Article

Assessing Knowledge to Forge Solutions: A Study on Awareness of Malnutrition Risk Factors and Preventive Measures among Women of Reproductive Age in Shimla, Himachal Pradesh

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Abstract: Background: Maternal knowledge on malnutrition plays a crucial role in shaping child health outcomes, particularly in regions grappling with the dual burden of undernutrition and overnutrition. This study aimed to assess the level of understanding among women of childbearing age in Shimla, Himachal Pradesh, India, and to identify knowledge gaps and potential barriers to implementing preventive measures. **Material & Methods:** A descriptive cross-sectional survey was conducted in Shimla district, Himachal Pradesh, from October to December 2023. A sample of 400 women of reproductive age was selected using a Google Form questionnaire consisting of 20 structured questions. The questionnaire covered socio-demographic information, as well as knowledge related to risk factors and preventive strategies for child malnutrition. Data were analyzed using Epi Info V7 Software, and descriptive statistics were employed to summarize the findings. **Results:** The study revealed a moderate level of knowledge among the participants, with 27% demonstrating very good knowledge, 43% having good knowledge, 18.5% possessing fair knowledge, and 11.5% having poor knowledge regarding risk factors and preventive strategies for child malnutrition. While respondents exhibited satisfactory understanding of fundamental concepts such as the importance of exclusive breastfeeding and access to clean water, gaps in knowledge were observed in areas such as identification of specific nutritional deficiencies and awareness of maternal nutrition during pregnancy.

Conclusion: The findings underscore the need for targeted educational interventions to address knowledge gaps and disparities in awareness among women of reproductive age in Shimla, Himachal Pradesh. Community-based approaches that empower women and integrate nutrition education into existing maternal and child health services are essential for mitigating the risk of child malnutrition and achieving the Sustainable Development Goal of ending all forms of malnutrition by 2030.

Keywords: Buprenorphine; Fentanyl; Bupivacaine; Open cholecystectomy; Thoracic epidural anaesthesia.

How to cite: Akanksha Nadda & Ankush Bhagta (2024). Assessing Knowledge to Forge Solutions: A Study on Awareness of Malnutrition Risk Factors and Preventive Measures among Women of Reproductive Age in Shimla, Himachal Pradesh.Int Aca J. Nutr&Food. Sci,2024 vol.5, issue 1, page: 01-06

1. Introduction

In the quest to enhance child health outcomes globally, understanding the pivotal role of maternal knowledge on malnutrition is indispensable. Malnutrition, encompassing both undernutrition and overnutrition, remains a significant public health challenge that detrimental impacts the growth, immunity, and overall development of children. The World Health Organization (WHO) emphasizes the critical need to address malnutrition's root causes as part of the Sustainable Development Goals (SDGs), aiming to end all forms of malnutrition by 2030. Amidst this global landscape, the role of informed and empowered women, especially those of childbearing age, becomes central to turning the tide against child malnutrition. [1–4]

Int Aca J. Nutr&Food. Sci. **2024**, 5: Issue1, 01-06

2

Shimla, the capital city of Himachal Pradesh in Northern India, presents a unique setting for examining this issue. Despite India's economic growth and improvements in healthcare, rural and semi-urban areas like Shimla continue to grapple with the dual burden of malnutrition. Factors such as socio-economic status, educational levels, and access to healthcare services intricately weave into the fabric of nutritional outcomes for children in these regions. This complexity is further compounded by Shimla's diverse topography and socio-cultural practices, which influence dietary habits and health-seeking behaviors.

This study aims to delve into the understanding that women of reproductive age possess regarding the risk factors and preventive measures for child malnutrition. By focusing on this demographic, the research seeks to unearth the depth of awareness, identify knowledge gaps, and understand the perceived barriers to implementing effective malnutrition prevention strategies. The ultimate goal is to contribute meaningful insights that can inform public health interventions, policy formulations, and community-based programs tailored to mitigate malnutrition risks among children, thereby fostering a healthier future generation.

Through a meticulous examination of maternal knowledge on malnutrition, this study aspires not only to highlight areas of strength but also to pinpoint critical gaps where targeted educational and support initiatives can make a substantial difference. In doing so, it aligns with the broader global commitment to improving maternal and child health, ensuring that efforts to combat malnutrition are grounded in the realities of those most intimately involved in the nurturing and care of children.

1.1. Objectives of the Study

To assess the level of understanding related to risk factors and preventive strategies for child malnutrition among women of childbearing age in Shimla, Himachal Pradesh.

2. Research Methodology

- Research Approach -Descriptive
- Research Design- Cross-sectional survey design
- Study area: District Shimla, Himachal Pradesh
- Study duration- between October 2023 to December 2023
- Study population: All women of reproductive age group who were staying in the District Shimla, Himachal Pradesh for 12 months or more.
- Sample size- 400 women of reproductive age group assuming 50% have adequate knowledge regarding risk factors and preventive strategies for child malnutrition, 5% absolute error, 95% confidence level, and 5% non-response rate.
- Study tool: A google form questionnaire consisting of questions regarding socio-demography, risk factors and preventive strategies for child malnutrition was created. The questionnaire was initially pre-tested on a small number of women of reproductive age group to identify any difficulty in understanding by the respondents.
- Description of Tool-

a) Demographic data survey instrument: The demographic form elicited information on participants' background: age, marital status, religion, employment, education and many more.
b) Questionnaire: The questionnaire contains 20 structured questions regarding knowledge about risk factors and preventive strategies for child malnutrition. One mark was given for each correct answer and zero for incorrect answer. The maximum score was 20 and minimum score was zero in each category. Scoring was done on the basis of marks as >80%(16-20)=very good,60-79%(12-15) =Good,41-59% (8-11)=Fair,<40% (< 8)=poor

- Validity of tool - by the experts in this field
- Data collection- Data was collected under the guidance of supervisors. The google form questionnaire was circulated via online modes like email and social media platforms like Whatsapp groups, Facebook, Instagram and Linkedin among women of reproductive age group in both rural and urban areas of District Shimla ,Himachal Pradesh till the 400 responses were collected.
- Data analysis- Data was collected and entered in Microsoft excel spreadsheet, cleaned for errors and analyzed with Epi Info V7 Software with appropriate statistical test in terms of frequencies and percentage.
- Ethical Considerations- Participants confidentiality and anonymity was maintained.

3. Results

The goal of the current study was to assess the awareness regarding risk factors and preventive strategies for child malnutrition among women of reproductive age group in District Shimla, Himachal Pradesh through a non-experimental descriptive survey. A total of 400 respondents including 155 (38.75%) were from urban areas and 245 (61.25%) from rural areas participated in the study.

Table 1. Knowledge regarding risk factors and preventive strategies for child malnutrition among study participants

S.No.	Statements	Frequency of Correct Responses	Percent
1	What do you understand about the term "child malnutrition"?	297	74.25
2	Can you identify the key risk factors for child malnutrition?	276	69
3	How does a child's diet in the first 1,000 days of life affect their risk of malnutrition?	265	66.25
4	What role does exclusive breastfeeding play in preventing child malnutrition?	322	80.5
5	Do you know the importance of introducing complementary foods at the right time and in the right quantity?	269	67.25
6	What are the common nutritional deficiencies seen in children under five years old?	232	58
7	Can you name some socioeconomic factors that contribute to child malnutrition?	244	61
8	How does access to clean water and sanitation impact child nutrition?	268	67
9	What are some signs and symptoms of malnutrition in children?	241	60.25
10	How does maternal nutrition during pregnancy affect the risk of child malnutrition?	220	55
11	Do you know about micronutrient supplementation programs for pregnant women and children?	198	49.5
12	What role do vaccinations play in preventing malnutrition-related illnesses?	232	58
13	Can you identify some cultural or traditional practices that may impact child nutrition negatively?	256	64
14	How does poverty affect access to nutritious food for families?	210	52.5
15	What are some strategies families can use to stretch their food budget while still providing nutritious meals?	242	60.5
16	Do you know about the importance of growth monitoring in detecting malnutrition early?	217	54.25
17	How does access to healthcare services affect a child's nutritional status?	198	49.5
18	Can you name some community-based interventions aimed at preventing child malnutrition?	196	49
19	What are some educational resources or programs available to families to learn about proper nutrition for children?	191	47.75
20	How can women empower themselves and their communities to address the root causes of child malnutrition?	218	54.5

In the present study 27% (108) females had very good knowledge (16-20 marks) towards risk factors and preventive strategies for child malnutrition , 43% (172) having good knowledge (12-15 marks), 18.5% (74) having fair knowledge (8-11 marks) and 11.5% (46) having poor knowledge (<8 marks). (Table 1)
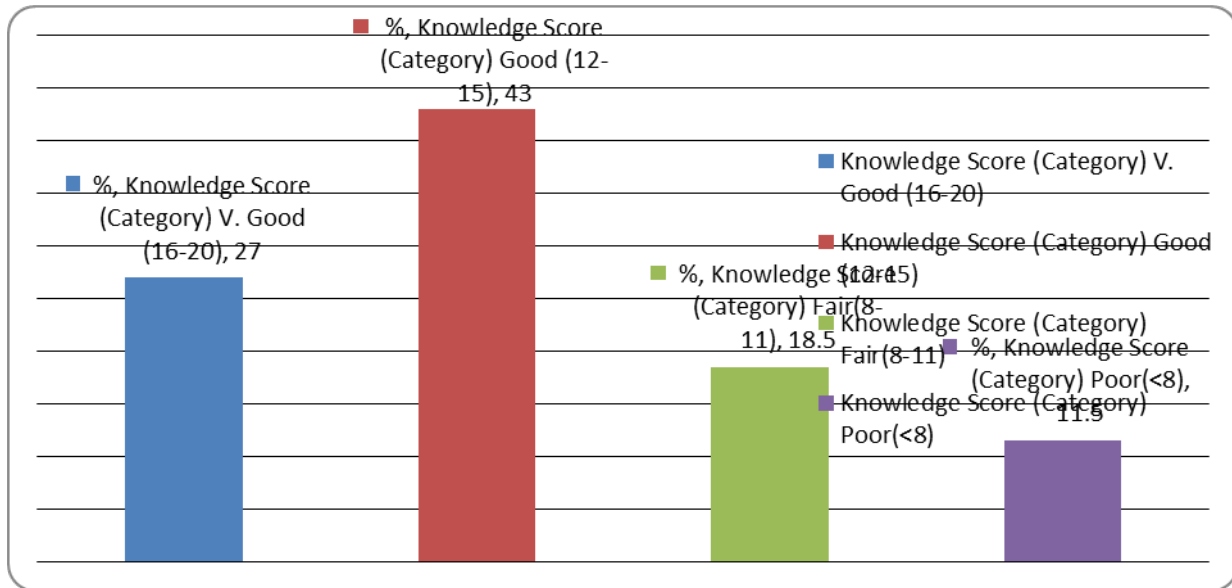
Figure 1. Knowledge score regarding risk factors and preventive strategies for child malnutrition among study participants

Maximum =20 Minimum=6. (Figure-1)

4. Discussion

The findings of this study shed light on the level of awareness among women of reproductive age in Shimla, Himachal Pradesh, regarding the risk factors and preventive strategies for child malnutrition. Overall, the results reveal a moderate level of knowledge among the participants, with significant variations across different aspects of child malnutrition.

Firstly, it is encouraging to note that the majority of respondents demonstrated a satisfactory understanding of fundamental concepts related to child malnutrition. A notable proportion correctly identified the term "child malnutrition" (74.25%) and recognized the importance of exclusive breastfeeding (80.5%) and the impact of clean water and sanitation on child nutrition (67%). These findings underscore the effectiveness of existing health education initiatives and community awareness programs in disseminating essential information regarding child nutrition. [5–7]

However, despite these positive indicators, certain areas of concern warrant attention. For instance, while a significant proportion of participants acknowledged the importance of introducing complementary foods at the right time and quantity (67.25%), fewer were able to identify specific nutritional deficiencies commonly seen in children under five years old (58%). This suggests a need for targeted educational interventions aimed at enhancing knowledge about micronutrient requirements and the identification of signs of malnutrition. [8,9]

Furthermore, disparities in knowledge were evident across different socio-demographic groups. For instance, respondents from rural areas exhibited slightly lower levels of awareness compared to their urban counterparts. This observation underscores the need for tailored interventions that account for regional disparities and socio-economic factors influencing health-seeking behaviors and access to information. [10,11]

The findings also highlight areas where gaps in knowledge exist, such as understanding the role of maternal nutrition during pregnancy (55%) and awareness of micronutrient supplementation programs for pregnant women and children (49.5%). Addressing these gaps requires a multi-faceted approach that integrates maternal and child health services with nutrition education and support programs. [12,13]

Moreover, the study underscores the importance of community-based interventions and empowering women to address the root causes of child malnutrition. Participants demonstrated a relatively high level of awareness regarding the impact of cultural and traditional practices on child nutrition (64%), indicating a recognition of the socio-cultural determinants of health. Leveraging this awareness to foster community-driven solutions and promote culturally sensitive approaches to nutrition education is essential for sustainable change. [14,15]

5. Conclusion

In conclusion, while the study identifies areas of strength in maternal knowledge on child malnutrition, it also underscores the need for targeted interventions to address existing gaps. By leveraging community resources, promoting women's empowerment, and integrating nutrition education into existing maternal and child health services, stakeholders can work towards achieving the Sustainable Development Goal of ending all forms of malnutrition by 2030.

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