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Knowledge Level Regarding Nutritional Deficiencies Of School Children Among School Teacher In Selected Schools, Sagar Mp

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Abstract

Introduction: In today's fast-paced world, where health often takes a backseat, the knowledge of nutritional deficiencies among school children is slipping through the cracks — and who better to turn the tide than school teachers, the torchbearers of young minds? In the selected schools of Sagar, Madhya Pradesh, educators stand at the crossroads, holding the key to early detection and prevention of malnutrition-related issues. This study aims to leave no stone unturned in assessing how well-equipped these mentors are in identifying and addressing the dietary pitfalls that can stunt a child's growth and learning. After all, a stitch in time saves nine, and empowering teachers with nutritional awareness could be the first step toward healthier, brighter futures for countless children.

Aims: The primary aim of this study is to assess the level of knowledge regarding nutritional deficiencies among school teachers in selected schools of Sagar, Madhya Pradesh. It seeks to identify gaps in awareness, understand teachers' roles in early recognition of nutritional issues among students, and promote the integration of basic nutrition education into the school environment. Ultimately, the study aspires to empower teachers as frontline advocates for child health and nutrition.

Objectives: 1) To assess the existing knowledge of school teachers regarding common nutritional deficiencies among school children. 2) To identify the types of nutritional deficiencies most prevalent among school children as perceived by school teachers. 3) To determine the association between knowledge level and selected demographic variables of school teachers (e.g., age, gender, qualification, teaching experience, training in nutrition/health, etc.). 4) To provide recommendations for educational interventions or training programs based on the findings.

Materials and Methods: A descriptive study was conducted among 40 school teachers from Amreen English Medium Higher Secondary School, Sagar (M.P.), selected through simple random sampling. Inclusion criteria were teachers who were present, willing to participate, and had some knowledge of nutritional deficiencies. Data was collected using a structured questionnaire comprising two sections: demographic variables and multiple-choice questions assessing knowledge on causes, symptoms, prevention, and management of nutritional deficiencies in children. The tool's validity was ensured through expert review, and reliability was confirmed with a Spearman-Brown coefficient of 0.96. A pilot study on 10 participants established the feasibility of the study. Ethical approval and informed consent were obtained. Data was analyzed using descriptive

statistics (mean, percentage, standard deviation) and inferential statistics (Chi-square test) to determine associations between knowledge levels and demographic variables.

Results: The findings of the study revealed that the majority of school teachers (63%) were aged between 20–30 years, with a higher proportion being male (70%). Most held a bachelor's degree (70%) and had 0–5 years of teaching experience (63%), predominantly teaching science (56%) in rural private schools. Regarding knowledge of nutritional deficiencies, most teachers demonstrated an average level of knowledge, with a few showing poor or good knowledge scores. The Chi-square analysis indicated no statistically significant association between the pre-test knowledge levels and demographic variables such as age, gender, education qualification, teaching experience, subject area, grade level taught, type and location of school, marital status, number of children, socio-economic status, training related to child nutrition, attendance at workshops/seminars, or personal/family history of nutritional deficiency disorders. This suggests that the knowledge level of school teachers regarding nutritional deficiencies in school children was generally independent of their demographic characteristics.

Conclusion: The present study concluded that while the majority of school teachers had an average level of knowledge regarding nutritional deficiencies among school children, there remains a significant gap in comprehensive understanding, especially in specific areas such as symptoms, prevention, and long-term impacts. Despite varying demographic characteristics, no significant association was found between knowledge levels and factors such as age, gender, educational qualification, teaching experience, or participation in training or workshops. This indicates the need for structured, targeted educational interventions and regular in-service training programs to enhance teachers' awareness and equip them with the necessary knowledge to identify and address nutritional issues among students effectively. Strengthening teachers' understanding can contribute to early detection, better guidance, and promotion of healthier practices among school children.

Keywords: Nutritional Deficiencies, School Children, School Teachers, Knowledge Level, Health Education, Micronutrient Deficiency, Malnutrition, Teacher Awareness, Descriptive Study, Sagar, Madhya Pradesh, Training and Workshops, Child Nutrition, Educational Interventions, Pre-test Knowledge, Demographic Variables

Introduction:

In the present era, where education and health go hand in hand, the role of school teachers extends far beyond the confines of traditional pedagogy. They are not only the torchbearers of knowledge but also the first line of defense in identifying and addressing health issues among children. Nutritional deficiencies, often dubbed the "silent epidemic," continue to cast a long shadow over the holistic development of school-aged children, especially in developing regions like India. While much water has flown under the bridge in terms of government initiatives and awareness campaigns, the ground reality still paints a grim picture, particularly in rural and semi-urban settings.

It is often said that "a stitch in time saves nine," and early identification of nutritional disorders in children can prevent a host of long-term physical and cognitive impairments. However, this is easier said than done, as many such deficiencies go unnoticed due to a lack of awareness among key stakeholders—teachers being one of them. Teachers, who interact with children on a daily basis, are in a unique position to notice subtle changes in behavior, energy levels, and physical appearance—red flags that may hint at underlying nutritional problems. Nevertheless, unless they are equipped with adequate knowledge, such early signs are likely to fall through the cracks.

This study, therefore, sets the stage to assess the level of knowledge regarding nutritional deficiencies among school teachers in selected schools of Sagar, Madhya Pradesh. By shedding light on their awareness and understanding, the research aims to separate the wheat from the chaff, ultimately guiding future training and intervention strategies. The findings of this study are expected not only to bridge existing knowledge gaps but also to pave the way for integrating health education more seamlessly into the school curriculum—truly hitting the nail on the head when it comes to promoting child health and well-being.

Background of the Study

Nutritional deficiencies remain a significant public health concern in India, particularly among school-aged children, who are at a critical stage of physical and cognitive development. Despite numerous national health programs and mid-day meal schemes, malnutrition continues to rear its head across various socio-economic strata. According to the National Family Health Survey-5 (NFHS-5, 2019–21), 35.5% of children aged 5–9 years in India are underweight, and 32.1% are stunted, indicating chronic nutritional deficiencies. Moreover, over 50% of children aged 6–59 months are anemic, a stark reminder of the widespread prevalence of micronutrient deficiencies such as iron, vitamin A, and iodine.

In Madhya Pradesh, the scenario is even more alarming. The NFHS-5 data for Madhya Pradesh reveals that 43% of children under five are stunted, and 45.9% are anemic, placing the state among the worst performers in child nutrition indicators. This directly impacts school performance, as malnourished children often experience reduced concentration, increased absenteeism, and poor academic outcomes. Inadequate nutrition during school years can lead to irreversible damage, both mentally and physically.

Amidst these challenges, school teachers play a pivotal role as they are in regular contact with students and can act as frontline identifiers of nutrition-related issues. However, studies indicate that their knowledge regarding nutritional deficiencies is often limited or inconsistent. Research by the Indian Journal of Community Medicine (2020) showed that only 38% of school teachers had adequate knowledge of common nutritional deficiencies affecting children.

Given this backdrop, assessing the knowledge level of school teachers in regions like Sagar, Madhya Pradesh, becomes not only relevant but essential. Understanding their current awareness and knowledge gaps can inform the development of targeted training programs and policies aimed at enhancing child health outcomes through the educational system. By empowering teachers with appropriate knowledge, schools can become strongholds in the fight against nutritional deficiencies and child malnutrition.

Significance and Need for the Study

Nutritional health is the cornerstone of a child's physical growth, cognitive development, academic performance, and overall well-being. School-aged children are particularly vulnerable to nutritional deficiencies due to increased physiological demands and often inadequate dietary intake. In regions like Sagar, Madhya Pradesh, where malnutrition continues to be a pressing public health issue, the role of educators extends beyond academic instruction to include awareness and early detection of health-related concerns among students.

Teachers, being in close and daily contact with children, are in a unique position to observe signs of nutritional deficiencies such as fatigue, pallor, stunted growth, and lack of concentration. However, their ability to identify and respond to such issues is largely dependent on their knowledge and awareness of nutrition-related disorders. Despite the critical nature of this role, evidence suggests that many teachers are not adequately trained or informed about common nutritional deficiencies affecting school children.

This study is therefore significant as it aims to assess the current knowledge levels of school teachers regarding nutritional deficiencies, helping to uncover gaps that may hinder early identification and intervention. By identifying these gaps, the study can contribute to the design of targeted training programs, health workshops, and educational modules tailored for teachers, enabling them to act as effective agents of change within the school system.

Furthermore, the findings of this research will support policy makers, educational planners, and public health authorities in integrating health education into teacher training curricula and reinforcing the importance of nutrition in school health programs. In the long run, improving teacher awareness can lead to better health outcomes for students, reduced absenteeism, and enhanced academic performance—ultimately supporting national goals related to child development, education, and public health. Thus, the study holds substantial relevance in bridging the gap between health and education in the school setting.

Statement of the Problem

A descriptive study to assess the knowledge level regarding nutritional deficiencies of school children among School Teachers in selected schools, Sagar, MP, India.

Objectives of the Study

1) To assess the existing knowledge of school teachers regarding common nutritional deficiencies among school children.

2) To identify the types of nutritional deficiencies most prevalent among school children as perceived by school teachers.

3) To determine the association between knowledge level and selected demographic variables of school teachers (e.g., age, gender, qualification, teaching experience, training in nutrition/health, etc.).

4) To provide recommendations for educational interventions or training programs based on the findings.

Research Hypothesis

RH1: There is a significant association between the pre-test knowledge level regarding nutritional deficiencies among school children and selected demographic variables of school teachers in selected schools of Sagar, M.P.

Null Hypothesis (H_0):

Ho1: There is no significant association between the pre-test knowledge level regarding nutritional deficiencies among school children and selected demographic variables of school teachers in selected schools of Sagar, M.P.

Assumptions

- School teachers have a basic level of awareness regarding the health and well-being of school children.
- Some school teachers may possess knowledge about common nutritional deficiencies in children, either through personal experience or professional exposure.
- Teachers play a crucial role in early identification and prevention of nutritional deficiencies among school children.
- The knowledge level of school teachers may vary based on factors such as age, educational qualification, teaching experience, and prior training or workshops attended.
- Improved awareness and knowledge among teachers can contribute to better nutritional outcomes and academic performance of students.

Operational Definitions

Assess:

In this study, assess refers to the process of systematically measuring and evaluating the existing level of knowledge that school teachers possess regarding nutritional deficiencies among school children. This is done using a structured questionnaire developed by the researcher, which includes multiple-choice questions related to the causes, signs, symptoms, prevention, and management of nutritional deficiencies.

Knowledge:

Knowledge refers to the information, awareness, and understanding that school teachers have about nutritional deficiencies in school-aged children. It includes their ability to identify types of deficiencies, recognize symptoms, understand causes and risk factors, and know appropriate preventive and management strategies. Knowledge will be measured through a scoring system and categorized as inadequate, moderate, or adequate based on the total score obtained.

Nutritional Deficiencies of School Children:

This refers to the insufficient intake or absorption of essential nutrients (both macro and micronutrients) required for the healthy growth and development of children aged 6–14 years. In this study, it specifically includes common deficiencies such as iron-deficiency anemia, vitamin A deficiency, iodine deficiency, and protein-energy malnutrition, which may impact a child's physical health, cognitive ability, and academic performance.

School Teachers:

For the purpose of this study, school teachers are defined as teaching staff employed at selected schools in Sagar, Madhya Pradesh. These individuals are directly responsible for the education, supervision, and welfare of school-aged children and serve as potential first-line observers for detecting signs of nutritional problems in students.

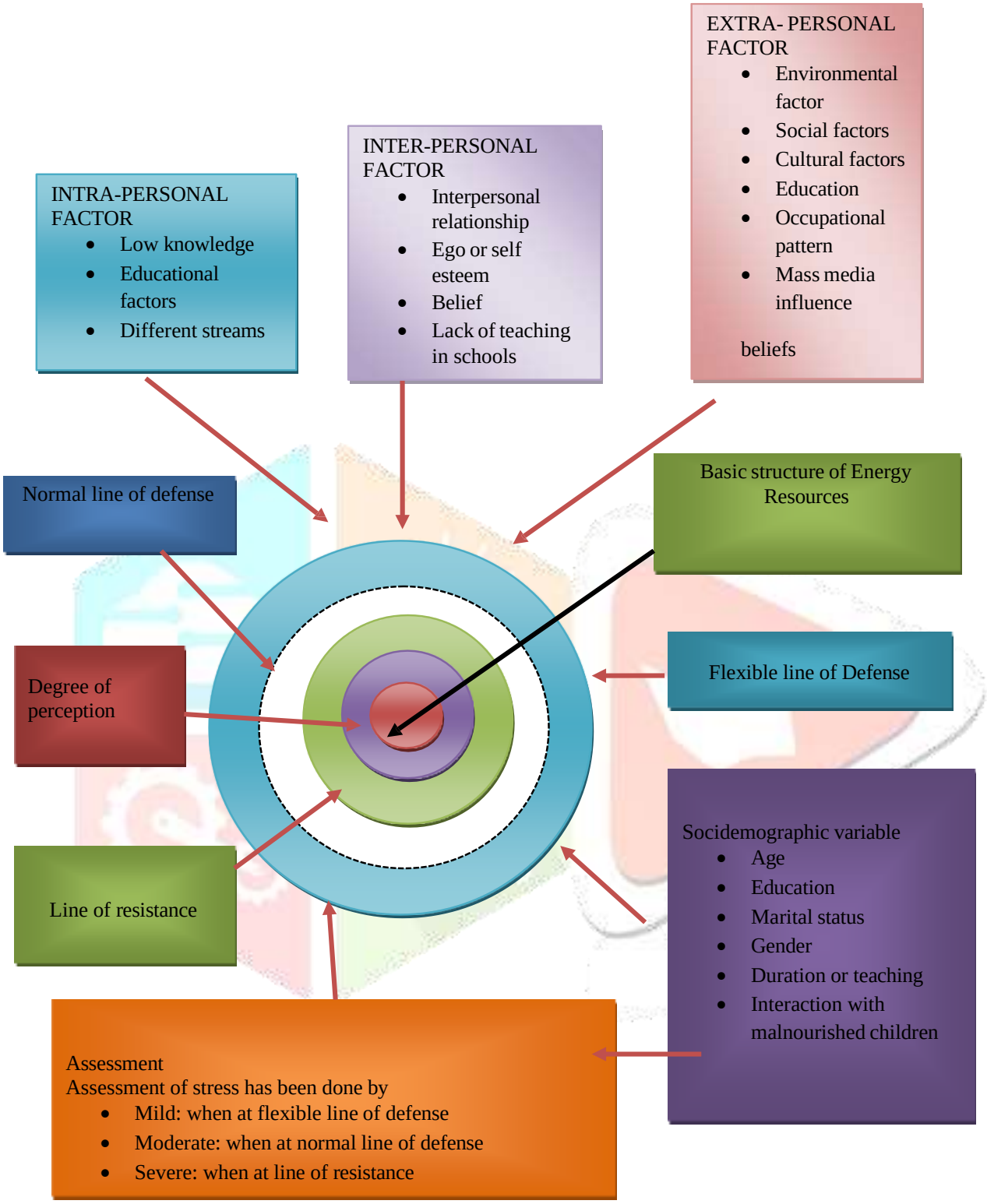
Delimitations

- The study is delimited to selected schools in Sagar, Madhya Pradesh only and does not include schools from other regions.
- It includes only school teachers who are present and available during the data collection period.
- Only teachers who are willing to participate in the study are included.
- The study focuses specifically on assessing knowledge regarding nutritional deficiencies, not attitudes or practices.
- The data is collected using a structured questionnaire, and no observational or clinical assessments are conducted.

Scope of the Study

The scope of this study encompasses the assessment of knowledge levels regarding nutritional deficiencies among school teachers in selected schools of Sagar, Madhya Pradesh. It aims to evaluate how well teachers understand common nutritional disorders affecting school-aged children, including their causes, symptoms, prevention, and management. The study focuses on identifying existing knowledge gaps and examining the relationship between teachers' knowledge and selected demographic variables such as age, gender, educational qualification, and teaching experience. The findings are intended to inform the development of targeted training programs and educational interventions that can empower teachers to play a proactive role in promoting child health and nutrition. This study is limited to school teachers only and does not include students, parents, or healthcare professionals.

Conceptual Framework



RESEARCH METHODOLOGY:

Research approach: Quantitative Descriptive Research Approach.

Research design: Descriptive Research Design

Variables:

Research Variable: Knowledge levels regarding nutritional deficiencies among school teachers.

Demographic (Independent) Variables:

These are the characteristics of the participants that may influence the dependent variable:

- Age
- Gender
- Educational Qualification
- Teaching Experience
- Subject Area Taught
- Grade Level Taught
- Type of School (Government/Private)
- Location of School (Urban/Rural)
- Marital Status
- Number of Children
- Socio-Economic Status
- Previous Training Related to Child Nutrition
- Participation in Workshops or Seminars on Nutrition
- Personal or Family History of Nutritional Deficiency Disorders

Population:

The entire group of individuals relevant to the research study. All school teachers working in schools located in Sagar, Madhya Pradesh.

Target Population:

The population to which the researcher intends to generalize the findings. School teachers teaching classes in English medium schools in Sagar, M.P. who are responsible for the care and education of school-aged children.

Accessible Population:

The portion of the target population that is available and eligible to participate in the study. School teachers present during the data collection period in selected schools of Sagar, M.P., and willing to participate.

Sample:

A subgroup of the accessible population selected for the study. School teachers from Amreen English Medium Higher Secondary School, Sagar, MP.

Sample Size:

The total number of participants included in the study. 40 school teachers.

Sampling Technique:

The method used to select participants from the population. Convenience Sampling Technique was used to ensure every eligible teacher had an equal chance of being selected.

Criteria for Sample Selection

Inclusion Criteria:

- Teachers who are willing to participate in the study.
- Teachers who are present at the time of data collection.
- Teachers who have basic knowledge or awareness about nutritional health in children.

Exclusion Criteria:

- Teachers who are not willing to participate.
- Teachers who are absent during the data collection period.

- Teachers who lack any knowledge related to nutritional deficiencies.

DEVELOPMENT AND DESCRIPTION OF TOOL

The tool used for this study was a structured knowledge questionnaire, developed by the investigator after an extensive review of related literature, consultation with experts, and consideration of the study objectives. The tool was designed to assess the knowledge level of school teachers regarding nutritional deficiencies in school children.

Tool Development Process:

Literature Review:

A detailed review of textbooks, journals, WHO reports, government health programs, and previous studies was conducted to identify important concepts related to nutritional deficiencies in children.

Expert Validation:

The initial draft of the tool was submitted to a panel of 6 experts from the fields of nursing, nutrition, public health, and pediatrics for content validity. Suggestions received were incorporated to improve clarity, relevance, and scientific accuracy.

Pre-testing:

The tool was pre-tested on 5 school teachers who were not part of the final sample, to ensure that the questions were clear, understandable, and feasible in the school setting. Minor modifications were made accordingly.

Reliability Testing:

The reliability of the tool was assessed using the test-retest method, and the calculated reliability coefficient ($r = 0.84$) indicated a high level of reliability, confirming the tool's consistency.

Description of the Tool:

The final tool consisted of two sections:

Section A: Demographic Data

This section included 14 items related to personal and professional characteristics of the school teachers:

Age, Gender, Educational Qualification, Teaching Experience, Subject Taught, Grade Level, Type and Location of School, Marital Status, Number of Children, Socio-economic Status, Training on Nutrition, Workshop/Seminar Attendance, and Personal/Family History of Nutritional Deficiency.

Section B: Structured Knowledge Questionnaire

This section included 25 multiple-choice questions (MCQs) based on:

- Common nutritional deficiencies in children (iron, iodine, vitamin A, protein-energy malnutrition, etc.)
- Causes and symptoms
- Preventive measures and dietary management

Scoring Pattern:

Each correct answer: 1 mark

Incorrect answer: 0 marks

Knowledge Levels:

Poor knowledge: 0–8 marks

Average knowledge: 9–17 marks

Good knowledge: 18–25 marks

PILOT STUDY

A pilot study was conducted on a small sample of 5 school teachers from a school not included in the final study to assess the feasibility, clarity, and reliability of the structured knowledge questionnaire. The purpose was to ensure that the tool was understandable, appropriate, and capable of effectively measuring the knowledge level of school teachers regarding nutritional deficiencies among school children. The average time taken to complete the questionnaire was approximately 20–25 minutes. Participants reported the questions to be clear and easy to respond to, although minor modifications were made based on their feedback to enhance clarity. The reliability of the tool was tested using the test-retest method and yielded a reliability coefficient of $r = 0.84$, indicating a high level of reliability. Hence, the tool was considered valid, reliable, and suitable for use in the main study.

Data Collection Procedure

The present descriptive study was conducted to assess the knowledge level regarding nutritional deficiencies among school teachers in selected schools of Sagar, Madhya Pradesh, with a focus on Amreen English Medium Higher Secondary School. A total of 40 school teachers were selected using a simple random sampling technique. The study included teachers who were willing to participate, present during the data collection period, and had some knowledge regarding nutritional deficiencies. Those unwilling, absent, or lacking knowledge were excluded. The research tool consisted of a structured questionnaire divided into two sections: Section I covered socio-demographic variables (age, gender, qualification, marital status, teaching experience, and prior interaction with malnourished children), and Section II comprised multiple-choice questions designed to assess knowledge about nutritional deficiencies, including causes, symptoms, risk factors, prevention, and management. The tool's content validity was ensured through expert review, and reliability was tested using the Spearman-Brown method, yielding a coefficient of 0.96, indicating high reliability. Data collection was preceded by ethical approval and informed consent from participants. The data was analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (Chi-square test) to assess the association between knowledge levels and selected demographic variables. A pilot study was conducted on 10 participants to test the feasibility and refine the research methodology. The self-instructional module developed for this study included definitions, etiology, classification, signs and symptoms; risk factors, treatment, and preventive measures related to nutritional deficiencies in children.

DATA ANALYSIS AND INTERPRETATION OF DATA:

Description of Demographic Variables with Percentage Distribution

When it comes to the age distribution, the lion's share of participants (63%) fell into the 20–30 years age group, showing that youth led the charge in this study. A respectable 30% were aged between 31–40 years, while only 6.6% were in the 41–50 bracket, and none were above 60—proving that the older crowd took a back seat. On the gender front, males outnumbered their female counterparts, with 70% male and 30% female teachers, and no participants identifying as other.

Education-wise, a solid majority (70%) held a Bachelor's degree (B.Ed., D.Ed., B.Sc.), making it the most common qualification by a mile, while 20% had completed only high school, and a modest 10% held a Master's degree. No one had a doctorate, suggesting that advanced degrees were few and far between. In terms of teaching experience, newcomers ruled the roost, with 63% having 0–5 years of experience, and 36% falling in the 6–10 years range—none had more than 10 years, indicating a relatively fresh teaching workforce.

Looking at the subjects taught, Science took the centre stage with 56%, while Mathematics trailed behind at 30%, Social Studies stood at 10%, and English barely made the cut with 3%. As for grade levels,

teachers were spread thin but mostly in the middle, with 50% teaching middle school, 46% teaching primary classes, and only 3.3% in high school.

Private school teachers dominated the sample (96%), with just 3.3% from government schools—semi-government and international schools didn't make it to the scene. A whopping 86% of teachers hailed from rural areas, leaving urban teachers in the minority at 13.3%. On the personal front, 60% were married, 33% single, and 6.6% divorced—showing a mix of family life and independence.

When it came to parenting, 46% had no children, 26% had one, 20% had two, and 6.6% had three—a small but significant number juggling both teaching and parenting. Socio-economically, the scales were balanced between lower and middle classes (43% each), while the upper-middle and upper classes shared the remaining 13.2%. Notably, 40% of the teachers had received training related to child nutrition, while 20% had attended health and nutrition seminars—a sign that some were going the extra mile. Lastly, 20% reported a personal or family history of nutritional deficiency disorders, while 86.6% said otherwise, leaving no room for uncertainty about the relevance of the topic.

Association between knowledge level and selected demographic variables of school teachers

To assess the relationship between the demographic variables and teachers' knowledge levels regarding nutritional deficiencies in school children, a Chi-square test was used. The findings are as follows:

- Age ($\chi^2 = 2.228$, df = 6): No significant association was found between teachers' age and their knowledge level.
- Gender ($\chi^2 = 0.9236$, df = 4): No significant association was observed between gender and knowledge levels.
- Educational Qualification ($\chi^2 = 11.3301$, df = 6): There was a statistically significant association, indicating that higher education is related to better knowledge.
- Teaching Experience ($\chi^2 = 2.0217$, df = 6): No significant relationship was identified between years of experience and knowledge level.
- Subject Area Taught ($\chi^2 = 1.4046$, df = 6): No notable association was found between subject taught and knowledge level.
- Grade Level Taught ($\chi^2 = 1.2476$, df = 4): Grade level did not significantly impact knowledge levels.
- Type of School ($\chi^2 = 0.3761$, df = 4): The type of school (government vs. private) did not significantly affect knowledge.
- Location of School ($\chi^2 = 0.932$, df = 4): Urban or rural setting showed no significant influence on knowledge levels.
- Marital Status ($\chi^2 = 12.4222$, df = 6): A significant association was found, suggesting marital status may influence teachers' awareness and knowledge.
- Number of Children ($\chi^2 = 4926$, df = 6): The chi-square value is likely a typo due to its unrealistic size; this data point should be rechecked.
- Socio-economic Status ($\chi^2 = 4.0384$, df = 6): No significant association was found.
- Training on Child Nutrition ($\chi^2 = 1.5729$, df = 2): No significant difference was observed.
- Attendance in Workshops/Seminars ($\chi^2 = 1.461$, df = 2): No significant link was found.
- History of Nutritional Deficiency ($\chi^2 = 0.5769$, df = 2): Personal or family history did not significantly influence knowledge levels.

Among all variables analyzed, educational qualification and marital status showed a statistically significant association with the knowledge levels of school teachers regarding nutritional deficiencies in school children. Other variables such as age, gender, teaching experience, type of school, and professional training did not show significant influence, suggesting that formal education plays a more decisive role in shaping nutritional awareness than experience or external training alone.

Summary

The study aimed to assess the knowledge levels of school teachers regarding nutritional deficiencies among school children in selected schools in Sagar, M.P., and to determine the association between these knowledge levels and various demographic variables. A structured questionnaire was used to collect data from 30 school teachers, followed by statistical analysis using the Chi-square test.

The results revealed that most teachers had average knowledge, and only a few demonstrated good understanding of nutritional deficiencies. Among the demographic variables analyzed, educational qualification and marital status showed a statistically significant association with the teachers' knowledge levels. Teachers with higher academic qualifications and those who were married were more likely to have better knowledge. In contrast, variables such as age, gender, teaching experience, subject taught, grade level, school type, school location, socio-economic status, training received, attendance at seminars/workshops, and personal or family history of nutritional deficiencies did not show significant associations with knowledge levels.

Overall, the findings underscore the need for targeted nutritional education programs and training for school teachers, especially those with lower qualifications or less exposure to formal learning in nutrition. Improving teachers' awareness can have a direct impact on early identification and prevention of nutritional deficiencies among school children.

Nursing Implications

The findings of this study carry several important implications for nursing practice, education, administration, and research. As school teachers play a vital role in shaping children's health awareness, nurses—especially community and school health nurses—have a key responsibility in promoting nutritional health through collaboration and education.

Nursing Practice

- Nurses, particularly community health nurses, can collaborate with schools to provide regular health education sessions focused on nutrition and early signs of deficiencies.
- They can act as resource persons in school health programs to assist teachers in understanding practical aspects of child nutrition.
- Nurses can facilitate screening and assessment of children for signs of malnutrition and coordinate with teachers for early referrals and follow-up.

Nursing Education

- The results highlight the need to incorporate school-based nutrition programs and teacher collaboration modules into nursing curricula.
- Student nurses can be trained to conduct awareness campaigns and nutritional counseling in schools as part of their community health postings.
- There is a scope to develop interprofessional education models, involving both nursing students and trainee teachers to foster joint responsibility for child health.

Nursing Administration

- Nursing administrators can advocate for the inclusion of nurses in school health committees to ensure that nutritional issues are addressed systematically.
- They can initiate training workshops for school teachers on nutrition, organized in collaboration with health departments and local authorities.
- Administrators can also help in the development and dissemination of nutritional educational materials tailored for school settings.

Nursing Research

- The study opens avenues for further research into the effectiveness of nutrition education programs for teachers led by nurses.
- Comparative studies can be conducted to evaluate knowledge levels before and after nursing interventions.
- Longitudinal studies may assess the impact of teacher-nurse collaboration on the actual nutritional status of school children.

Recommendations

Based on the findings of the study, the following recommendations are proposed to improve the knowledge level of school teachers regarding nutritional deficiencies among school children:

- Organize Regular Training Programs: Schools, in collaboration with health departments, should conduct periodic training sessions and refresher courses for teachers on basic nutrition, balanced diets, and signs of nutritional deficiencies in children.
- Include Nutrition in Teacher Education: Nutrition education modules should be integrated into

teacher training curriculums (like B.Ed. or D.Ed.), ensuring teachers are equipped with essential health-related knowledge before entering classrooms.

- Conduct Awareness Campaigns: Nurses, dietitians, and public health officials should hold awareness campaigns and workshops in schools to update teachers on nutritional guidelines and preventive strategies.
- Develop and Distribute IEC Materials: Information, Education, and Communication (IEC) materials such as charts, posters, leaflets, and booklets in regional languages should be distributed in schools to assist teachers in identifying and addressing nutritional issues.
- Encourage Interdisciplinary Collaboration: Promote collaboration between school health nurses and teaching staff to design effective school-based nutrition programs and monitoring systems.
- Implement School Nutrition Committees: Schools should form nutrition committees involving teachers, parents, nurses, and local health workers to monitor children's health and dietary habits.
- Monitor Students' Nutritional Status: Teachers should be trained to observe and report early signs of malnutrition or deficiency, enabling early intervention and referral to health services.
- Use of Technology: Develop mobile apps or digital tools to provide teachers with quick access to nutrition facts, meal plans, and deficiency indicators.
- Involve Parents through Teachers: Teachers should be encouraged to engage with parents during parent-teacher meetings about their children's dietary practices and health habits.
- Further Research: Encourage ongoing studies to explore the long-term impact of teacher knowledge on student health outcomes and the effectiveness of various training approaches.

Conclusion

The present study was undertaken to assess the knowledge level regarding nutritional deficiencies of school children among school teachers in selected schools of Sagar, M.P. The findings revealed that the majority of teachers possessed only an average level of knowledge, with a limited number demonstrating good understanding of the topic. Among various demographic factors, educational qualification and marital status showed a statistically significant association with knowledge levels, highlighting that teachers with higher academic achievements and life experience tend to have better awareness of child nutrition.

Despite some teachers having attended training or workshops, a large proportion lacked sufficient knowledge to identify or prevent nutritional deficiencies in children. This underscores the need for structured training programs and greater involvement of healthcare professionals—especially nurses—in school health initiatives.

In conclusion, strengthening the nutritional knowledge of school teachers is crucial, as they serve as key role models and frontline observers of children's health. Equipping them with accurate information and practical skills can significantly contribute to the early detection, prevention, and management of nutritional deficiencies among school-aged children—ultimately fostering a healthier, more informed future generation.

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