ASSESSMENT OF KNOWLEDGE AND PARTICIPATION OF MALES IN MNCHN SERVICES RESIDING IN SEMI URBAN AREAS OF JAIUR, RAJASTHAN

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

In

Hospital and Health Management

By

PANKAJ KUMAR

Under the supervision and guidance of

DR. DEEPTI SHARMA

2023

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled assessment of Knowledge and participation of males in MNCHN services residing in semi urban areas of Jaipur, Rajasthan is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Name: Pankaj Kumar

Date: 25 May, 2023

CERTIFICATE

This is to certify that dissertation titled Knowledge and participation of males in MNCHN services residing in semi urban areas of Jaipur, Rajasthan is a record of the research work undertaken by Pankaj Kumar in partial fulfillment of the requirements for the award of the degree of MBA in Hospital and Health Management from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

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LIST OF ABBREVIATIONS

1.	ANC	Ante Natal Care
2.	ANM	Auxiliary Nurse Midwife
3.	ASHA	Accredited Social Health Activist
4.	BCC	Behavior Change Communication
5.	BEmONC	Basic Emergency Obstetric and Newborn Care
6.	CEmONC	Comprehensive Emergency Obstetric and Newborn Care
7.	Govt.	Government
8.	ICPD	International Conference on Population Development
9.	IIHMR	Indian Institute of Health Management And Research
10.	MNCHN	Maternal Newborn Child Health Nutrition
11.	MNH	Maternal Newborn Health
12.	PNC	Post Natal Care
13.	Pvt.	Private
14.	SDG	Sustainable Development Goals
15.	SPSS	Statistical Package for Social Sciences
16.	WHO	World Health Organization

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ABSTRACT

Maternal, Neonatal, Child Health and Nutrition (MNCHN) services are crucial in ensuring the wellbeing of mothers, newborns, and children. While much attention has been given to the involvement of women in these services, men also play a vital role in the MNCHN services as fathers, husbands, and caregivers. Evidence shows that the involvement of males in MNCHN services led to an increase in the uptake of antenatal and postnatal care, increased likelihood of exclusive breastfeeding and improving the nutritional status of children. This study aimed to assess the knowledge and participation of males in MNCHN services in semi urban areas of Jaipur, Rajasthan. Purposive sampling technique was used and 120 participants from different semi urban places of Jaipur were interviewed. The analysis of data was conducted using excel and SPSS.

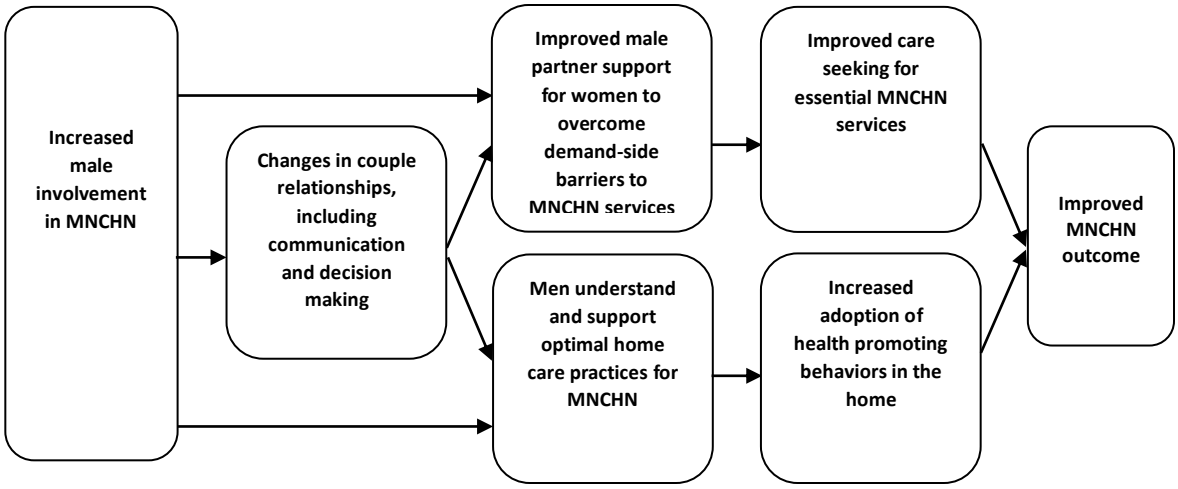
The analysis of data suggests that a major proportion (87 percent) of respondents had heard of MNCHN services, still a quarter of respondents did not accompany their partner to access these services. The major reasons for not accompanying were lack of time due to work obligation and lack of knowledge on importance of MNCHN services. About 89 percent of all participants knew about ANC, but only 8 percent of respondents knew the correct number of ANC visits required during pregnancy, 4 visits. Similarly a small proportion (10 percent) of respondents was aware of PNC. In addition, nearly three-fourth of respondents did not know about pregnancy complications. More than half of the participants responded that no healthcare provider discussed with them regarding importance of ANC/PNC, nutrition during pregnancy and institutional delivery, family planning, importance of breastfeeding and vaccination after childbirth. More than 90 percent of participants would like to participate in the awareness sessions/campaigns on MNCHN to know more about these services.

In conclusion, the survey results showed that men were not very aware of MNCHN services and their participation was also low due to time constraints and lack of knowledge. However, the participants want to know more about these services. Healthcare providers must educate men about the importance of MNCHN services and encourage them to participate in activities related to maternal, newborn, child health and nutrition. By educating men on MNCHN services, healthcare providers can ensure that men have the knowledge and understanding to make informed decisions for their families.

CHAPTER 1: INTRODUCTION

The process of reproduction is the mutual responsibility of men and women. It is assumed that women are the primary source of reproduction and men do not play significant roles in MNCHN activities; that's why it is important to evaluate men's participation and their knowledge about maternity, neonatal, and child health and nutrition services. In recent times, the importance of involving men in Maternal, Newborn, Child Health, and Nutrition services is increasing. Normally, these services are considered only for women because of their roles as mothers and caregivers. Males also have an important role in family planning, the use of ANC, birth preparation, PNC, and child nutrition. Their engagement can lead to better health-seeking habits, more service utilization, greater partner communication, and improved support networks. "Special efforts should be made to emphasize husbands' shared responsibility and promote their active involvement in responsible parenting and reproductive behavior" stated by the International Conference on Population and Development (ICPD, 1994).

Figure 1.1: Explanatory model for the effect of male involvement on MNH outcomes



Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5784936/

However, the role of men in MNCHN has been overlooked, leading to missed opportunities for comprehensive and holistic healthcare. Engaging men in MNCHN services can result in improved health outcomes for women, newborns, and children, as well as promote gender equality and foster positive family dynamics. But, there are numerous barriers that hinder

effective male participation in MNCHN, including cultural norms, gender dynamics, limited awareness, and health system challenges.

MNCHN services stand for Maternal, Newborn, Child Health, and Nutrition services and encompass a range of programs and interventions that aimed at promoting the health and well-being of women, newborns, infants and children. These services address various aspects of healthcare, including reproductive health, antenatal care, postnatal care, immunization, child nutrition, and early childhood development. These services are crucial for ensuring the wellbeing of mothers, newborns, and children, reducing maternal and child mortality, improving health outcomes, and ensuring the overall well-being of individuals and communities.

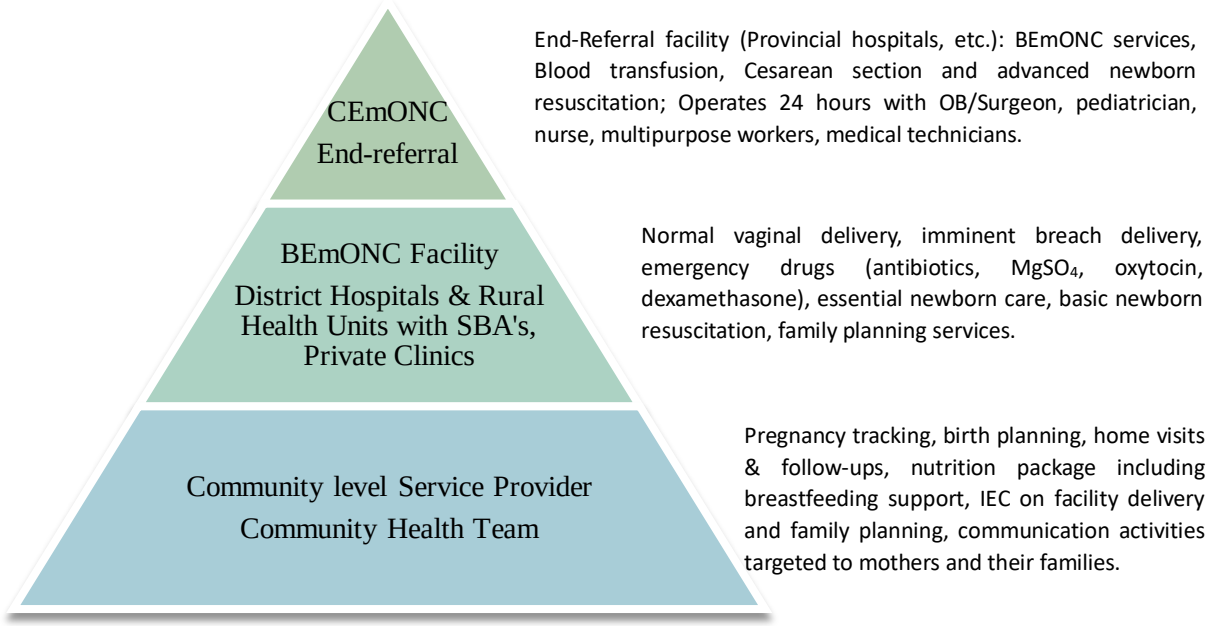
Maternal health is a key component of MNCHN services, focusing on the health and well-being of women during pregnancy, childbirth, and the postpartum period. It includes antenatal care (ANC), where pregnant women receive regular check-ups, screenings, and counseling to monitor their health and the development of the fetus. Antenatal care also involves education and support for healthy practices during pregnancy. Postnatal care (PNC) follows childbirth, providing support and medical attention to women and newborns during the critical early weeks, addressing breastfeeding, postpartum recovery, and newborn care.

Newborn health is another crucial focus area of MNCHN services, aiming to reduce neonatal mortality and improve newborn well-being. This includes promoting safe delivery practices, ensuring essential newborn care immediately after birth, and addressing common issues such as neonatal infections, respiratory problems, and prematurity. Additionally, MNCHN services emphasize the importance of exclusive breastfeeding in the first six months of a newborn's life, as it provides optimal nutrition and contributes to their overall health and development.

Child health services encompass the well-being of children from birth to adolescence. This includes immunization programs to protect children against vaccine-preventable diseases such as measles, polio, tetanus, etc. and play a critical role in reducing child mortality and morbidity. Nutrition interventions are also integral to child health, as proper nutrition is essential for growth, development, and overall health. MNCHN services promote practices such as exclusive breastfeeding, appropriate complementary feeding, and micronutrient supplementation to combat malnutrition and its associated health risks.

MNCHN services are implemented through various channels, including healthcare facilities, anganwadi centers, community-based programs, and outreach initiatives. They involve collaboration between healthcare providers, policymakers, community leaders, and other stakeholders to ensure comprehensive and integrated care.

Figure 1.2: Maternal and Child Health Services Delivery Network



https://www.researchgate.net/figure/Maternal-and-Child-Health-Service-Delivery-Network_fig1_345824660

Involving men's in MNCH services can be helpful in achieving high coverage of antenatal care, institutional delivery, better nutritional status of pregnant women as well as their newborn child .

1.1 AIM

To assess the knowledge and participation of males in maternal, newborn, and child health and nutrition (MNCHN) services whose wife is currently pregnant or currently having children of age 0-1 year.

1.2 OBECTIVES

A) To assess the level of awareness and participation of males in MNCHN services whose wife is currently pregnant or currently having children of age 0-1 year.

B) To identify the factors that influence the men's participation in MNCHN activities and the challenges they face in participating.

C) To provide recommendations to increase men's awareness and participation in MNCHN activities.

CHAPTER 2: REVIEW OF LITERATURE

Sr. No.	Author	Salient Features
I	Mbadugha CJ, Anetekhai CJ, Obiekwu AL, Okonkwo I, Ingwu JA(2019)	The study was conducted in Nigeria with sample size of 145 and purposive sampling technique was used. The study found that male involvement in MNCHN services significantly improved maternal and child health outcomes. The study found that men who were involved in antenatal care and delivery had better knowledge of maternal and child health, were more likely to encourage their partners to seek care, and were more likely to support their partners during childbirth and postpartum. The lack of knowledge on role of male partners during maternity, work schedule of male partner and lack of encouragement to male participation were identified as the major barriers to male involvement in maternity.
II	Alio AP, Salihu HM, Kornosky JL, Richman AM, Marty PJ(2010)	The study suggested that paternal involvement was associated with better feto-infant health outcomes. Specifically, the results showed that infants of mothers who had high paternal involvement had a lower risk of preterm birth and low birth weight. Moreover, high paternal involvement was associated with a decreased risk of infant mortality.
III	Nasreen, H.E., Leppard, M., Al Mamun, M. *et al.*(2012)	The study was conducted in 6 rural districts of Bangladesh with sample size of 7200. The study found that male involvement in MNCHN services led to an increase in the uptake of skilled birth attendance and postnatal care. The study also found that involving men

		in MNCHN services increased the likelihood of exclusive breastfeeding and improved the nutritional status of children. The study also provides evidence that men can learn and improve their awareness on women's and children's health particularly in relation to delivery, essential newborn and postpartum care.
IV	Tokhi M, Comrie-Thomson L, Davis J, Portela A, Chersich M, Luchters S(2018)	A systematic review of 13 studies from nine countries conducted by the World Health Organization (WHO) found that engaging men in MNCHN services can lead to improved maternal and child health outcomes, an increased uptake of postpartum family planning and health services during pregnancy and the postpartum period and home based care practices such as breastfeeding.
V	Rahman, Ahmed Ehsanur & Perkins, Janet & Islam, Sajia & Siddique, Md. Abu & Moinuddin, Mohammed & Anwar, *et al*. (2018).	The study was conducted in rural areas of Bangladesh with a sample size of 317. This study demonstrated that husbands who have knowledge of maternal and newborn health issues were more involved in utilization of relevant service. The husbands' involvement is a key factor associated with women's utilization of skilled MNH services during pregnancy, childbirth and postpartum. The study also found that husbands have a greater awareness of newborn-related danger signs compared to maternal danger signs.
VI	Mullany BC, Becker S, Hindin MJ (2007)	An RCT conducted to investigate the impact of including husbands in antenatal health education services on maternal health practices in urban Nepal has found that the inclusion of husbands in antenatal health

		education services had a positive impact on maternal health practices. The results showed that women in the intervention group had higher rates of antenatal care utilization, including more visits to antenatal care clinics and higher rates of tetanus toxoid vaccination during pregnancy. Additionally, women in the intervention group had higher rates of institutional delivery and were more likely to receive postnatal care services. The results showed that newborns of women in the intervention group had higher rates of postnatal care utilization, including more visits to postnatal care clinics and higher rates of exclusive breastfeeding.
VII	Chattopadhyay A.(2012)	The study was conducted by analyzing NFHS-III data of three states namely Uttar Pradesh, West Bengal and Maharashtra to understand whether the husband's positive knowledge about pregnancy affirms women's availing themselves of ANC and institutional delivery as well as health care decision-making. It was found that large proportion of pregnant women do not have three ANC check-ups, mainly due to lack of pregnancy-related knowledge among their husbands and a strong patriarchal set-up, where the decisions about even the movement of women are in the hands of men.

CHAPTER 3: METHODOLOGY

3.1 RESEARCH QUESTION

What is the level of knowledge and participation of males in maternal, newborn, and child health and nutrition services residing in semi urban areas of Jaipur, Rajasthan?

3.2 STUDY DESIGN

Descriptive cross sectional study. Data was collected from men whose wife was pregnant or have children aged 0-1 years in terms of socio demographic profile and information to determine awareness of MNCHN services and identify factors influencing their participation in MNCHN activities.

3.3 STUDY SETTING

The following places of Amber tehsil of district Jaipur, Rajasthan were selected for data collection:

- Jairampura II & IV
- Chhatarpura
- Ramlyawala
- Deepura
- Tatiyawas
- Rampura I & III
- Akeda Chaud I & II
- Jairampura
- Chhanwar Ka Bas
- Motto Ka Bas
- Chetawala
- Dabri I

3.4 STUDY POPULATION

All married males residing in the above-mentioned places whose wives were either pregnant or delivered within the last year, i.e., from April 2022 to April 2023.

3.5 INCLUSION CRITERIA

- All males whose wives were pregnant
- All males whose wives have delivered within the last year, i.e., from April 2022 to April 2023.

3.6 EXCLUSION CRITERIA

- Men whose wives were pregnant or had children aged 0–1 years that were not willing to participate.
- Men whose wives were neither pregnant nor had children 0–1 years old.

3.7 SAMPLING TECHNIQUE

Purposive sampling of 120 males whose wives were either pregnant or had children aged 0–1 year was done.

3.8 DATA COLLECTION TOOL/ PROCEDURE

A semi-structured questionnaire was used for data collection. All the respondents were briefed about the nature of the study, its purpose, and the process of completing the questionnaire. 120 respondents were interviewed through a semi-structured questionnaire. Only eligible respondents were selected for the interview.

3.9 DATA ANALYSIS TECHIQUE/TOOL

Data collected was checked for any incompleteness or partial filling and analysis was done using Microsoft Excel and SPSS. A univariate analysis was done to find out the level of awareness of males regarding maternal, newborn, child health and nutrition services. A bivariate analysis was conducted to assess the relationship between the various sociodemographic, cultural and religious factors and the participation of males in MNCHN activities.

3.10 ETHICAL CONSIDERATIONS

Informed written consent was obtained from all the study participants. Before beginning the interview, all the participants were informed about the purpose of the study and obtained their consent. If anyone was not willing to be a part of the study, they were not forced by any means. All the participants were explained how their data would be collected, stored, and used, and they were assured of the confidentiality of their data. The data was stored on a secured server with password protection and restricted access.

CHAPTER 4: RESULTS

4.1 Univariate Analysis

A univariate analysis was performed to determine the sociodemographic characteristics of the respondents, which are shown in Table 4.1.

Table 4.1: Sociodemographic characteristics of respondents (N=120)

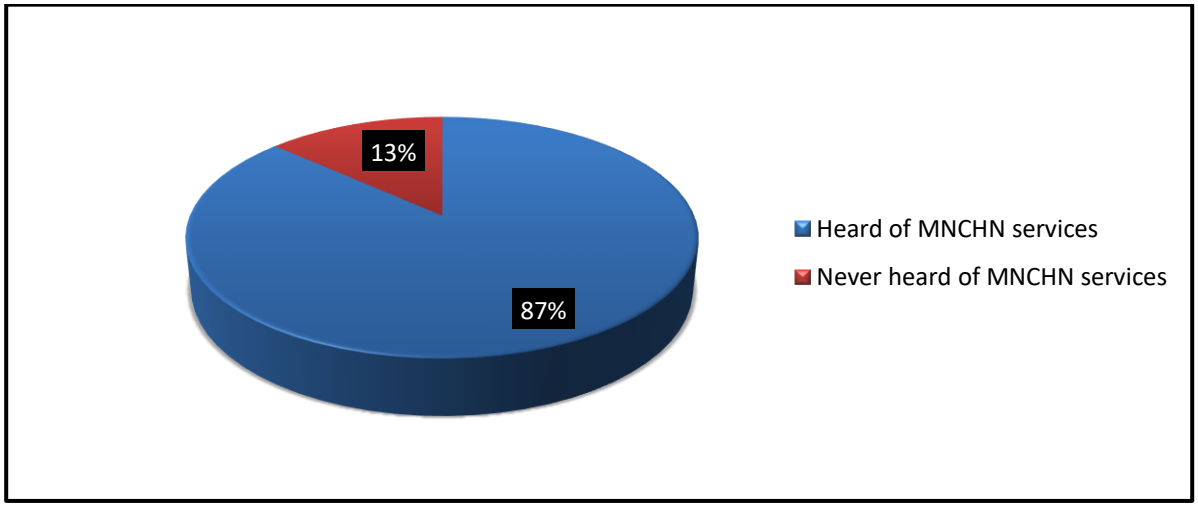
Socio-demographic characteristics	Frequency (N=120)	Percentage
Age (years)		
21-25	16	13.3
26-30	79	65.8
31 and above	25	20.8
Education Status		
Primary level	17	14.1
Secondary	34	28.3
Higher Secondary	32	26.7
Graduate and above	37	30.8
Religion		
Hindu	119	99.2
Muslim	1	0.8
Occupation		
Daily laborer	26	21.7
Agriculture	24	20.0
Business	15	12.5
Service industry	52	43.3
Professionals	3	2.5
No. of Children		
0	11	9.2
1	39	32.5
2	58	48.3
3	12	10.0

The table 4.1 shows that almost two-thirds of the respondents belong to the age group of 26 to 30 years and one-fifth belong to the age group of 31 years and older.

The analysis of the respondents' educational status shows that almost a quarter of the respondents had secondary education. In addition, almost the same percentage of respondents had higher secondary education. About 30 percent of all respondents were graduated or above level educated. Almost all (99 percent) of respondents were Hindu by religion.

The analysis of occupations shows that day laborers accounted for one-fifth of the respondents. One-fifth of the respondents were engaged in agriculture. The largest proportion (43 percent) of respondents was employed in the service sector. A negligible proportion (3 percent) of respondents belonged to professionals. The analysis of the number of children they had shows that almost half of the respondents had two children, and almost one-third was the father of single child. About nine percent of the respondents' wives were pregnant for the first time, and 10 percent of the respondents had three or more children.

Figure 4.1: Men ever heard of MNCHN services (N=120)



Analysis of the above chart shows that a large proportion (87 percent) of total respondents had heard of maternal, newborn, child health, and nutrition services, while a small proportion of respondents (13 percent) had never heard of these services. The analysis regarding source of information on MNCHN services shows that out of those who had ever heard of MNCHN services, anganwadi workers were the source of information for two-third of respondents, and nearly half of the respondents had heard about MNCHN services from healthcare workers (Doctors, nurses, ANMs, ASHAs). Also, nearly 22 percent got the

information about MNCHN services through social media and about 17 percent of respondents had heard of these services either from their wife, friend or family.

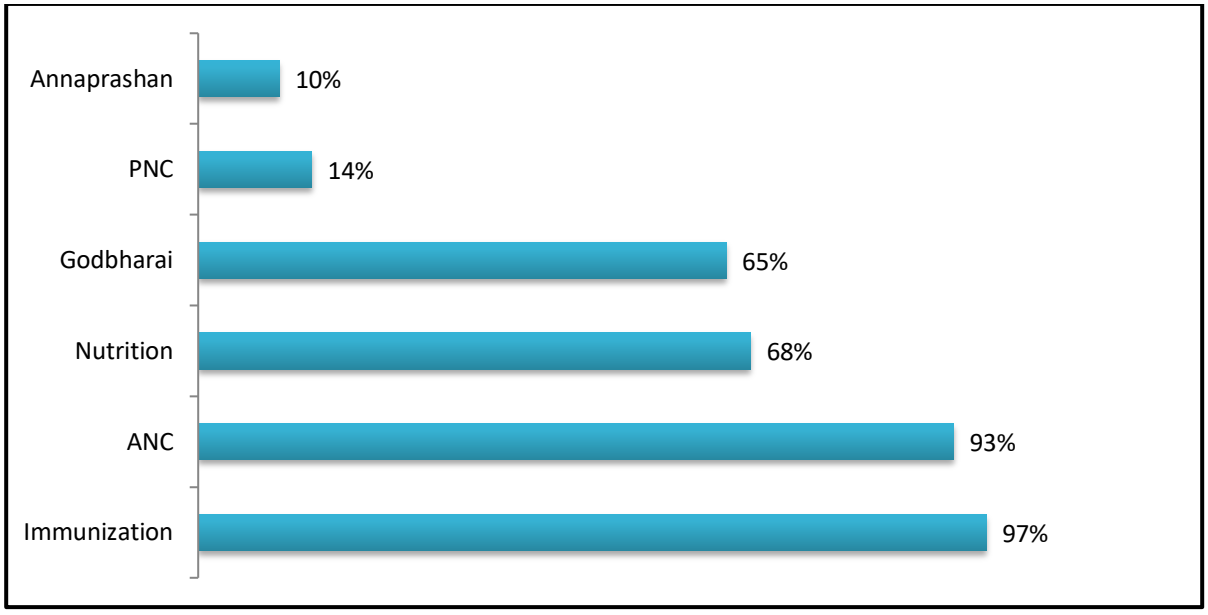
Table 4.2: Interaction with MNCHN awareness activities

Response	Percentage of respondents (N=104)
Road play/Puppet show/Skit about MNCHN	2.9
Seen any Wall painting or hoarding about MNCHN	20.2
Discussed with healthcare worker/Professional about MNCHN	1.9

Table 4.2 shows that of those who had heard of MNCHN services, one-fifth had seen wall paintings or posters about MNCHN in the past few months. A small proportion (three percent) of them had also seen a street play/skit about MNCHN services. Only two percent of those who had heard about MNCHN services talked to health workers or professionals about MNCHN.

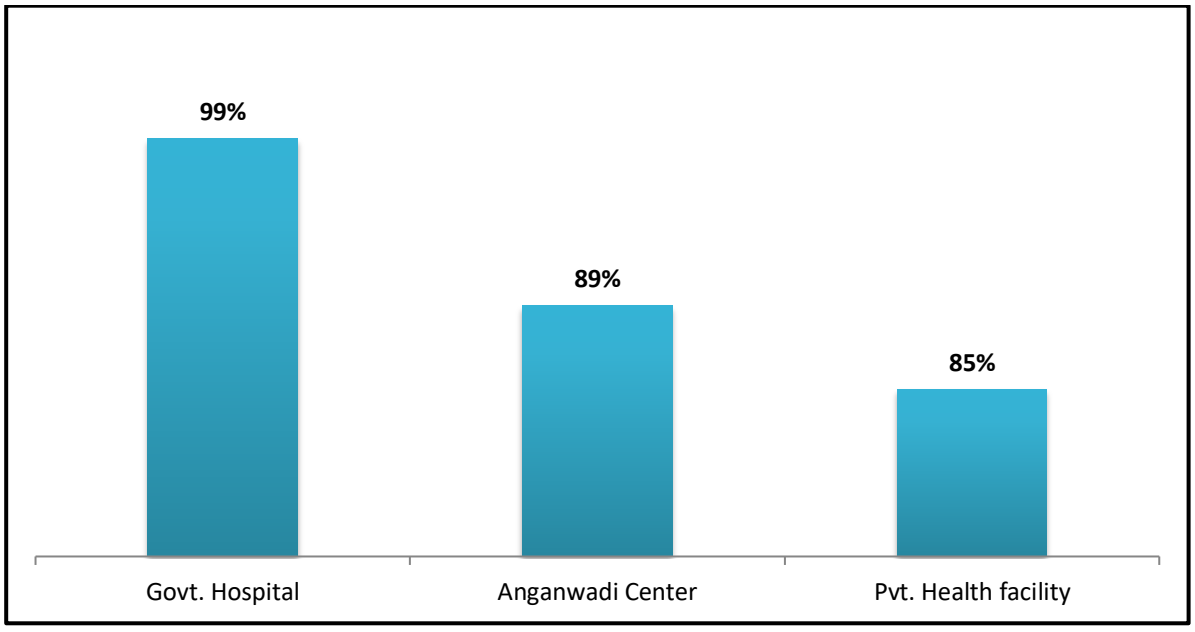
Analysis of knowledge about services provided under MNCHN shows that of those who have ever heard of these services, more than 90 percent of them know about ANC and immunizations as shown in figure 4.2. In addition, about two-thirds of respondents knew that nutrition and Godbharai were offered under MNCHN services. Furthermore, the proportion of respondents who knew about PNC and Annprashan were 14 percent and 10 percent respectively.

Figure 4.2: Knowledge of availed MNCHN services (N=104)



Analysis of knowledge of services provided during ANC visit suggests that a large proportion (84%) of respondents believed that screening for diseases is performed during ANC, while almost two-thirds of respondents indicated that vaccination of pregnant women is performed at ANC. In addition, a quarter of respondents believed that minor illnesses were treated during ANC. Only a very small proportion (three percent) believed that educational and counseling services were also provided during the ANC visit.

Figure 4.3: Knowledge of places to avail MNCHN services (N=104)



The analysis regarding knowledge of places where MNCHN services can be accessed shows that almost all respondents knew the places where they can access MNCHN services as shown in figure 4.3. In addition, almost all participants (99 percent) responded that they can avail MNCHN services at the government hospital. About 89 percent of the respondents knew anganwadi centers and 85 percent of the respondents knew private health facilities to avail MNCHN services. A negligible proportion (one percent) recognized pharmacy as the place to avail MNCHN services.

Further analysis of the data shows that the major proportion (87 percent, N=104) of those who had ever heard of MNCHN services accompanied their partner to avail these services; of these, 79 percent (N=90) accompanied their partner because the family/partner needed it, and one-fifth of respondents accompanied because no one was available in the family as shown in table 4.3.

Table 4.3: Reasons for accompanying partner for MNCHN services

Responses	Frequency (N=90)	Percentage of respondents
Family/Health needs of partner	71	79.9
Motivated by awareness campaigns and education	2	2.2
Motivated by personal experience	1	1.2
No one else available	18	20.0
Any other(Specify)	13	14.4

About 14 percent gave as reasons that they felt it was their responsibility; that they could make better decisions; that it was better for the health of the mother and child, that the health facility was far away, and that they wanted to know more about MNCHN services. A few of the respondents (two percent) were motivated by awareness campaigns to accompany their partner to seek MNCHN services.

About 13 percent of respondents who had heard of MNCHN services did not accompany their partner to avail MNCHN services. Table 4.4 shows respondents' reasons for this decision. The main reason due to which they did not accompany their partner to MNCHN services was lack of time (93 percent, N=14). About one-fifth of respondents did not accompany their partner because they did not know about the importance of MNCHN services. Cultural or religious beliefs were the reasons cited by seven percent of respondents, and an equal number of respondents did not feel comfortable talking about women's health issues.

Table 4.4: Reasons for not accompanying for MNCHN services (N=14)

Response	Frequency (N=14)	Percentage of respondents
Lack of time	13	92.9
Lack of knowledge about the importance of MNCHN services	3	21.4
Cultural or religious beliefs	1	7.1
Not comfortable discussing women's health issues	1	7.1

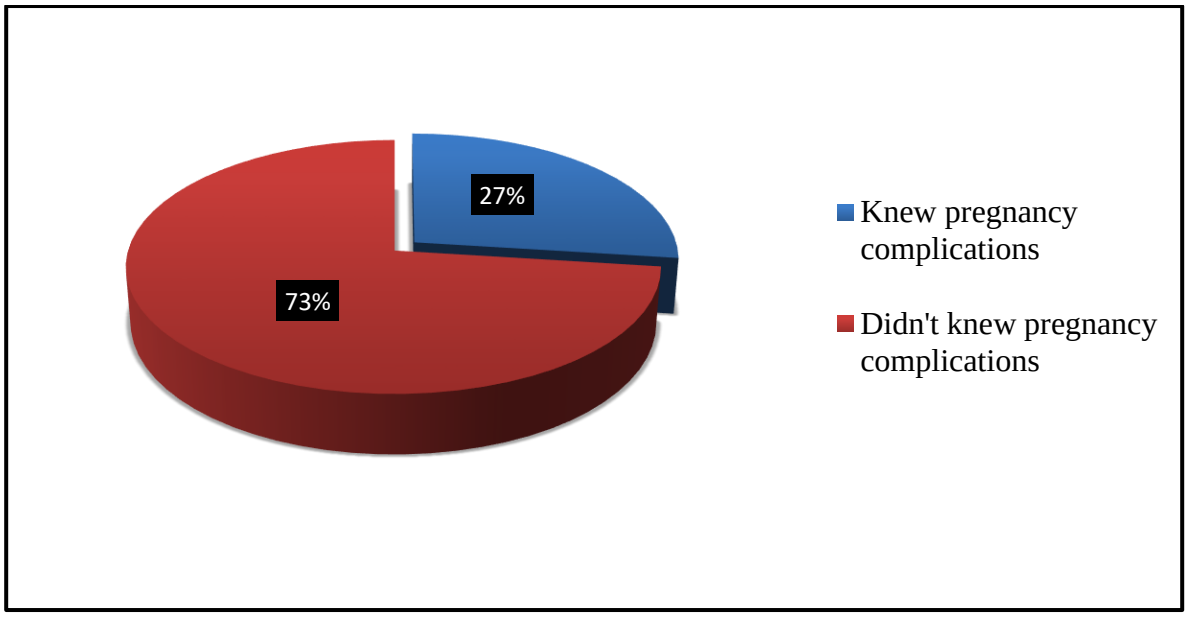
About 16 percent (N=90) of those who accompanied their partner to access MNCHN services faced barriers/challenges in accessing these services; of these, distance and lack of transportation to health facilities were the most significant barrier (93 percent). The other barriers were lack of/inadequate availability of health workers and overcrowding at facilities.

About 89 percent of all participants knew about ANC, but only 8 percent of respondents knew the correct number of ANC visits required during pregnancy, 4 visits. Similarly, only 11 percent of participants knew about postnatal checkup, and of them, none knew the minimum number of PNC visits required after child birth.

The analysis regarding knowledge of complications during pregnancy shows that only quarter of respondents knew about the complications that can occur during pregnancy as

shown in figure 4.4; of these, almost three-quarters of respondents recognized severe swelling, redness, or pain in the legs/arms as complications during pregnancy, severe abdominal pain by two-thirds of respondents, and vaginal bleeding and prolonged labor were recognized by almost 15 percent of respondents as complications during pregnancy.

Figure 4.4: Knowledge about complications during pregnancy (N=120)



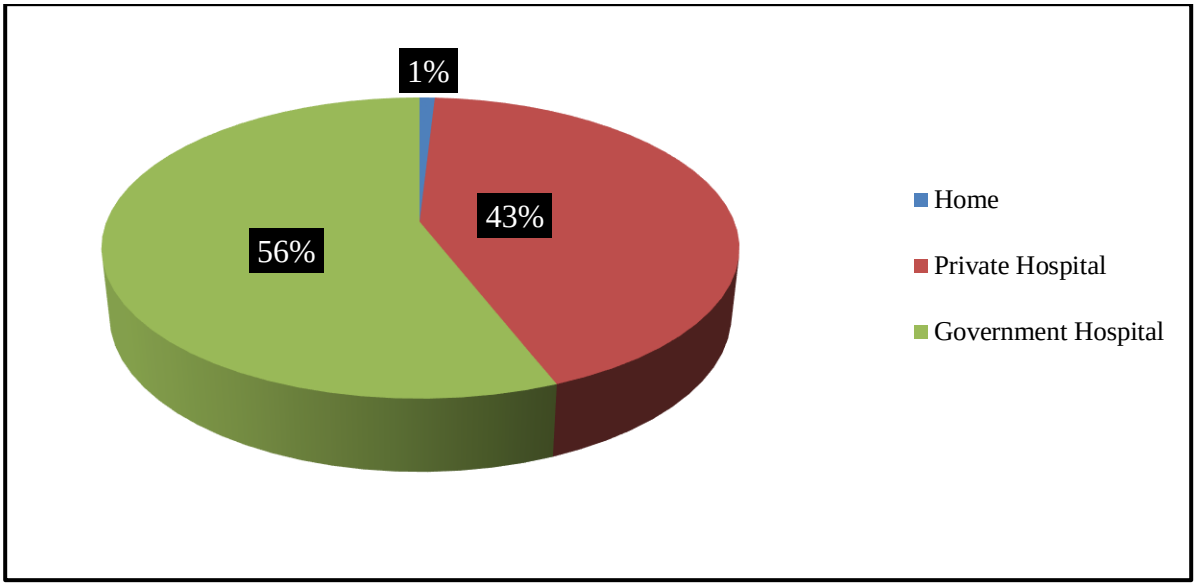
About 43 percent (N=120) of respondents reported that health workers had dealt with them when their wife was pregnant or after giving birth. Of these, 94 percent were counseled about infant immunization and 82 percent about ANC and PNC as shown in table 4.5.

Table 4.5: Percentage of respondents counseled on maternal and newborn care

Counseled by healthcare worker on importance of	Percentage of respondents (N=51)
Child immunization	94
Importance of ANC/PNC	82
Benefits of institutional delivery	27
Family planning	18
Breastfeed immediately after delivery	12

About a quarter of respondents said they had talked about the benefits of institutional delivery. About 18 percent of respondents were counseled about family planning and 12 percent were counseled about the benefits of colostrum feeding for newborns.

Figure 4.5: Place of birth of respondent's children (N= 109)



Analysis of the data shows that only one respondent had a child born at home. Of those whose child was born in health facilities, 44 percent were born in private health facilities and the rest in government health facilities.

Further analysis of the data shows that 15 percent of the respondents did not know about the mamta card. In addition, about 93 percent of respondents said they knew the normal birth weight of a baby, but only half of them knew what weight is normal i.e. 2500-4000 grams for a newborn.

Almost all respondents felt that men should be involved in MNCHN activities. The main reasons they gave were that it was their responsibility (63 percent) to improve maternal and newborn health and to increase their knowledge (18 percent each). In addition, 98 percent of respondents felt that community awareness and education campaigns could be useful in increasing male participation in MNCHN activities. The respondents also believed that providing male-friendly MNCHN facilities (46 percent) and providing flexible hours for MNCHN services (30 percent) can increase male participation in these activities. About 10 percent of respondents believed that male participation can be increased through incentives, use of social media such as Whatsapp groups, and wife education.

4.2 Bivariate analysis

Bivariate analysis was conducted to determine the relationship between respondents' sociodemographic characteristics and their knowledge of and participation in MNCHN services.

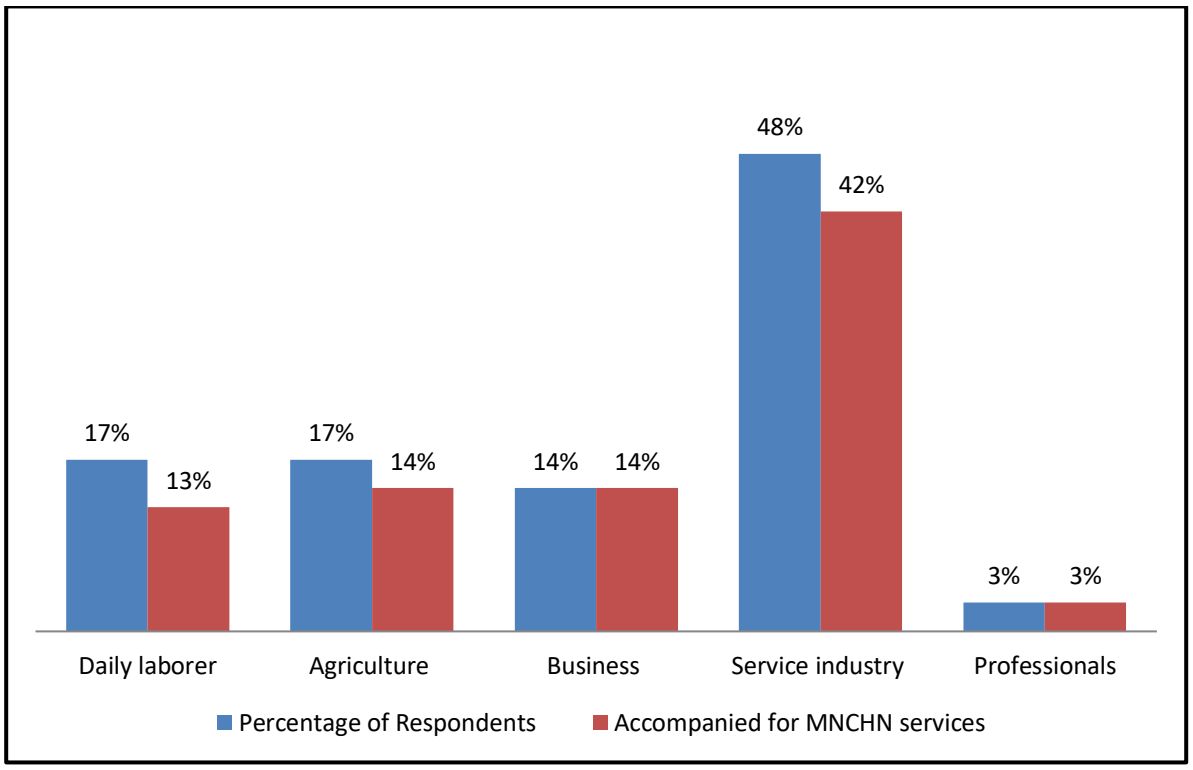
Table 4.6: Relationship between Education status and Knowledge of MNCHN services (N=120)

			Have you ever heard of MNCHN services?		
			a) Yes	b) No	Total
Education Status	a) Primary level	Count Heard of MNCHN services	9 7.5%	8 6.7%	17 14.2%
	b) Secondary	Count Heard of MNCHN services	29 24.1%	5 4.2%	34 28.3%
	c) Higher Secondary	Count Heard of MNCHN services	31 25.8%	1 0.8%	32 26.7%
	d) Graduate and above	Count Heard of MNCHN services	35 29.2%	2 1.6%	37 30.8%
Total		Count Heard of MNCHN services	104 86.7%	16 13.3%	120 100.0%

It can be inferred from the above table that about 87 percent (N=120) of respondents had heard of MNCHN services. The percentages of respondents with primary, secondary, higher secondary, and university degrees and above were 14, 28, 27, and 31 percent, respectively. About 8 percent of respondents with primary level education were aware of MNCHN services. About a quarter each of respondents with secondary and higher secondary level education were aware of MNCHN services. Around 29 percent respondents having knowledge of MNCHN services were Graduate and above level educated.

Figure 4.6 clearly illustrates the relationship between respondents' occupation and participation in MNCHN services. The x-axis represents the percentage of respondents (N=104) and the occupation is represented by y-axis. The blue column in graph is representing the percentage of respondents and red column is representing percentage of respondents who had accompanied their partner for MNCHN services.

Figure 4.6: Relationship between Occupation and accompanying to MNCHN services (N=104)



The data suggests that, of the total respondents, each, daily laborers and respondents with agricultural occupation accounted for one-fifth of the total respondents. However, only 13 and 14 percent respondent respectively had accompanied their partners to access MNCHN services. Respondents who were business owners and professionals, all participated in MNCHN activities. About 42 percent of the respondents were employed in the service industry and had accompanied their partners to access MNCHN services.

Figure 4.7: Relationship between Education level and knowledge about ANC (N=120)

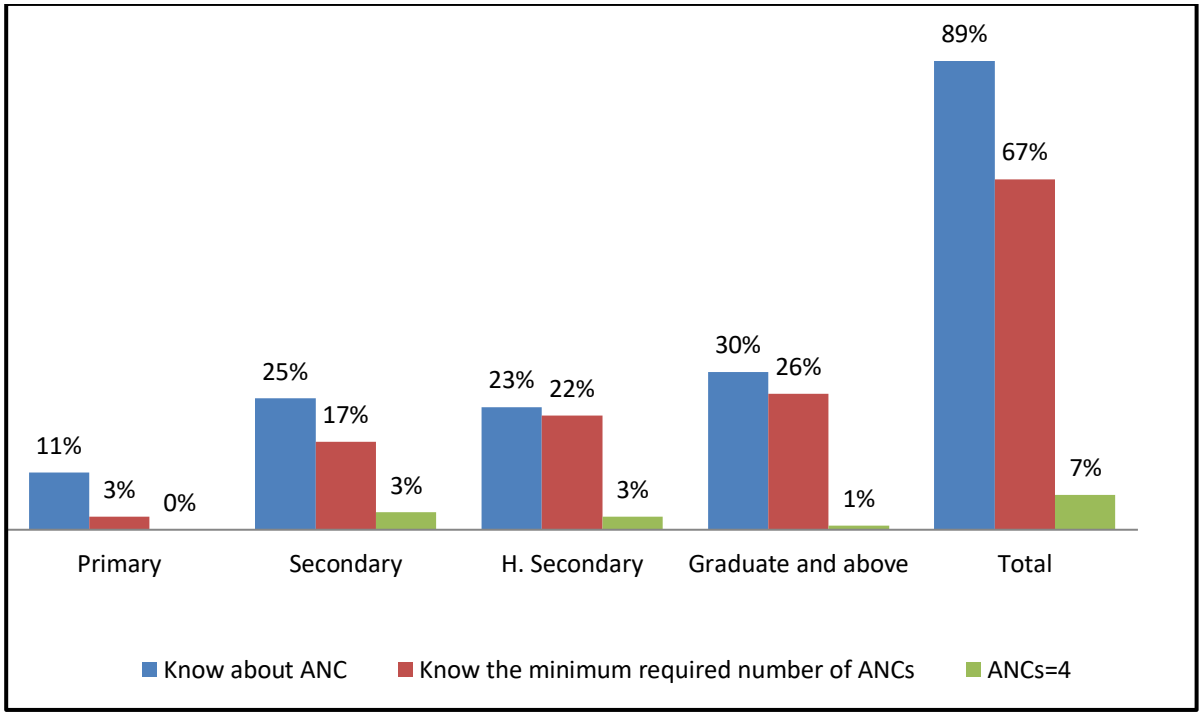


Figure 4.7 demonstrates the relationship between education status and respondents' knowledge about ANCs. The x-axis shows the education level of respondents and the y-axis is showing the percentage of respondents. The graph shows that respondents who have university education have a higher percentage of knowledge about ANCs than those with lower educational levels. As the educational level decreases, the knowledge about ANCs also decreases. This indicates that education has an important role in increasing knowledge about ANCs.

Overall 89 per cent of respondents knew about ANC and two-thirds knew the minimum number of ANC visits required during pregnancy, but only seven per cent gave the correct answer about the minimum number of ANC visits required during pregnancy i.e. 4 visits. 11 percent primary level educated respondents were aware of ante natal checkup but no one knew the correct number of visits. Around a quarter of respondents having secondary level education knew about ANC but only three percent were aware of exact number of ANC visits required during whole pregnancy.

CHAPTER 5: DISCUSSION

The International Conference on Population and Development (ICPD) in Cairo in 1994 first time recognized the importance of male involvement in reproductive health and called for their active participation in promoting maternal, newborn, child health, and nutrition (MNCHN) services. The United Nations in 2015 has set a target for all countries to reduce maternal mortality to less than 70 per 100,000 live births by 2030 (SDG 2030). India has also declared its commitment to achieve these targets. Evidence shows that when men are involved in MNCHN services, they can provide better support to women and their families during and after childbirth. Men can also play an important role in increasing awareness and understanding of health services, as well as helping to reduce the likelihood of pregnancy-related complications. This study aims to understand the level of knowledge of men regarding MNCHN services.

The study revealed that despite that a large portion of respondents had heard of MNCHN services, a third of them still did not accompany their partners to access these services Furthermore, the majority of respondents only accompanied their partners for immunization and antenatal care, particularly for ultrasound and blood tests, and a few had accompanied their partner for postnatal care. This indicates that, while there is a good awareness of MNCHN services among the population, there is still a need for better utilization of these services, especially in the context of postnatal care. About a quarter of the respondents accompanied their partner to health facilities as there was no one else available at home to take them. Only a negligible proportion of the respondents were motivated by awareness campaigns. This issue can be addressed through better education and awareness campaigns. The most common reason for not accompanying was lack of time due to work commitments, followed by lack of awareness of the importance of MNCHN services. This suggests the need of strategies to raise men's awareness of the importance of maternal, newborn, child health and nutrition services. In order to increase the awareness on MNCHN services, it is important to provide more flexible work hours and consider other ways to raise awareness, such as through public forums or media campaigns. The study also found the association of education and knowledge of MNCHN services and the results are statistically significant (**$\alpha<0.05$**). As the educational level increases, the percentage of respondents having knowledge about MNCHN services also increases. The percentage of respondents who knew

about these services is lower for respondents having primary and secondary level education as compared to the respondents having graduation degree.

A small proportion of respondents faced barriers to accessing MNCHN services, with the main barrier being the distance of the health facilities and lack of transport.

The survey results indicate that while the majority of respondents were aware of ANC, only 8% knew the exact number of ANC visits recommended during pregnancy. Furthermore, the majority of survey participants were not aware of PNC and of those who did know about it, none could accurately state the number of PNC visits required after childbirth. This indicates that there is a need for greater awareness and education about both ANC and PNC those with higher levels of education had a greater understanding of ANC than those with lower educational qualifications. This disparity was most noticeable amongst those who had graduated from university or college, with a greater percentage of these individuals being aware of ANC than those without such a qualification, indicating a strong link between higher education and the knowledge of ANC. This indicates that higher education can play an important role in improving awareness of ANC and its implications. However, there is a large gap between the percentage of respondents who know about ANC and the prescribed number of visits required during pregnancy.

Only half were aware of the recommended period of exclusive breastfeeding. This is concerning because exclusive breastfeeding is one of the most important sources of nutrition for infants, and is recommended for the first six months of a baby's life. WHO and UNICEF recommend exclusively breastfed for the first 6 months of life to ensure optimal growth, development, and health. No other food or liquids, including water, should be provided.

Only one-quarter of respondents were aware of potential pregnancy complications. This lack of knowledge could lead to a range of serious health issues for both the mother and the unborn child. It is essential that husband have access to accurate information on the risks associated with pregnancy to ensure they can make informed decisions about their partner's health. So, it is important to promote awareness of potential pregnancy complications. This could be done through public health campaigns, social media, or even through health care providers.

More than half of the respondents did not receive any communication from healthcare professionals during their partner's pregnancy. This is a concerning, as it suggests that many

expecting parents are not receiving the necessary information and support they need during and after childbirth. Without any form of guidance from healthcare professionals, expecting parents may not be able to adequately prepare for the arrival of their baby.

While majority of respondents were aware of the normal weight of a newborn baby. However, only half of them gave the correct answer i.e. 2500-4000 grams. This suggests that there is room for improvement in terms of educating parents on the normal weight of newborns.

Almost every respondent agrees that men should be involved in maternal, newborn, child health and nutrition (MNCHN) services. The involvement of men in MNCHN services is not only beneficial for the health of mothers and newborns, but also for the overall health of the family unit. The inclusion of men in MNCHN services can have a positive effect on the health of mother and newborns. Involving men can increase awareness of the importance of MNCHN services, improve access to MNCHN services and support women during and after pregnancy. In addition, the presence of men in MNCHN services can help reduce gender inequalities and promote the health of all family members. Furthermore, the involvement of men in MNCHN services can help to strengthen the bond between men and women, improve communication between partners, and lead to better decisions regarding health care-seeking behaviors.

CHAPTER 6: CONCLUSION

The survey results have highlighted the current level of knowledge of men regarding MNCHN services and their participation in these activities. It is widely understood that in order to provide comprehensive care, males must participate in maternal, newborn, and child health and nutrition (MNCHN) activities. The care provided to families would be incomplete without male engagement since men are an important component of the family and their active participation is necessary for effective health outcomes. Men are directly responsible for the wellbeing of their families since they frequently have to make decisions for their wives and children. Men are also in responsible for supporting their families financially and emotionally, which is crucial for quality medical care.

Recognizing the crucial role that males play in the health and well-being of their families, efforts should be made to enhance their knowledge and encourage their active participation. Advocacy and awareness campaigns should challenge the barriers, emphasizing the benefits of male involvement. Strengthening health systems by providing flexible hour and male-friendly services, ensuring privacy, and training healthcare providers in engaging with men will facilitate their active participation. Collaboration between various sectors, including health, education, and social sectors, is essential to create a supportive environment for male involvement. Engaging community leaders and men's groups can foster a culture of male participation in MNCHN services. Enhancing male knowledge and participation will contribute to improved health outcomes for women, newborns, and children, ultimately promoting the overall well-being of families and advancing gender equality in reproductive health.

In order to involve men in MNCHN services, healthcare providers must take a gender-responsive approach to care. This means that providers must recognize the gender-specific roles men and women play in the process of providing care. Providers must also strive to reduce any barriers that prevent men from accessing services, such as language barriers, cultural norms, and stigma.

In addition to providing services, healthcare providers must also educate men about the importance of MNCHN services. This can be done by providing information on the benefits of MNCHN services and how these services can positively impact their families. By

educating men on MNCHN services, healthcare providers can ensure that men have the knowledge and understanding to make informed decisions for their families.

Overall, without involving men in MNCHN services, comprehensive care cannot be achieved. Healthcare providers must take a gender-responsive approach to care and educate men about the importance of MNCHN services in order to ensure that men are actively involved in the process. This will ultimately result in better outcomes for families, as comprehensive care is essential for successful health outcomes.

RECOMMENDATIONS

It is clear that men's participation in MNCHN services enhanced the number of prenatal and postnatal visits, the chance of exclusive breastfeeding, and the nutritional status of children. To increase knowledge and participation of males in Maternal, Newborn, Child Health, and Nutrition (MNCHN) services, here are some recommendations:

a) Educational campaigns to raise awareness among males about importance of MNCHN services. Mediums such as TV, social media and community outreach can be used to spread the information about benefits of males' involvement and the roles they can play in improving the maternal and child health.
b) Providing male friendly maternal, newborn, child health and nutrition services and encouraging male participation in MNCHN activities.
c) Collaboration between various sectors, including health, education, and social sectors, is essential to create a supportive environment for male involvement.
d) Organizing workshops, seminars, and group discussions that especially address the participation of men in MNCHN programmes.
e) Providing flexible hours for MNCHN services for those who do not participate because of lack of time due to work commitments.
f) A culture of male engagement in MNCHN services may be promoted by including community leaders and men's groups.
g) Increasing the number of male health workers, including doctors, nurses, and community health workers, in MNCHN services. This will help in creating a more comfortable environment for male participants and improve their willingness to engage in discussions on MNCHN.

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ANNEXURES

INFORMED CONSENT

I would like to thank you for giving your time for this interview. My name is Pankaj Kumar and I'm from IIHMR University, Jaipur and currently doing my internship from Mamta Health Institute of Mother and Child (MHIMC), Jaipur. I would like to talk to you about maternal, newborn, child health and nutrition services. There is no benefit for you as a part of this research. The interview will take about 10 to 15 minutes. The answers and information you give us will be kept completely confidential. You do not have to talk about anything that you don't want to. Please feel free to pause when required and if you wish to end the discussion.

Are you willing to participate in the interview?

Name-

Address-

Date -

SURVEY QUESTIONNAIRE

BACKGROUND CHARACTERISTICS

1. How old are you at your last birthday? (age in completed years)

2. What is your education status?
    a) Illiterate
    b) Primary level (1-5)
    c) Secondary (6-10)
    d) Higher Secondary (11-12)
    e) Graduate and above

3. What is your religion?
    a) Hindu
    b) Muslim
    c) Other(Sikh, Jain, Christian)

4. What is your occupation?
    a) Agriculture
    b) Daily laborer
    c) Business
    d) Service industry
    e) Professionals

5. How many children do you have?
    a) 0
    b) 1
    c) 2
    d) 3
    e) More than 3

AWARENESS AND PARTICIPATION

1. Have you ever heard of MNCHN services? -- If no, skip to Q.15
    a) Yes
    b) No

2. Where did you come to know about it?
    a) Wife
    b) Health worker
    c) Friend/relative
    d) Poster/pamphlet/painting
    e) Social media
    f) Other (please specify)

3. In the last few months have you seen any:
    a) Road plays/Puppet show/Skit about MNCHN?
    b) Seen any WALL PAINTING or HOARDINGS about MNCHN?
    c) Discussed with Healthcare Worker/Professional about MNCHN?

4. Which of the following services are provided in MNCHN as per your awareness? (Multiple responses)
    a) ANC
    b) PNC
    c) NUTRITION
    d) GODBHARAI
    e) ANNAPRASHAN
    f) IMMUNIZATION
    g) ANY OTHER(Specify)

5. Do you know what services are provided under ANC?
    a) Screening for diseases
    b) Education and counseling
    c) Treatment for minor ailments
    d) Immunization
    e) Any other(Specify)

6. Do you know of a place where you can obtain MNCHN services? If no, skip to Q.8
    a) Yes
    b) No

7. Where is that place?
    a) Anganwadi Center
    b) Govt. Hospital
    c) Pvt. Health facility
    d) Local Vaidya/Hakim
    e) Others (Specify)

8. Have you ever accompanied your partner to access MNCHN services? -- If no, skip to Q.13
    a) Yes
    b) No

9. If yes, what motivated you to accompany your partner for MNCHN services?
    a) Motivated by awareness campaigns and education
    b) Motivated by personal experience
    c) Family/Health needs of partner
    d) Any other(Specify)

10. What MNCHN services did you go for? (Multiple responses)
    a) ANC
    b) PNC
    c) NUTRITION
    d) GODBHARAI
    e) ANNAPRASHAN
    f) IMMUNIZATION
    g) ANY OTHER(Specify)

11. Have you ever faced any barriers or challenges in accessing MNCHN services? -- If no, skip to Q. 14

a) Yes
b) No

12. What are the major challenges/barriers?
    a) Distance and lack of transportation to healthcare facilities
    b) No/Inadequate healthcare workers available
    c) Language barriers between the healthcare providers and you
    d) Cultural or religious beliefs
    e) Other (Specify)

13. What are the reasons for not accompanying them? (Multiple responses)
    a) Lack of time
    b) Lack of knowledge about the importance of MNCHN services
    c) Cultural or religious beliefs
    d) Not comfortable discussing women's health issues
    e) Any Other (Specify)

14. What do you think are the common reasons for lack of involvement of men in MNCHN activities in your community?
    a) Cultural or traditional beliefs
    b) Lack of awareness or education
    c) Time constraints or work obligations
    d) Lack of access to MNCHN services
    e) Any other (Specify)

15. Do you know about anti natal checkups? If no, skip to 18
    a) Yes
    b) No

16. Do you know the minimum number of ANC visits required for your pregnant wife/when your wife was pregnant? If no, skip to 18
    a) Yes
    b) No

17. If yes, then how many?
    a) <3
    b) 3
    c) 4
    d) >4

18. Do you know about post natal checkups? If no, skip to 20
    a) Yes
    b) No

19. What is the minimum no. of PNCs required after delivery of baby?
    a) <3
    b) 3
    c) 4
    d) >4

20. Do you know for how long the baby should be exclusively breastfed?
    a) Less than 6 months
    b) 6 months
    c) Up to one year
    d) More than one year

21. Do you know about any complications in pregnancy? -- If no, skip to Q.23
    a) Yes
    b) No

22. Are you aware about any of the signs of complication of pregnancy?
    a) Vaginal Bleeding
    b) Prolonged Labour
    c) Convulsions
    d) Severe Abdominal Pain
    e) Severe swelling, redness or pain of leg/arm.

23. When your wife was pregnant, did any healthcare provider/worker of your area ever interacted with you at any time during her pregnancy? -If no, skip to Q.26
    a) Yes
    b) No

24. When they interacted with you during your wife's pregnancy, what did they talk to you about: (Multiple responses)
    a) Importance of ANC/PNC/ proper nutrition of mother during pregnancy
    b) Benefits of delivering baby in the hospital/health facility
    c) Family planning/delaying your next child birth
    d) None of these

25. Did anyone explain you about the importance of following: (Multiple responses)

a) Cord Care
b) Breastfeed immediately after delivery
c) Need to keep baby warm after delivery
d) Child Immunization

26. Where was your child born? If Home, then skip to Q.28

a) Health facility
b) Home

27. Type of health facility

a) Government Facility
b) Private Facility

28. Do you know about Mamta card?

a) Yes
b) No

29. Do you know what the normal weight of a baby is at birth? If no, skip to Q. 31

a) Yes
b) No

30. What is the normal weight of baby at birth?

a) >4000gms
b) 2500-4000gms
c) <2500gms
d) <1500gms
e) <1000gms

31. Do you think men should be involved in MNCHN services? (Give Reasons)

a) Yes
b) No

32. How do you think we can increase male participation in MNCHN activities?

a) Community sensitization and education campaigns
b) Addressing cultural and social beliefs
c) Providing male-friendly MNCHN facilities
d) Offering incentives or rewards
e) Providing flexible timing for MNCHN services
f) Other (Specify)

33. Would you like to participate in an awareness sessions/campaign on MNCHN?

a) Yes
b) No