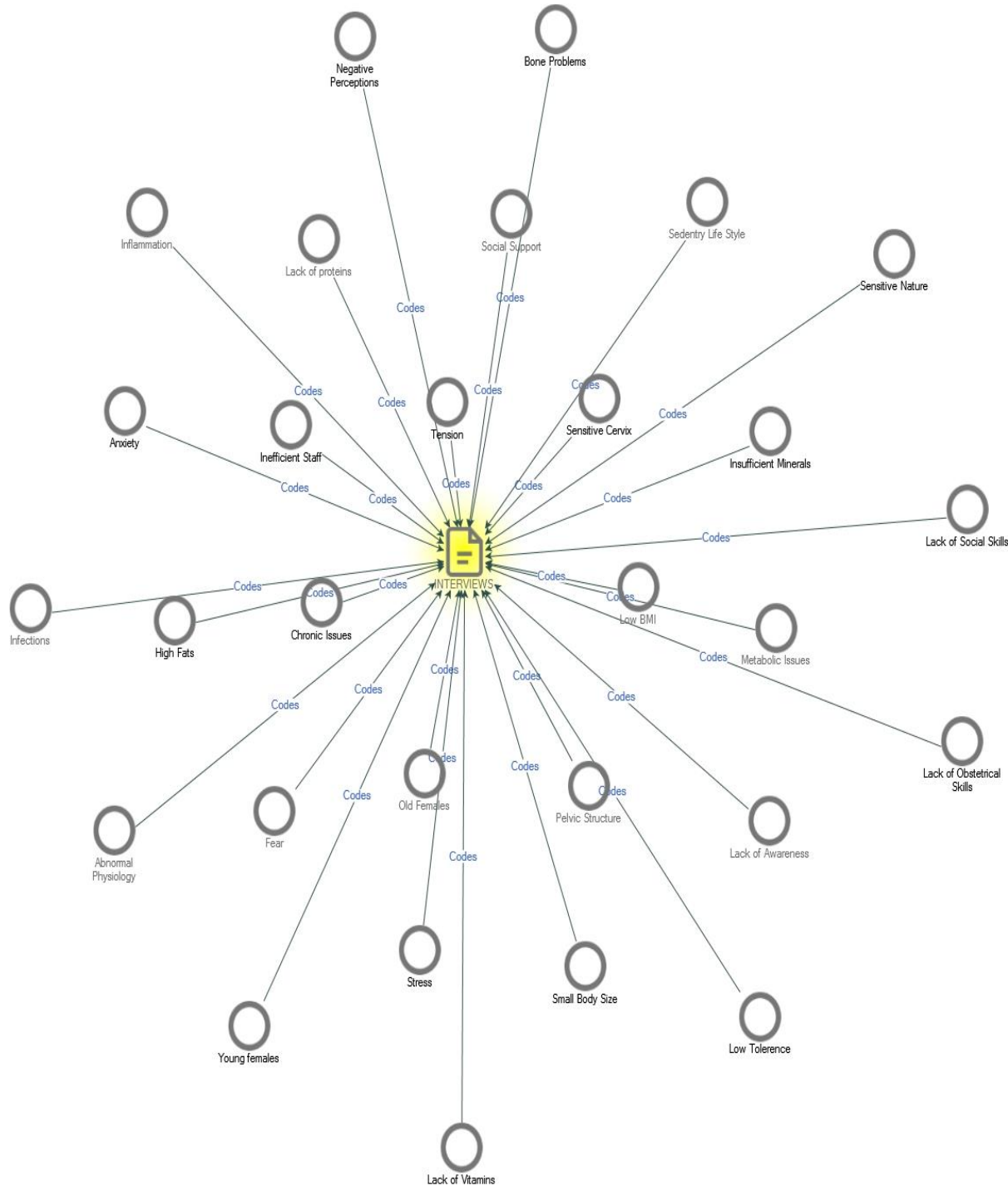


Figure 1: Codes emerged from the data of interviews on barriers to effective painless labor

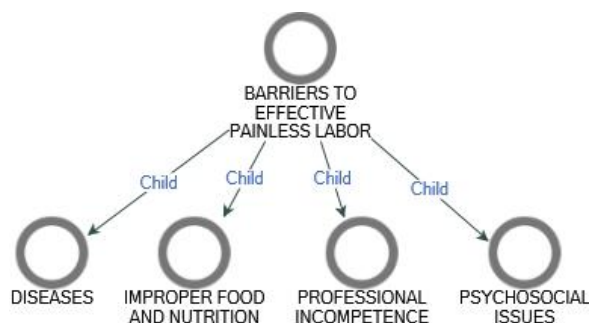


Figure 2: Master themes emerged from the interviews and literature review on barriers to effective painless labor

3. Results

3.1. Labeling and Codes

The data collected from the interviews was managed through NVivo 11 plus. The data was labeled and codes emerged on the barriers to effective painless labor includes; chronic diseases, behaviors, personality, anxiety, fear, lack of vitamins, young age, etc. All the codes that emerged from the interviews are shown in Figure 1.

The results indicated the reasons that led to the barriers to effective painless labor. According to the doctors the females suffered from psychological issues like stress, fear, tension, anxiety, lack of social support, and negative perceptions. The females also suffered from nutritional problems that included lack of vitamins, deficiency of essential proteins, insufficient minerals, high fats, and low BMI. The reasons are concerned with the age of the female i.e if the female is too young she experienced more pain and on the other hand, if the female is too old and has old bones she also experienced pain during labor. The results also showed the physical structure as the reason for the barriers to effective painless labor. The females have a small body size that led to painful labor and have metabolic issues, chronic issues, pelvic structure, and a sensitive cervix. The doctors reported a lack of awareness about painless labor among the females and the doctors, insufficient staff in the hospitals, and the lack of obstetrical skills as the barriers to effective painless labor.

3.2. Categories

The process of initial coding was done by using NVivo 11 Plus. The following figure 2 showed the four categories that emerged after analyzing the results on NVivo software 11 plus. The results indicated four basic elements regarding barriers to effective painless labor that included different kinds of diseases, have improper

food and nutrition which consists of the lack of essential vitamins, improper diet, and insufficient minerals. Apart, professional incompetence also played a significant role in the barriers to effective painless labor. Psychological issues related to anxiety, tension, depression, and other kinds led to the barriers to effective painless labor.

3.2.3. Themes

By using NVivo 11 plus software, the themes were generated to organize a group of data like repeated words, attributes, and ideas by emerging them into their corresponding categories.

Diseases

The results showed that the female suffered from several diseases that led to barriers to effective painless labor. The diseases include pathologies, physical issues, and physiological issues. Figure 3 indicated the pathologies in the females that hinder effective painless labor. Different kinds of pathologies like bone problems e.g. rigid bones and inflated bones led to painful labor in the females, chronic problems included different types of chronic diseases, inflammation of the body parts and sometimes different kinds of infections caused the painful labor. The results also indicated the physical issues in the females that led to the barriers to effective painless labor. The physical issues included the small body size of the females that hinders painless labor. Apart from the results showed the age factor included young and old females. Both the young and the old females led to the barriers for effective painless labor. Some females have a poor pelvic structure that also played a role in the barriers to effective painless labor.

The physiological issues in the females included increased muscle tension and the sensitive cervix in the body that hinders the painless labor. The decrease in pelvic blood flow inhibited the relaxation of the muscles in the pelvic region leading to painful labor. Apart from the females' menstrual issues at an early age or throughout life played a significant role in the barriers to effective painless labor. The low BMI of females significantly led to painful labor.

Improper Food and Nutrition

Figure 4 showed the improper food and nutrition that led to the barriers to effective painless labor. The females have bad eating habits and have improper nutrition that causes painful labor.

The bad eating habits of the females included the intake of high fats, taking chunk foods having insufficient fiber that aren't the requirement of the body. Apart from the females take high sugar which also led to painful labor.

On the other hand, the females have an insufficient diet with a lack of essential proteins, vitamins, minerals that are the requirements of the women in the pregnancy. The

lack of essential fibroids and the minerals from the body of the females cause painful labor.

Professional Incompetence

Figure 5 indicated professional incompetence as the main reason for the barriers to effective painless labor. The hospitals have insufficient improper training that causes the female to suffer more pain during labor. There is also a lack of facilities that are used in the delivery of the females due to which the females suffer from severe pain. Apart from the doctors have a lack of awareness regarding the new techniques and the process of delivering the baby which causes pain to the females. Some doctors have no idea about delivering the baby or have a lack of obstetrical skills that led to painful labor.

Psychological Issues

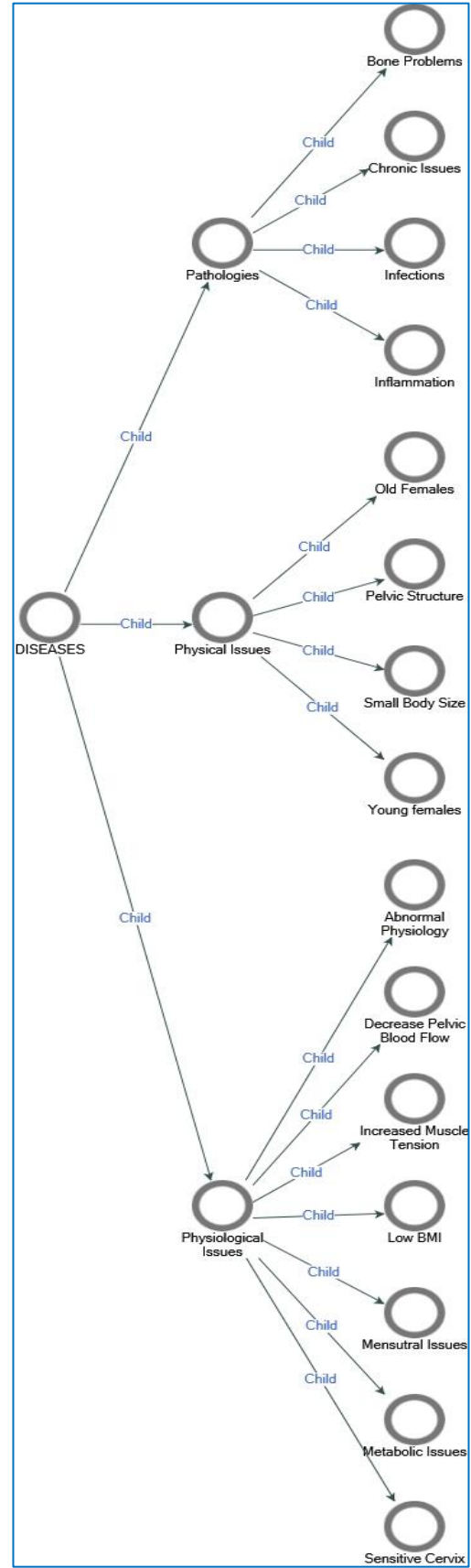
Figure 6 indicated the psychological issues that led to the barriers to effective painless labor. The females are suffered from behavioral issues, lack of support, negative emotions and have negative mental states. The behavioral issues in the females like the lack of social skills in making effective relationships with others, negative perceptions about self and others, and the inactive lifestyle led to the barriers for effective painless labor.

The negative emotions like anxiety and the fear of delivering the baby led to painful labor. The females think about delivering the baby due to which they became panicked and became anxious that considered the major reason for the painful labor. Apart from this, females have negative mental states including a low tolerance to bear the pain, have stress and tension regarding this, and have low self-esteem that put the barriers to effective painless labor.

3.3. Comparison of the codes emerged between the interviews and literature review

Figure 7 indicated the comparison of the codes that were emerged from the interviews with the doctors and the literature review regarding the barriers to painless labor. The results showed that regarding the physical issues the small body size, sensitive cervix, and pelvic structure ar seemed to be consistent in the interviews and the literature review. While regarding improper food and nutrition the lack of vitamins, proteins and essential minerals are consistent in both the interviews and the literature review. Regarding the professional incompetence, the insufficient staff and lack of awareness are described by both the doctors in the interviews and the literature review. Apart from the psychological issues in the females like anxiety and fear

Figure 3: The themes of the master theme, "Diseases" emerged from the codes of the interviews and literature review on barriers to effective painless labor



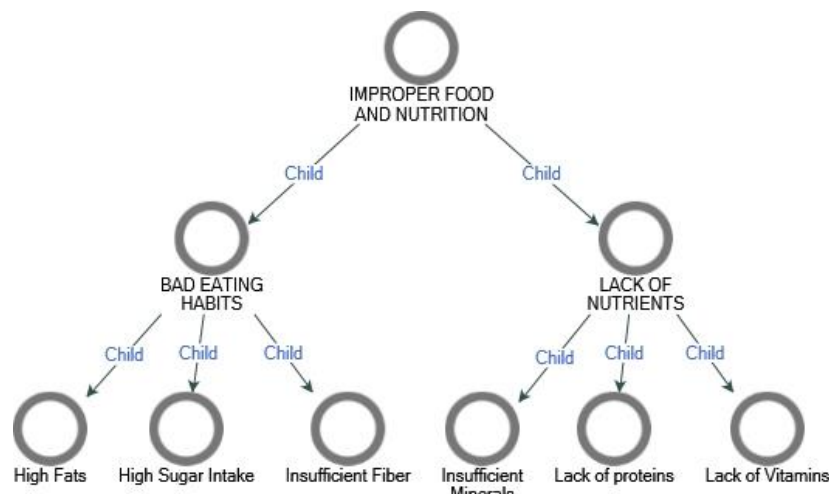


Figure 4: The master theme of Improper Food and Nutrition emerged from the codes of the interviews and literature review on barriers to effective painless labor

described commonly in both the interviews and literature review that led to barriers for effective painless labor.

3.4. Percentage of the different codes emerged from the interviews on barriers to effective painless labor

Figure 8 shows the percentages of the codes that were emerged from the interviews of the doctors regarding the barriers to effective painless labor. The results showed that about 11% of doctors reported the lack of awareness regarding the procedures and the techniques for delivering the baby as the main cause for the painful labor in the females. The inactive lifestyle of the females and the lack of vitamins are reported secondly that cause painful labor. Apart from the psychological issues including stress and tension were reported by the doctors 6% which cause painful labor. The figure showed that other reasons fall under 5% which led to the barriers for effective painless labor.

4. Discussion

The present study was aimed at exploring barriers to effective painless labor according to the surgeons' thoughts. As painless labor is considered an important issue for pregnant women during delivery. So, in most cases, severe pain during labor led to the cesarean section. The results of the present study showed the barriers like diseases, lack of nutrition and proper diet, professional incompetence, and psychological issues in the females that led the mothers to the painful labor.

The results showed that diseases in females led to the physiological reasons that are considered as the origin of the painful labor in females. This process included the contraction of the uterus or cervical dilation. On the other hand, in the females, while delivering the baby, sometimes the inflammation in bones occurs due to which the cervix isn't open properly which induces pain during labor. As, the studies also indicated that most of the time the process of delivering a baby depends on the tissues of the bone, contraction of the uterus, the structure of the pelvis, and the size of the uterus. Sometimes during the latent phase of labor, the size of the uterus is small and the size of the baby large which induces pain.⁷

Apart from diseases, infections in females cause complications in labor. Different kinds of infections also led to painful labor and cause the delivery process prolonged. It is indicated that during pregnancy the immune system became active and due to hormonal changes, different infections occur in the body of the females that not only impact the pregnancy but also induce painful labor. According to Leeper and Lutzkanin (2018) after pregnancy, the uterus expands which puts more pressure on the uterus. The progesterone hormone causes the urine to stay in the bladder for a long that led to urinary tract infections. The yeast infection in the reproduction track and the candidiasis infection in the females are considered to be barriers to painless labor.⁸

Apart, from the infectious diseases, the females' physical condition contradicts the pregnancy and induces labor pain. One such cause is related to the weight of the pregnant female. The low weight of the mother not only affected the baby or the mother herself but also causes

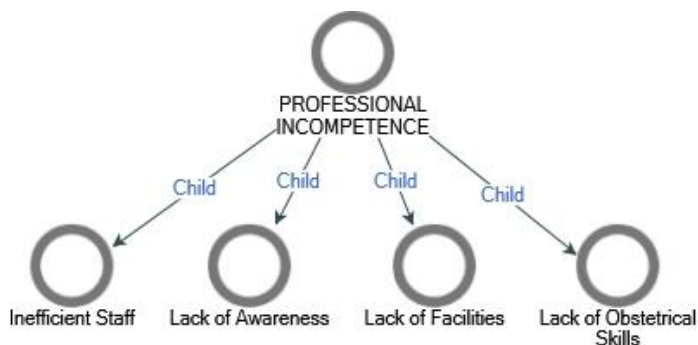


Figure 5: The master theme of Professional Incompetence emerged from the codes of the interviews and literature review on barriers to effective painless labor

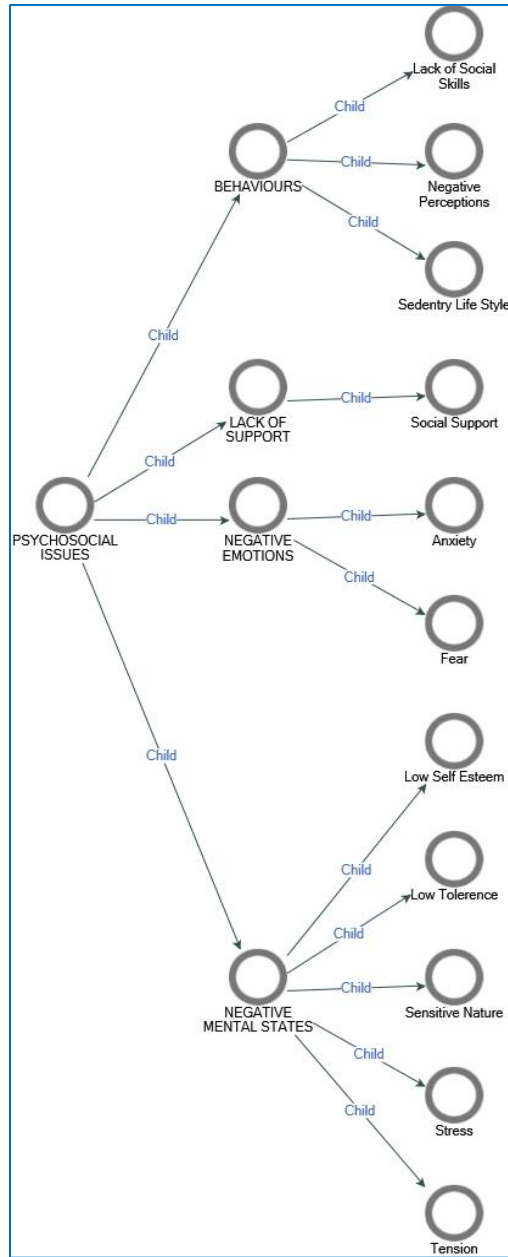


Figure 6: The master theme of psychosocial issues emerged from the codes of the interviews and literature review on barriers to effective painless labor

complications in delivering the baby. It has been indicated that if the women have low weight in pregnancy, this low BMI in females led to complications including birth asphyxia, anemia, and perinatal mortality rates and also induces painful labor.⁹

Apart from the physical and physiological factors, nutritional status is considered an important factor at the time of pregnancy because

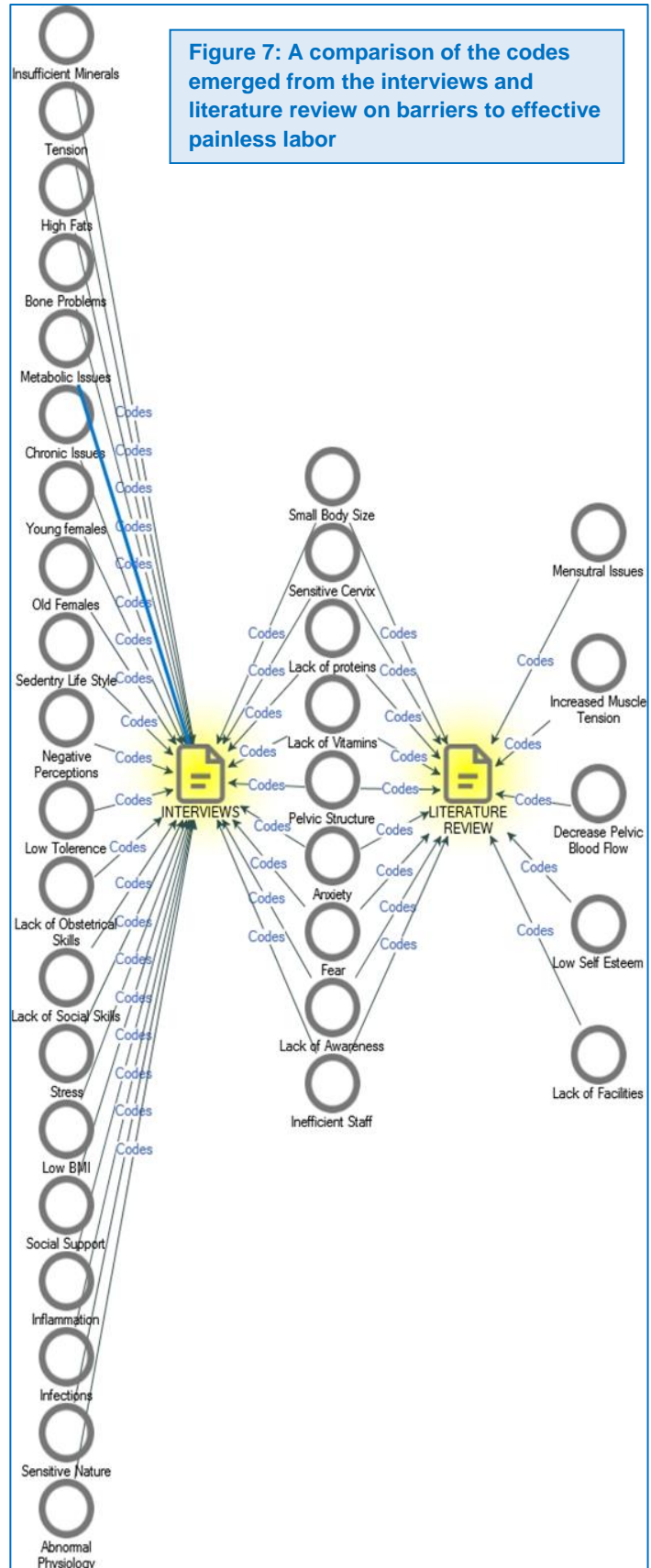


Figure 7: A comparison of the codes emerged from the interviews and literature review on barriers to effective painless labor

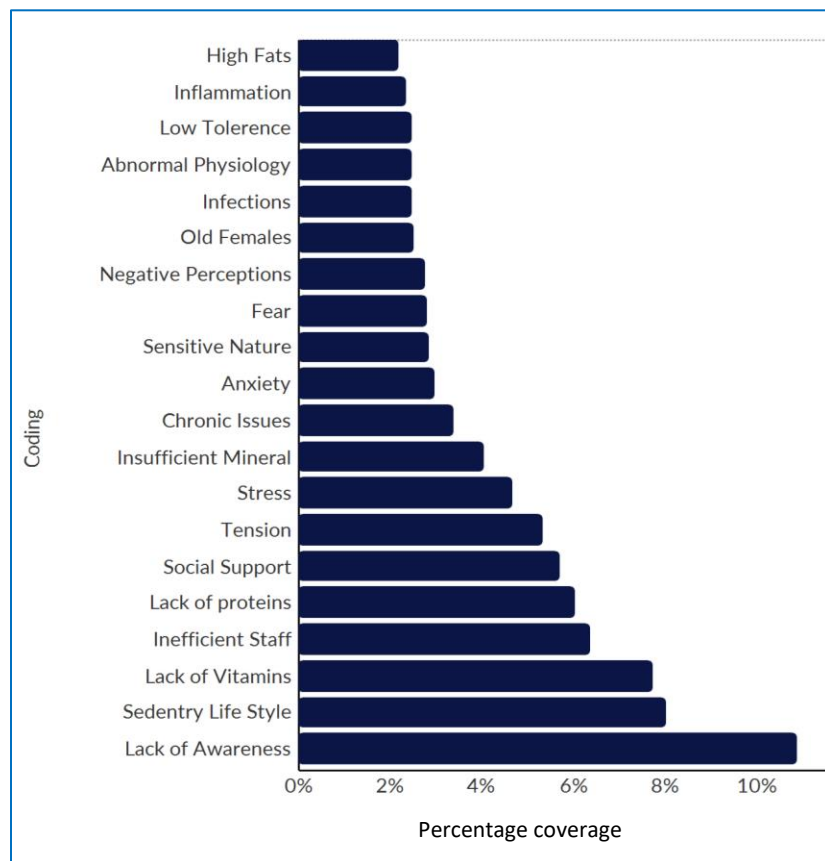


Figure 8: A percentage of the different codes emerged from the interviews on barriers to effective painless labor

it has a direct link with the health of the baby and the mother as well. If the women have an unbalanced nutritional diet or have a lack of essential vitamins it not only affected the mother in the manner of being underweight but also influences the health of the fetus. Insufficient diet, lack of vitamins doesn't only harm the mother or the child but are also linked with intensive labor pain. As the study indicated that the height/weight ratio of pregnant women affected the pelvic structure that created resistance or hinders the passage of the child from the birth canal. This process induces labor pain which is linked with the nutrition of the weight of the mother.⁵

The results also indicated the professional incompetencies that led to the barriers to effective painless labor. The attitude of the staff toward the patient played a significant role. Also, the childbirth experience affected the internal and external factors of the women. The external factors included the attitude of the staff, attitude of the staff towards the pain experienced by the women, motivation towards childbirth, and education about childbirth affects the extent of labor pain. It is indicated from studies that women who experienced or learned safe childbirth showed low levels of stress as

compared to their counterparts. Labor pain tolerance is also affected by an individual's endurance, acceptance of the pain, and physical condition.¹⁰ The health professionals have no proper knowledge about effectively managing the labor pain due to lack of adequate knowledge, poor attitudes, and availability of resources for painless labor.¹¹

It is also indicated that women are related to multiple psychological factors including different behaviors during labor that affects the pain during the delivery. It is because the women experienced severe physical pain and mental stress that linked with painful and prolonged labor. According to the fear tension pain theory, the body of the women induces more pain if the women experienced fear or stress during labor or at the time of delivery.¹² It is indicated from results the mothers experienced maternal depression and anxiety at the time of delivery that played a significant role in the experience of the painful labor. This is consistent with the study of Junge et al., who explored that women who experienced severe fear at the time

of childbirth have more labor pain as compared to women without fear of childbirth.¹³

The future implications should also include the verbatim of the females regarding the barriers to effective painless labor. The females should also describe the reasons that they perceive the barriers to painless labor.

5. Conflict of Interest

The authors declare no conflict of interest

6. Funding

No external or internal funding was involved in the conduct of this study.

7. Authors' contribution

MR: Concept, data collection, writing up

FS: Data collection

MNI, SZHN: Concept, review

KR: Manuscript writing, data analysis

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