

Awareness and Knowledge Among Rural Women Towards Nutrition and Health: in the Context of Samastipur District

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Health and nutrition are fundamental to individual well-being and social development, especially in rural communities where women are the primary caregivers and gatekeepers of household health practices. This study titled “Awareness and knowledge among rural women towards nutrition and health: with reference to Samastipur district” aims to investigate the extent of awareness, knowledge and practices related to nutrition and health among rural women in Samastipur, a socio-economically deprived district in Bihar, India. Despite several government schemes and policies aimed at improving women’s health and nutrition, such as Poshan Abhiyaan, Janani Suraksha Yojana and National Health Mission, rural areas continue to face gaps in health outcomes due to limited awareness, poor access to health services and deep-rooted cultural barriers. The research uses a descriptive cross-sectional design and was conducted using both quantitative and qualitative methods. A structured questionnaire was administered to 200 rural women aged 18 to 49 years selected through multistage random sampling across several villages in Samastipur. In addition to the survey, focus group discussions (FGDs) were conducted to explore in-depth insights into social norms, attitudes and practices related to nutrition and health. The study assessed awareness of balanced diet principles, maternal and child health care, hygiene practices, nutritional deficiencies, anaemia and knowledge of government health schemes. The findings reveal that there is a moderate level of awareness among rural women about basic health and hygiene practices, but limited understanding about nutritional requirements, importance of micronutrients and disease prevention. A large proportion of women were unaware of recommended dietary intake during pregnancy and lactation, and misconceptions about food taboos were found to be common. Moreover, information about institutional delivery benefits and maternal health schemes was present, but not all women availed of these services due to distance, illiteracy, social stigma and family restrictions. Qualitative analysis indicated that socio-cultural factors, male-dominated decision-making and low educational levels significantly contribute to low utilisation of health and nutrition programmes. The study highlights the need for intensive awareness campaigns at the grassroots level, improved access to health education, and active community participation to address nutrition and health-related knowledge gaps. Recommendations include strengthening the role of accredited social health activists (ASHA) and Anganwadi workers, introducing culturally appropriate nutrition education modules, and enhancing health infrastructure in rural areas. In conclusion, empowering rural women through education and awareness is crucial to break the cycle of poor nutrition and health outcomes. Findings from this study underscore the importance of context-specific strategies and community-based interventions to improve the health status of women in Samastipur and similar rural areas across India.

Key Word:- maternal health, education and awareness, family restriction, nutrition programs,

Introduction: Nutrition and health are fundamental pillars of individual and community well-being, particularly for women, who play a central role in shaping family health and nutrition practices. In rural India, however, women often face numerous challenges—ranging from low literacy rates and poor access to healthcare, to deeply embedded socio-cultural norms—that hinder their understanding and adoption of healthy dietary and medical practices. This is especially evident in districts like **Samastipur**, located in the state of Bihar, where poverty, gender disparities, and limited infrastructural development compound these issues. Rural women in Samastipur, like in many other parts of India, are primary caregivers responsible for preparing food, caring for children, and maintaining household hygiene. Despite this critical role, their awareness regarding balanced nutrition, micronutrient needs, maternal health, disease prevention, and access to health services remains limited. Malnutrition, anemia, early pregnancies, and poor antenatal care are prevalent among women due to inadequate health education and insufficient utilization of available health schemes and services.

The Government of India has introduced several programs such as the **Integrated Child Development Services (ICDS)**, **National Nutrition Mission (POSHAN Abhiyaan)**, and **Janani Suraksha Yojana**, aimed at improving maternal and child health. Yet, the success of these schemes largely depends on the level of awareness and participation among rural women. In the context of Samastipur, assessing the current state of knowledge and awareness about nutrition and health among women is vital for identifying gaps and guiding more effective interventions.

This study, therefore, seeks to explore the extent of nutritional and health awareness among rural women in Samastipur district, the factors influencing their knowledge, and the barriers they face in adopting healthy practices. The findings will

contribute to the formulation of targeted strategies to empower women with the information and resources necessary to improve both their own health and that of their families.

Rationale for the Study: Rural women form the backbone of India's agrarian economy and are key contributors to household nutrition and child health. In districts like Samastipur in Bihar, where socioeconomic challenges and infrastructural limitations persist, the health and nutritional status of women continues to be a matter of serious concern. Poor health awareness, coupled with deep-rooted gender disparities, limited access to healthcare services, and lack of formal education, significantly restrict rural women's ability to make informed decisions about their health and that of their families. Despite the implementation of various government schemes and public health initiatives—such as POSHAN Abhiyaan, Janani Suraksha Yojana, and National Health Mission—there exists a significant gap between policy intentions and ground-level outcomes. The effectiveness of such programs is closely tied to the degree of awareness, understanding, and utilization by the intended beneficiaries. However, in Samastipur, anecdotal evidence and preliminary reports suggest low levels of awareness regarding essential aspects of nutrition, hygiene, maternal care, and disease prevention among women, leading to poor health outcomes such as malnutrition, anemia, and maternal morbidity. Given their central role in ensuring household health and nutrition, empowering rural women with proper knowledge and awareness is critical to improving overall community health indicators. By assessing the current level of awareness among women in Samastipur, this study aims to identify the prevailing gaps in knowledge, explore socio-cultural and economic barriers to health education, and suggest locally relevant strategies for intervention. Furthermore, Samastipur serves as a representative case for many rural districts in Bihar and other parts of India where similar socio-economic and cultural conditions prevail. Therefore, this research has the potential not only to contribute to localized program planning but also to inform broader policy frameworks aimed at women's health and nutrition empowerment in rural India.

Objective of the study: To bring awareness and knowledge about nutrition and health among rural women of Samastipur district.

Research hypothesis H1: Rural women of Samastipur district must have a multi-dimensional approach in awareness, knowledge and behavior towards nutrition and health.

Methodology of the study: The main objective of this research is to study the impact of opportunities of nutrition and health programs and availability of health services in rural areas of Samastipur district. The research uses a descriptive cross-sectional design and is conducted using both quantitative and qualitative methods. A structured questionnaire was administered to 200 rural women aged 18 to 49 years. Focus group discussions (FGDs) were conducted to explore in-depth social aspects, attitudes and perceptions related to nutrition and health. The study called for awareness of institutional feeding practices, maternal and child health care, sanitation practices, nutrition practices, and knowledge of government health practices.

Literature Reviews:-

Admure, A. (2023). "Knowledge of antenatal women regarding Pradhan Mantri Matritva Vandana Yojana" The result of this study found that most of the antenatal mothers were aware of the Pradhan Mantri Matru Vandana Yojana. This study recommends that similar studies can be done on husbands and other family members. And similar research can also be done on a larger group of pregnant women.

Behera, Sasmita. (2023). "Pradhan Mantri Matru Vandana Yojana (PMMVY): A Review" According to research studies, despite India's remarkable progress in the socio-economic sector, the country's maternal health care remains a significant concern. Ensuring the well-being of mothers before and after delivery, as well as the health of their children, is vital for the overall development of the nation. Addressing malnutrition in pregnant mothers is essential, as it directly affects the health of the unborn child. According to research, by implementing these suggestions, the government strengthens the operation of the DTH and can have a significant positive impact on maternal and child health across the country.

Anand, S., et al. (2022). "Impact of National Health Mission on Health Outcomes in India" This paper evaluates the impact of the National Health Mission (NHM) on various health outcomes in India. It finds significant improvements in maternal and child health indicators, immunization coverage, and reduction in infectious diseases.

Archana, M., et al. (2021). "Study to Assess the Awareness Regarding Maternal Rights Among the Antenatal Mothers in Selected Hospitals". The result of this study found that making antenatal mothers aware of their maternal rights is very important to improve the level of knowledge. If the mother is aware of her rights then she can take her own decisions about improving her health. Therefore, the mother should be aware of her rights. If antenatal mothers are aware of their rights then it has a positive impact on the reduction of maternal morbidity and mortality.

Anshu, Sonia., et al. (2018). “The link between mothers' vulnerability to intimate partner violence and Children's human capital” This study is the first to use an indirect measure of PDT. The study found significant negative correlations between mothers' sensitivity to PDT and children's human capital. The negative relationship is mediated by mothers' poor health and disruption of the home environment.

Classification and analysis of facts:-

Table 1: Socio-Demographic Profile of Respondents:-

Variable	Category	Frequency (n=200)	Percentage (%)
Age Group (in years)	18–25	45	22.5
	26–35	78	39.0
	36–45	52	26.0
	46 and above	25	12.5
Education Level	Illiterate	62	31.0
	Primary	48	24.0
	Secondary	60	30.0
	Higher Secondary & above	30	15.0
Occupation	Homemaker	135	67.5
	Agricultural Labour	40	20.0
	Others	25	12.5
Monthly Family Income	Below ₹5000	90	45.0
	₹5001 – ₹10000	65	32.5
	Above ₹10000	45	22.5

Table 2: Awareness of Nutrition Among Rural Women:-

Nutritional Knowledge Items	Aware (n)	Not Aware (n)	Percentage Aware (%)
Importance of balanced diet	110	90	55.0
Sources of protein	98	102	49.0
Iron-rich foods	85	115	42.5
Importance of green vegetables and fruits	150	50	75.0
Nutritional needs during pregnancy and lactation	72	128	36.0
Understanding of malnutrition symptoms	68	132	34.0

Table 3: Health Awareness Among Rural Women

Health Knowledge Items	Aware (n)	Not Aware (n)	Percentage Aware (%)
Importance of antenatal check-ups	138	62	69.0
Institutional delivery benefits	144	56	72.0
Janani Suraksha Yojana / Government health schemes	112	88	56.0
Basic hygiene practices (hand washing, sanitation)	165	35	82.5

Health Knowledge Items	Aware (n)	Not Aware (n)	Percentage Aware (%)
Vaccination awareness (TT, polio, etc.)	125	75	62.5
Common diseases and home remedies	85	115	42.5

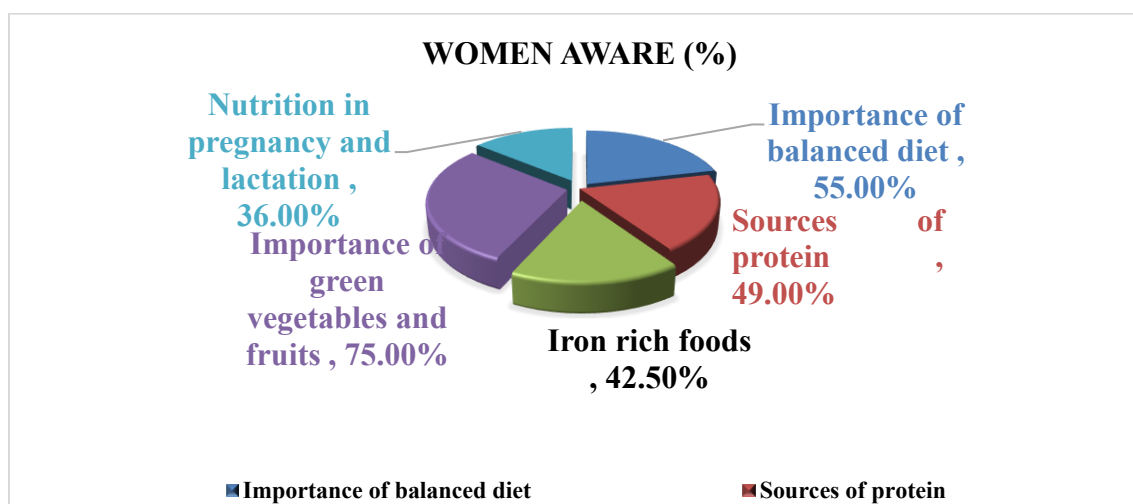
Table 4: Barriers in Accessing Health and Nutrition Services

Identified Barriers	Frequency (n)	Percentage (%)
Lack of awareness	104	52.0
Distance from health facilities	88	44.0
Financial constraints	96	48.0
Cultural restrictions/family opposition	65	32.5
Low female autonomy in decision-making	72	36.0
Language/literacy issues	58	29.0

the analytical interpretation of the calculation of the study data is being presented in the following points. This analysis has been done on the basis of the figures, percentages and trends obtained from the questionnaire:-

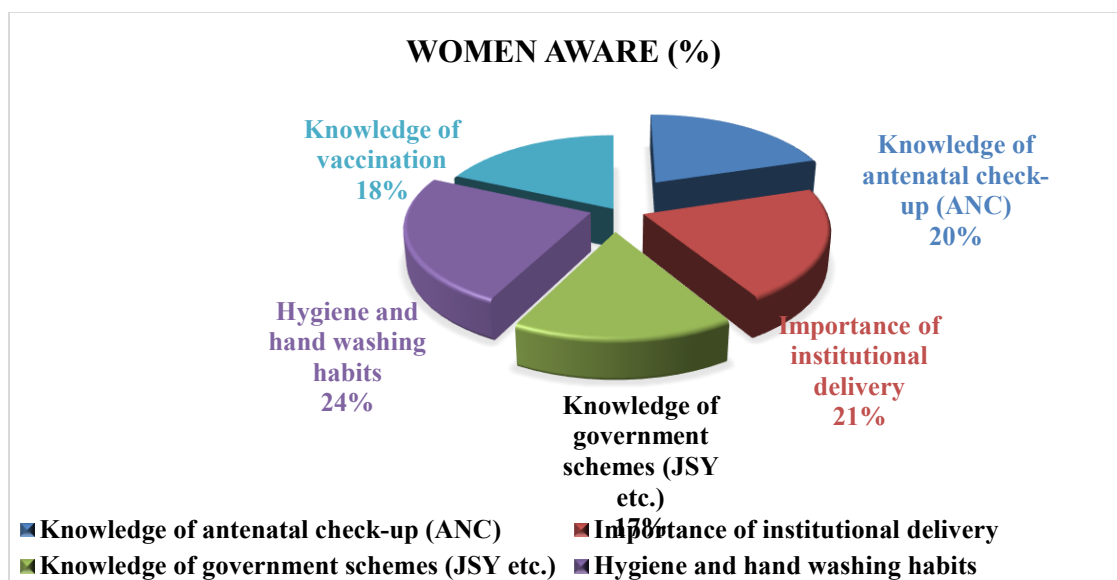
Effect of age and education level, Out of 200 women surveyed, 39% were in the age group of 26–35 years, which is significant in terms of reproductive age. 31% of the women were illiterate, while only 15% had education beyond higher secondary. This shows that low literacy rate is a significant barrier to women's health and nutrition related knowledge. The level of awareness was found to be comparatively higher among educated women.

Analysis of Nutritional Awareness	Women Aware (%)
Importance of balanced diet	55.0%
Sources of protein	49.0%
Iron rich foods	42.5%
Importance of green vegetables and fruits	75.0%
Nutrition in pregnancy and lactation	36.0%



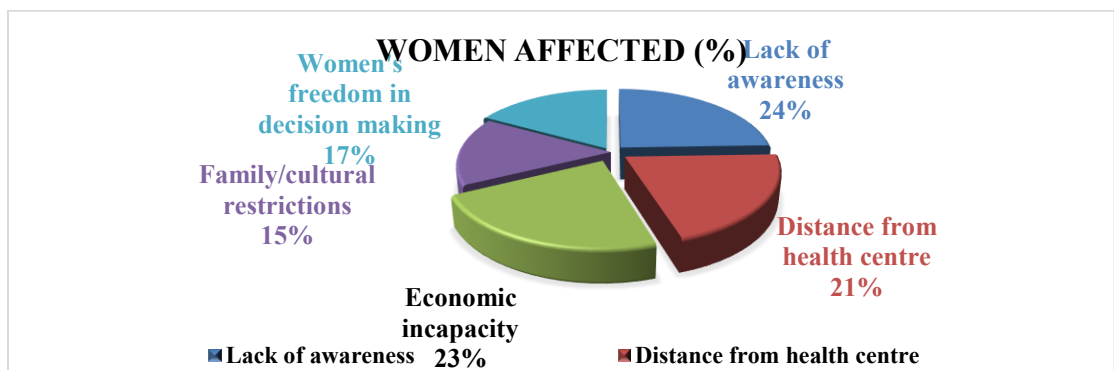
Only 36% of women were aware of the need for special nutrition during pregnancy and lactation, which increases the risk of infant and maternal malnutrition. Awareness about green vegetables and fruits is relatively high, but awareness about essential micronutrients (such as iron, calcium) is low.

Analysis of health awareness	Women aware (%)
Knowledge of antenatal check-up (ANC)	69.0%
Importance of institutional delivery	72.0%
Knowledge of government schemes (JSY etc.)	56.0%
Hygiene and hand washing habits	82.5%
Knowledge of vaccination	62.5%



82.5% of women knew handwashing and hygiene practices, indicating the positive role of Swachh Bharat Mission and ASHA/Anganwadi workers. However, only 56% of women were aware of government schemes like Janani Suraksha Yojana, indicating that there is a need for improvement in the dissemination and effective implementation of schemes.

Major barriers to access to services, Barriers	Women affected (%)
Lack of awareness	52.0%
Distance from health centre	44.0%
Economic incapacity	48.0%
Family/cultural restrictions	32.5%
Women's freedom in decision making	36.0%



52% of women cite lack of awareness as the main reason, which is directly linked to low availability or limited information about health services. Limited women's participation in decision-making affects the use of health services.

5. Analytical Interpretation:- Education and economic status are directly related to nutrition and health knowledge. In areas where ASHA workers, Anganwadi services were active, women's level of knowledge was found to be better. Schemes exist, but lack of information and access to beneficiaries is still a big challenge. Cultural barriers, such as household traditions at the time of delivery and food myths, affect nutrition and health behavior.

In conclusion:-

- Rural women have partial awareness of nutrition and health, but there is a huge gap between overall knowledge and practical adoption.
- Health education at the community level, involvement of women's groups, and training programs in local languages can help reduce this gap.

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