



Maternal Healthcare Information Requirements of First-time Mothers in Puducherry: A Survey

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Abstract:

Healthcare and health promotion are essential because it provides both direction and rationale in guiding & understanding strategic health behaviours, providing care & treatment, and many other related decisions. The concept of maternal health literacy is to determine the ability of women to have knowledge, access and use information that promotes healthy living among the mothers and children. Good healthcare information and the understanding of that information are crucial for the development of health literacy among mothers. This study used a survey method and questionnaire tool to know the requirements of healthcare information of first-time mothers (primigravidas) in Puducherry and the results are presented here. The study assessed the healthcare information needs of 100 first time pregnant women in Puducherry including their awareness and satisfaction with regard to services & programmes provided by the Department of Health and Family Welfare, and also identified the best methods/modes of delivering healthcare information to these mothers. This study also found the barriers in getting required healthcare information that affects pregnant women in Puducherry. This study aims to highlight the role of hospitals in providing maternal healthcare information to first-time mothers in Puducherry during their pregnancy period. Community Health Centres should act as promoting agents to deliver healthcare information to all the uninformed mothers. Dissemination of maternal healthcare information can be done by making it available in written, spoken or electronic form. The information could be available in books, pamphlets, audio, audiovisual or web-based forms.

Keywords: Healthcare, Healthcare Information needs, first-time mothers, modes of Healthcare Information delivery.

INTRODUCTION

The health of a mother and child depends on the healthcare she receives during her pregnancy, delivery, and during the first few weeks after delivery (postpartum period). The health and survival of the newborn is closely linked to the mother; *healthier the mother, healthier the baby*. To assure safe motherhood, all pregnant women should have access to maternal healthcare information and other related services they may need for a safe pregnancy and childbirth. Pregnancy is an essential

phase in a woman's life; it gives social importance to individuals, families, and society. Depending on whether the mother and fetus are healthy or experiencing issues, maternal and neonatal healthcare provides a variety of preventive measures and interventions.

Background

The utilization of maternal healthcare services is associated with improved maternal & child health. This study examined the requirements of maternal healthcare information services for first-time mothers in Puducherry. Healthcare in Pondicherry is delivered through a network of 8 major hospitals, 4 Community Health Centres (CHCs), 39 Primary Health Centres (PHCs), 77 Sub-Centres, 14 ESI Dispensaries, 17 Disease Specific Clinics and a 700 bedded Women & Children's Hospital. Safe motherhood begins with the concept of nutritious food and a healthy lifestyle, which continues with appropriate prenatal and postnatal care. Maternal health information is important to improve the knowledge of women and their partners, to increase the availability of evidence-based services, and improve the communication of health information in the UT, as children and mothers constitute an important and vulnerable segment of the society. The nutritional status of women plays a direct role in the development of the fetus and the health of the woman.

The Government of India has established the Department of Health & Family Welfare, which is responsible for people's health and family welfare in all states, especially for reproductive health; maternal health; paediatric health; rural health services; and information, education & communication.

Secondary healthcare is provided through Community Health Centres (CHCs), which offer advanced medical services to the rural population and dedicated clinics to assist in treating diabetes and hypertension. Government General Hospitals, which serve as the principal referral institution for primary and secondary healthcare in the Union Territory(UT) as well as neighbouring districts in Tamil Nadu, provide tertiary care treatment. Puducherry, Karaikal, Mahe, and Yanam are the centres for four General Hospitals in the UT, which provide specialist and super-speciality treatment to both inpatients and outpatients. The Department of Health and Family Welfare is also responsible for organizing, monitoring, and overseeing all of the state's health agencies and providing maternal healthcare, advocacy for safe delivery, and post-partum care.

Gestational age in pregnancy is counted from the first day of the last menstrual period (LMP) to nine months and 7 days from that date, which is 40 weeks. The first trimester lasts from week one to week twelve, the second trimester from week thirteen to week twenty-seven, and the third trimester from week twenty-eight until delivery. Once a woman is pregnant, she should see a midwife or a doctor on a regular basis, since early and frequent check-ups, also known as prenatal care/visits, are critical to ensure the health of both the mother and the baby. An obstetrician or a midwife will inspect the woman and baby during prenatal care and provide helpful information as well as answer any concerns they may have. Prenatal care entails more than just medical attention; it also involves teaching and counselling on topics such as diet, physical activity, vaccinations, and newborn care. Physical exams, blood pressure checks, blood tests (haemoglobin, blood sugar), urine tests, and serial weight measures are all part of prenatal care. Healthcare professionals may advise additional blood tests and ultrasound scans depending on the stage of the pregnancy. Pre-conception and prenatal care can help prevent difficulties and educate women on how to safeguard their babies and have a good pregnancy.

Need for the Study

It is very important to develop the maternal and child healthcare system in this country. The country should set up a healthcare system that will benefit the health, wellness and quality life of women,

children and families, not just control maternal and child mortality. This study will focus on first-time mothers, who are badly in need of healthcare information not only in Puducherry but all over India. By carrying out this study, we come to know the level of knowledge first-time mothers have with regard to pregnancy, maternal health, child care, and the required information so that the same could be made available to them. Thus, this study is also to examine the existing maternal healthcare information available.

Aim and Objectives

This study aims to ascertain the requirements of maternal healthcare information of first-time pregnant women in Puducherry. The specific objectives are: a) To assess the healthcare information needs of first-time mothers in Puducherry; b) To analyze their awareness and satisfaction with regard to health services & programs already in place; c) To assess the role of health professionals, government and NGOs in providing healthcare information; d) To identify the best modes of delivering healthcare information to first-time mothers; e) To identify the barriers/obstacles in accessing the healthcare information by first-time mothers

Scope and Limitations

The scope of this project is to cover all the required information and services for first-time mothers throughout all stages of pregnancy, including antenatal care, place of an antenatal visit, consults with health providers, facilities offered by hospitals, types of childbirth, diet intake, daily activities, breastfeeding, exercise, medical conditions, channels to deliver healthcare information, problems in getting healthcare information and expectations regarding Governmental and Non-Governmental Organizations. Due to the lack of adequate time, money and manpower, it is not possible to explore all available tools for accountability such as surveys, public hearings, social audits and community-based monitoring. Thus, this study focuses on the experiences of first-time mothers seeking maternity care information with a sample of 100 first-time mothers in Puducherry.

REVIEW OF LITERATURE

Healthcare information refers to a/the consumers' ability to comprehend medical information provided by caregivers or obtained over the Internet, and to utilize that knowledge to make informed decisions about their own course of treatment⁽¹⁾. As a result, healthcare data aids in the improvement of a patient's health, safety, and contentment. Antenatal education, which focuses on information about pregnancy, labour, and baby care skills, improves maternal health literacy⁽²⁾. It also gives women the chance to learn about the many treatment choices available to them, like pain management. Maternal health literacy educates women to make informed decisions throughout their pregnancy and delivery; as a result, it is a crucial and useful tool in providing adequate prenatal care and a healthy and successful pregnancy outcome. Maternity care is provided in the form of a bundle of services supplied through clinics and outreach initiatives. There are also weekly prenatal camps in addition to round-the-clock medical services. Pregnant women should attend prenatal care clinics, health education and nutritional workshops, as well as a nurse and midwife-led vaccination programmes. Increased utilization of basic maternity health services is required to improve maternal health, including antenatal care visits, iron and folic acid supplements, TT (Tetanus toxoid) and other vaccinations, institutional delivery, postnatal visits, and the adoption of family planning methods, among other things. Maternal and child healthcare are mostly provided through government-run PHCs and sub-centres in India's rural areas. In metropolitan regions, services are mostly provided by government hospitals, urban health centres (UHCs), NGOs' nursing homes, and different private-run hospitals, nursing homes, and maternity facilities. India has made considerable progress over the last two decades in this sector, which was further accelerated under the National Rural Health Mission, whose goal is to reduce maternal and child mortality⁽³⁾.

Previous research on factors that affect maternal healthcare consumption in South India has either been focused on one state or the whole area. Using data from a cross-sectional survey, Bhatia and Cleland (1995)⁽⁴⁾ investigated the variables related to the utilization of maternity healthcare in Karnataka's urban and rural districts. Govindasamy and Ramesh (1997)⁽⁵⁾ looked at the impact of maternal education on the use of maternal healthcare services in general in South India. Because of inexperience, women tend to pay more attention to their first pregnancy and are thus more inclined to seek contemporary treatment. Higher-parity women, on the other hand, are more inclined to ignore the need for maternity healthcare^(6,7,8). In the Indian cultural setting, a lady returns to her village to give birth, especially if it is her first pregnancy. Women who are educated are more likely to have better knowledge and information about contemporary medical treatments, as well as a better ability to detect certain illnesses⁽⁹⁾. Women will have more confidence and capability to access contemporary healthcare services for themselves and their children as education empowers them^(10,11,12,13,14). Here educational levels divided into four groups for analysis: illiterate, primary and middle, high school, and above. According to Sachs (2005)⁽¹⁵⁾, healthcare organizations who do not adopt a medical system will find themselves inefficient and ineffective in their workflow. With the use of healthcare information, it is possible to improve maternal health in a country.

METHODOLOGY

This study uses a survey method and questionnaire tool for collecting data. Overall, a questionnaire-based survey is both an effective and efficient way of getting relevant information needed for this study.

Questionnaire Design

The questionnaire contained both open-ended and closed-ended questions used to gather the opinions and views of first-time mothers that came for antenatal consultation at the Rajiv Gandhi Women and Children's Hospital in Puducherry, about maternal healthcare information. The questionnaire consisted of five sections – personal information, awareness and satisfaction, checkups and role of health professionals, best methods of delivering healthcare information and obstacles in getting the healthcare information.

According to the Puducherry City Census 2011 data⁽¹⁶⁾, the total population was 244,377, out of which the female population was 119,430. Since there is no provision to get all first-time mothers' records, the exact number is not known. Due to time constraints, in total, 100 first-time mothers were chosen as a sample and given questionnaires to fill up at PHCs, UHCs and Rajiv Gandhi Women and Children's Hospital, Puducherry. A convenient sampling technique was used in drawing the chosen sample for this project.

DATA ANALYSIS

The data provided by the respondents was processed using Microsoft Excel software. The findings have been organized and presented in the following sections.

Demographics of the sample

The first part of the questionnaire deals with the personal profile of the participants. Here, the information sought included age group, educational background, profession and work description. The majority of the respondents of this survey were between the 18 to 22 years age group, as shown in Table 1. The maximum age was 38 years and the minimum age was 18 years.

Table 1. Demographic Profile of the Sample

| Age group | No. of Respondents | % of Respondents |
|------------------|---------------------------|-------------------------|
| 18 to 22 | 36 | 36% |

| | | |
|-------------------------------------|----|-----|
| 23 to 27 | 1 | 1% |
| 28 to 32 | 16 | 16% |
| 33 to 38 | 4 | 4% |
| 39 and above | 0 | 0% |
| Domicile | | |
| Urban areas | 60 | 60% |
| Rural areas | 32 | 32% |
| Urban slums | 8 | 8% |
| Educational qualification(s) | | |
| Undergraduates | 36 | 36% |
| Diplomas | 8 | 8% |
| High School graduates | 29 | 29% |
| Middle School graduates | 24 | 24% |
| Primary School graduates | 1 | 1% |
| Non-literates | 2 | 2% |

The majority (60%) of the first-time mothers surveyed came from urban areas. Over a third (36%) of the respondents are graduates and 53% have either completed their middle or a high school education and are capable of reading and writing. Over half (55%) of the first-time mothers surveyed were in their second trimester, 32% in their third trimester, and the remaining, in their first trimester of their pregnancy.

Healthcare Information Requirements of Mothers

A) Prenatal Care

Women nowadays have a lot of options when it comes to choosing doctors and hospitals to care for them during pregnancy, labour, and the postpartum period. When choosing a healthcare professional, one thinks about whether their pregnancy is low-risk or high-risk, how involved they want to be in decision-making and their feelings regarding "natural" deliveries and supplemental medicine. One can choose between an Obstetrician, a family/general medicine practitioner, an Auxiliary Nurse & Midwife (ANM), a Certified Nurse-Midwife (CNM) or a Certified Professional Midwife (CPM).

B) Mother's Choice of Place for Prenatal Visits

In Puducherry, the majority (87%) of the mothers normally consult an obstetrician for their prenatal care, as they have received many years of training and are also trained to handle complicated pregnancies and deliveries. Because each pregnancy is unique, prenatal check-ups are essential. The first visit will be beneficial in determining important dates and information. This is also an excellent time to provide a list of questions the mother and her partner will have regarding the pregnancy, prenatal care, and delivery possibilities, among other things. ANMs provide home visits for antenatal care and childcare, as well as to monitor the pregnancy's progress and cure minor ailments. Mothers are educated about childbirth, childcare, breastfeeding, immunizations, family spacing, and home economics. Of the total survey population, more than half (54%) of the mothers had prenatal visits at private hospitals, 35% at government hospitals and a small percentage at CHCs.

C) Frequency of Prenatal Visits

Prenatal Visits are recommended once every 4-6 weeks throughout the first 28 weeks of pregnancy, once every 2-4 weeks from 28 to 36 weeks of pregnancy, and weekly from 36 weeks till birth. Of the total, 74% of first-time mothers had undergone regular medical check-ups and consulted health providers for their prenatal visits. With regards to the intervals of consulting health providers for their medical check-ups, it is found that 82% of mothers consulted once a month, 3% every week, 9% consulted twice a month and 6% consulted once in a trimester. Regular check-ups and

consultations are taken to monitor the health of the mother and their baby. Monitoring includes: i) Good nutrition and health habits before and during pregnancy; ii) Frequent prenatal exams; and iii) Routine ultrasounds to detect any fetal anomalies. In addition to the above, routine screening includes: a) Blood pressure; b) Rh incompatibilities (Rh and ABO); c) Diabetes; d) Genetic disorders; e) Immunity against German measles (rubella); f) Sexually transmitted infections; g) Proteinuria; h) Weight gain; i) Fetal heart rate; and j) Fundal height.

D) Preference of Doctors by Age and Gender

Table 2. Health Provider's age and gender preference

| Age & Gender of the Health Provider | No. of respondents | % of respondents |
|--|---------------------------|-------------------------|
| Female doctor above 35 years | 75 | 75% |
| Female doctor below 35 years | 19 | 19% |
| Male doctor above 35 years | 0 | 0% |
| Male below 35 years | 0 | 0% |
| Not concerned with age and gender | 16 | 16% |

Table 2 shows the preference for age and gender for doctors, by mothers, for their consultations. Of the total, three fourths (75%) of the mothers preferred consulting female doctors above 35 years of age and having a reputed practice and better experience. Since it is their first pregnancy, they take extra precautions in all aspects. Gender preference has various elements that might affect a person's comfort level and lead to judgments about a physician's care or competency when choosing a doctor, including culture, religion, and prior encounters with a male or female healthcare practitioner⁽¹⁷⁾. Knowing that certain groups of patients are more likely to have significant gender preferences in choosing doctors since they may need to discuss sensitive/personal issues with them; yet, research into human desires and concerns will always have limitations^(18,19).

E) Emergency consultations for Mothers

In case of an emergency, the majority (82%) of first-time mothers prefer to consult at a hospital, over a sixth (15%) prefer to go to clinics and a small percentage (3%) prefer to go to health centres. The "3 delays" - the delay in deciding to seek care, the delay in contacting healthcare providers on time, and the delay in receiving effective treatment - are all factors in maternal mortality. The first is the mother's, family's, or community's failure to recognize a life-threatening ailment. The majority of deaths occur during labour or within the first 24 hours after delivery. It is found that 83% of mothers are residents of Puducherry or stay in and around Puducherry, within a radius of 1-10 km from hospitals.

F) Mother's Preference for Place of Delivery and distance of Hospitals

In Puducherry, most (92%) women prefer to deliver at Government hospitals, because these hospitals are fairly large, have extensive technical facilities, treat free of charge and counsel or motivate mothers to have a normal delivery. The second is a delay getting to a healthcare institution, which might be caused by poor road conditions, a lack of transportation, or distance. Many communities lack access to paved roads, and many households lack access to automobiles. Hence, public transportation is the main transportation method for many people in rural areas, which means that it may take hours to reach a healthcare facility. Hence women with life-threatening conditions often do not reach the facility in time. It is found that a nearly fifth (18%) of the mothers rely on public transport to reach the health centres or hospitals.

Table 3. Distance from home to hospital & Mode of transport

| Hospital distance (in Km) | No. of Respondents | % of Respondents |
|----------------------------------|---------------------------|-------------------------|
|----------------------------------|---------------------------|-------------------------|

| | | |
|-------------------------------|----|-----|
| 1-10 | 83 | 83% |
| 11-20 | 14 | 14% |
| 21-30 | 2 | 2% |
| 31 & above | 1 | 1% |
| Mode of transportation | | |
| Walking | 7 | 7% |
| Two-wheeler | 59 | 59% |
| Four-wheeler | 16 | 16% |
| Public transport | 18 | 18% |

The third delay happens at the healthcare institution; women are frequently given insufficient or ineffective treatment when they arrive. The equipment and services required to provide essential treatment for bleeding, infection, or eclampsia may be unavailable in resource-poor countries with shaky healthcare infrastructure. Maternal mortality is caused by treatment omissions, inappropriate treatment, and a lack of critical medications and facilities.

Table 4. Healthcare Information Requirements

| Health information needed during pregnancy | No. of respondents | % of respondents |
|---|---------------------------|-------------------------|
| Dietary information | 63 | 63% |
| Medical information | 56 | 56% |
| Prenatal & Postnatal care | 18 | 18% |
| Hospital information | 20 | 20% |
| Doctors information | 18 | 18% |

Note: Respondents are allowed to tick more than one option, so the total percentage is more than 100

G) Dietary advice during pregnancy

It is essential to consume a healthy and balanced diet throughout the pregnancy period. Weight gain that is either too little or too much might raise the chance of complications later in the pregnancy. According to WHO, a weight increase of 10-14 kg is necessary during pregnancy for women with a normal pre-pregnancy weight^(20,21,22). Most of the meals should be starch-based and protein-rich. 68% of first-time mothers were advised by their healthcare providers on dietary intake. Of the total, 63% of the mothers require information on diet, 56% of mothers require medical information during the pregnancy; a small (18%) percentage of mothers have mentioned that they need information regarding the growth of the baby and baby care; a fifth (20%) of them need information about reputed hospitals, and doctors (18%), to consult in case of any emergency. This information should also be made available to them.

H) Mother's knowledge on Nutrition and Exercise

The food the mother eats should provide all the nutrients for the growth of the baby. It is found that more than half (56%) of first-time mothers have good knowledge on food & nutrition needed during pregnancy. However, 42% of the mothers are not sure about the nutrition needed or know what food & nutrition is, and a small (2%) percentage of them have no idea on what to eat. Therefore, there is a need to educate all mothers on dietary matters to prevent any dietary deficiencies and their related problems.

It is found that with regards to daily activities, over half (55%) of the mothers are mildly active during their pregnancy, over a third (37%) are moderately active, a small percentage (3%) of them is very active and another 5% of them do not have any activities. Exercise is necessary during pregnancy, to strengthen the body. Depending upon the body's anatomy and lifestyle habits of the

person, the type and amount of exercise may vary. 72% of mothers also preferred selecting maternity wear which was comfortable for them.

I) Mothers thoughts/feelings about Pregnancy

It is found that 66% of mothers feel that their appetite is good. Hormonal changes in pregnancy can affect the brain chemistry; hence women are at risk of developing anxiety and postpartum depression, during or after pregnancy; or postpartum psychosis, a few weeks to a few months after the delivery⁽²³⁾.

Pregnancy alters their lives dramatically, especially if it is their first child. Some people adjust to these changes quickly, while others struggle. Even though they are happy about having a baby, it is typical for pregnant women to also feel vulnerable and frightened.

Table 5. Personal feelings about Pregnancy

| Feelings of Pregnant mother | No. of Respondents | % of Respondents |
|------------------------------------|---------------------------|-------------------------|
| Happy | 39 | 39% |
| Tired | 55 | 55% |
| Satisfactory | 16 | 16% |
| Depressed | 0 | 0% |
| Sad | 2 | 2% |
| Stressed | 6 | 6% |
| Angry | 1 | 1% |

Note: Respondents are allowed to tick more than one option so the total percentage is more than 100

J) Mother’s Supportive Healthcare

Care during pregnancy is very important to both mother and baby. To help make sure that their baby will be as healthy as possible, they should follow some simple guidelines and consult with their doctors from time-to-time. There are many more things a pregnant woman will have to be aware of during her pregnancy. It is important that the mother feels happy and satisfied with the care and protection she receives from her partner, family and relatives.

Awareness about Healthcare Information/Education

Breastfeeding

Breastfeeding is the most important method of providing nutrition to young infants, with breast milk providing all the nutrients they need for healthy growth and development, for 4-6 months from birth. Virtually all mothers can breastfeed, provided they have proper guidance, information and the support of their family. It is found that 99% of mothers have adequate knowledge about breastfeeding to their baby. Breastfeeding, child survival, mother’s health, and fertility all have mutually reinforcing impacts, according to both scientific data and programme experience⁽²⁴⁾. Maternal and child health services, as well as nutrition and family planning programmes, are excellent partners in promoting and safeguarding the health and well-being of the entire family. Breastfeeding causes the mother's fertility to return at a later time, resulting in longer childbirth intervals⁽²⁵⁾. Birth spacing allows for the continuance of breastfeeding for the benefit of the child, as well as various additional benefits for both mother and child⁽²⁶⁾. Better nutrition boosts newborn and child survival rates, which leads to longer birth intervals.

Evaluation of Healthcare Information Provided by Government/NGO’s

A) Medical care by Government/NGO

Of the total sample, 55% of the mothers received only medical care or advice from the government or by NGOs, indicating there is an improvement to be made in this area. It is found that 71% of the mothers have always received advice on medicines in all trimesters, but over a tenth (13%) of them have not received any such advice. It is found that the people living in rural areas are missing these

services, so the government should provide such services in rural areas or transport the mothers to Puducherry to receive such services.

B) Weeks of Gestation and Expected problems & their incidence

Table 6. Weeks of Gestation and Expected problems

| Weeks of pregnancy | No. of Respondents | % of Respondents |
|---------------------------|---------------------------|-------------------------|
| 0-8 | 2 | 2% |
| 9-12 | 8 | 8% |
| 13-20 | 3 | 3% |
| 21-28 | 1 | 1% |
| 29-34 | 1 | 1% |
| 35+ | 0 | 0% |
| Expected problems | | |
| Diabetes | 3 | 3% |
| Hypertension | 5 | 5% |
| Infection | 1 | 1% |
| Hemorrhage | 1 | 1% |
| Anemia | 1 | 1% |
| Hypothyroidism | 4 | 4% |

From table 6, it can be seen that 8% of first-time mothers had pregnancy-related problems between their 9-12th week of gestation, including gestational diabetes, hypertension, infection, haemorrhage, anaemia and hypothyroidism.

Best Channels to Deliver Healthcare Information:

Table 7. Best channels to deliver healthcare information

| Channel to deliver healthcare information | No. of Respondents | % of Respondents |
|--|---------------------------|-------------------------|
| Hospitals | 49 | 49% |
| Newspapers | 10 | 10% |
| PHC | 14 | 14% |
| Internet | 24 | 24% |
| TV | 37 | 37% |
| Mobile | 3 | 3% |
| Radio | 1 | 1% |
| Posters | 4 | 4% |
| Midwives | 12 | 12% |
| Magazines | 11 | 11% |

Note: Respondents are allowed to tick more than one option so the total percentage is more than 100

From table 7, it can be seen that 49% of mothers feel that hospitals are the best channels to deliver healthcare information when they come for their checkups and the least preferred source is the radio, with the TV being the next best channel.

Barriers in Accessing Health Information

Table 8. Barriers in accessing health information

| Barriers | No. of Respondents | % of Respondents |
|--------------------|---------------------------|-------------------------|
| Lack of clarity | 76 | 76% |
| Diffusive response | 5 | 5% |

| | | |
|------------------------------------|---|----|
| Lack of flexibility towards others | 4 | 4% |
| Illiteracy | 7 | 7% |
| Others | 1 | 1% |
| No barriers | 7 | 7% |

It is found that the greatest barrier was that 76% of mothers do not have clarity with regard to healthcare information, indicating that they have faced problems in getting the required healthcare information. Of the total, 75% of mothers indicated that hospital libraries should take the lead in arranging lectures, providing training and classes to enhance their knowledge on maternity health, and 69% indicated that hospital libraries should arrange educational films. A small percentage of mothers would like maternity programs and other types of training to be provided by hospital libraries.

Sources to access Healthcare Information

Table 9. Sources to access Healthcare information

| Sources of information | No. of Respondents | % of Respondents |
|------------------------|--------------------|------------------|
| Primary Health Centres | 12 | 12% |
| Doctors | 46 | 46% |
| Hospitals | 22 | 22% |
| Mothers | 63 | 63% |
| Mothers in law | 63 | 63% |
| Other family members | 51 | 51% |
| Library | 7 | 7% |
| Internet | 36 | 36% |
| Others | 2 | 2% |

Note: Respondents are allowed to tick more than one option so the total percentage is more than 100

From table 9, it is found that 95% of first-time mothers indicated that healthcare information is necessary for a healthy life, out of which 63% of mothers approached their mothers and mothers-in-law to get essential healthcare information during their pregnancy. About 51% of these mothers approached other family members and 46% approached their doctors. When first-time mothers undergo labour, they will be in pain & discomfort and go through a lot of emotions, so they look for someone close to them and who also has prior experience. For any woman, their mother comes first and then their mother-in-law. It is found that grandmothers⁽²⁷⁾, mothers^(28,29,30) and mothers-in-law play an important role in providing and accessing healthcare facilities and providers^(31,32) to first-time mothers. Studies in different countries and cultures around the world have found how intra-familial decision-making authority affects a woman's capacity to obtain and use maternal healthcare, notably in India^(33,34), Pakistan^(35,36), and some African countries like Ghana⁽³⁷⁾. Women's lack of decision-making and autonomy, as a result of gender inequality, economic marginalization, and community decision-making & social authority, implies that access to maternity healthcare services is not regarded as important.

Satisfaction of Services Rendered:

It is found that 81% of mothers' state that the Department of Health and Family Welfare provides very good services, 16% stated as fair services, and a small percentage (3%) stated as poor services. Regarding the services provided by the Health Centres in Puducherry, 82% stated that PHCs, and 79% stated that CHCs, provide good services.

DISCUSSION

The accountability for maternal healthcare services is investigated in this study using a human rights framework. It lays out several concrete initiatives that the Pondicherry government should incorporate to better associate accountability into maternal healthcare programmes and ensure that they are implemented throughout the healthcare system. One of the important issues to be considered by these mothers is their place of delivery, which in India is normally at their mother's hometown because all pregnant women have the choice, and with the role of technology as a facilitator, allowing that choice to be exercised safely. There are mixed opinions on their method of delivery and monitoring by professionals among these women. Some respondents believe that pregnancy is always risky and that all pregnant women should give birth in a hospital. Others indicated that for low-risk women and when overseen by qualified experts, home birth might be safe.

In this case, all pregnant women should be provided with the required information to manage their life in pregnancy. In this regard, many studies have been conducted by several researchers to assess the information needs of pregnant women. Their information needs should be identified and taken into consideration while planning educational programs for this group of women^(38,39,40).

Based on the survey, it was found that the maternal health literacy of first-time mothers of Puducherry is low for those mothers who reside in the rural and urban slum areas. First-time mothers also lack basic knowledge and understanding of managing pregnancy. It was found from the survey, that a majority of the families in Puducherry were earning an annual income below 1 lakh. The main barriers to accessing health information were a lack of both clarity and education. Hospital libraries and information centres are the best channels for delivering healthcare information in Puducherry.

Unplanned pregnancy leads to inadequate prenatal care, so women should be educated on having a planned pregnancy. In Puducherry, 51% of couples had a planned pregnancy and most of the respondents were happy for their pregnancy. About 8% of mothers had a previous miscarriage or abortion. The majority of the first-time mothers went for an antenatal check during their 2nd or 3rd month of pregnancy, for which the majority have consulted an obstetrician.

Consulting healthcare providers for regular health checkups help to determine the growth and health of the mother and baby. Dietary advice should be given to the mothers to have nutritious food and get the required protein, vitamins, minerals, calcium and other supplements. The mothers should also be prescribed folic acid and iron tablets. Medical care, information, advice and other services are important for a healthy pregnancy and can be delivered by the government or by NGO's. Regular checkups, immunization, ultrasound scanning should also be done to test if there are any abnormalities in the pregnancy. The health advisors can also give advice on the dos and don'ts during pregnancy.

Delivering health information is very important for medical treatment. Awareness, tips, preventive measures, etc. can be disseminated so that women can consult health providers before having serious complications. Hospitals, newspapers, PHCs, internet, TV, educational films, mobiles, posters, midwives and magazines are said to be the best channels to deliver maternal health information. The availability and significance of maternal healthcare services can be explored via electronic media. The media might also be utilized to raise social awareness and modify public perceptions of modern medical care.

Lack of clarity, dysfunctional responses, lack of flexibility towards others and illiteracy are the obstacles that prevent access to required healthcare information⁽⁴¹⁾. Family situations, economic problems, lack of understanding of technical words and restrictions are other barriers⁽⁴²⁾.

The majority of mothers preferred seeking information from their mothers and mothers-in-law or their friends. During pregnancy, the information which a mother most seeks is on dietary information, medical checkups, prenatal and postnatal care and information about hospitals & doctors. In addition, the mothers suggested access to information on baby's growth, baby care, breastfeeding, and postnatal care.

CONCLUSION

The study focuses on the importance of maternal healthcare information and its utilization by first-time mothers. It is found that first-time mothers in rural areas have attributed lack of availability and accessibility of maternal healthcare information to poor health, timely seeking of medical treatment and complicated delivery. First-time mothers are always excited to know how their baby grows and anxious to know what can be done to have a healthy baby. Hospitals can help these mothers by giving some brief information on how a safe pregnancy should be managed. They should also get an opportunity to interact and clarify their doubts from physicians. From the study, it is understood that several reasons have been put forward to understand why maternal healthcare services are essential. It is found that women's literacy is an important predictor for utilizing maternal healthcare information. Women living in urban and urban slum areas are more likely to seek maternal healthcare services than women from rural areas. Books, pamphlets, audio, audiovisual, and web-based forms can all be used to provide maternal healthcare information.

According to the findings of a recent study, educational and psychosocial interventions are needed to help pregnant women and their families physically and mentally⁽⁴³⁾. By conducting a similar study on a larger scale with first-time mothers all over the country covering south, north, east and west regions and all cultures, religions, communities, etc., it will give the understanding to formulate national policies at the country level. Also, the impact of a mother's independent variables on their dependent variables may be studied to find out many new things which we cannot identify in general studies or surveys. Based on the results, healthcare information kits may be prepared, and again studied to discover their impact on these mothers and find out the best channels of delivery to all mothers.

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