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Impact of Mass Media on Nutritional Practices Among Working Women Through Knowledge, Attitude, and Practices (KAP).

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ABSTRACT

Aim- Assessing impact of mass media on nutritional practices among working women through knowledge, attitude, and practices (KAP).

The present study investigates the role of mass media in determining the nutritional knowledge, attitudes, and practices (KAP) of working women in Patna, by using an analytical cross-sectional design. The study population consisted 100 employed women who were 25–50 years of age with their regular exposure to diverse media platforms. Data was found through a structured KAP questionnaire which was designed to evaluate nutritional awareness, attitudinal orientations, and dietary practices.

This analysis showed that participants possessed relatively strong knowledge regarding calcium, iron, and vitamin A; however, considerable deficiencies were seen with respect to vitamin C and the recognition of anemia symptoms. While attitudinal responses showed to have sound nutritional practices, but the consistent consumption of fruits and vegetables remained suboptimal. Statistical testing gave significant associations between educational attainment and different domains of nutritional perception, including body hygiene ($p = 0.046$), the importance of fruits and vegetables ($p \leq 0.000$), and the role of milk products as nutrient sources ($p \leq 0.000$). Age was also significantly associated with the knowledge of role of calcium in bone development ($p = 0.026$) and awareness of vitamin A sources ($p = 0.048$). However, it did not provide meaningful associations with other areas of nutritional knowledge.

Interpretation and conclusion: These findings emphasize the influence of educational attainment as a determinant of nutritional knowledge and attitudes, which suggests that age exerts a more selective effect. The study further highlights the potential use of mass media as an interventional tool, particularly when messages are confined to the educational profile of the target population, to strengthen nutritional practices among working women and thereby help to enhance the overall health outcomes.
Keywords: Mass media, Nutritional status, Knowledge, Attitude, Practice, Awareness, Program.

I. INTRODUCTION

In this era of digitalization, both modern media such as social networks, blogs, mobile applications, and streaming platforms as well as traditional media, including radio, television, and print, play an important role in shaping health-related behaviors[1]. These channels rapidly provide information to wide audiences, enhancing awareness in them, influencing their attitudes, and encouraging positive lifestyle changes. Historically, media campaigns and advertisements have contributed significantly to public health initiatives undertaken, which included vaccination drives, dietary modifications, and anti-smoking efforts[2] made possible.

The widespread influence of mass media has substantially shown impact on the way of perceiving and pursuing individual's healthy living pattern. As working women, often manage multiple personal and professional responsibilities in their day to day life, multimedia functions as an important source of nutritional information and play a key role for dietary decision-making[3].

Within different socioeconomic groups, working women represent a particularly vulnerable population. They suffer with the time limitations, emotional stress, and decision fatigue due to balancing professional duties and family obligations which frequently disrupt their eating habits. Evidences show that they are more prone to skipping breakfast, eating irregularly, consuming processed or packaged foods, and having inadequate intake of fruits, vegetables, and essential nutrients in their diet. These practices not only reduce daily productivity of working women but also elevate long-term risks of non-communicable diseases in them.

Media platforms including traditional outlets such as television and newspapers and digital social media platforms like Facebook, Instagram, and wellness blogs have become powerful tools for disseminating dietary and health guidance[4] to the population all around. By forming different scientific nutritional norms which influence public perceptions and also promote their healthy behavioral changes, these media hold significant potential to improve overall dietary practices.

This study aims to evaluate the level to which different forms of mass media improve nutritional knowledge of working women, inculcate positive attitudes, and support them in adopting healthier dietary behaviors[5].

II. METHODOLOGY

It is guided by the Knowledge, Attitude, and Practices (KAP) framework, the present study used an analytical cross-sectional design to examine the influence of mass media on the dietary behaviors of working women in Patna. This design aided in the collection of quantitative data from a defined population at a single point in time.

The study was conducted in Patna, the capital city of Bihar, where a suitable context was available to explore the role of media in shaping the eating habits of professional women. Patna has a diverse workforce comprising women employed in both public and private sectors, making it an appropriate setting for this investigation.

The study population included women aged 25 to 55 years who were employed across various sectors such as government services, entrepreneurship, healthcare, and higher education. A total of 100 participants were selected using purposive sampling, based on the criteria that they were currently employed, regularly exposed to one or more forms of media (television, newspapers, internet, social media, or radio), and willing to participate in the study.

Data was collected using a structured KAP questionnaire. The instrument contained a mix of Likert scale and close-ended questions organized into several domains:

- Demographic profile: age, marital status, occupation, educational level, and socioeconomic status.
- Knowledge and awareness: nutritional knowledge, information sources, and media-generated awareness.
- Attitudes: perceptions of dietary habits, the influence of media campaigns on food choices, and trust in media-based dietary guidance.
- Practices: meal planning, eating patterns, and food choices shaped by media exposure.

The assessments were carried out among individuals working in offices, healthcare institutions, and educational establishments in Patna. To encourage voluntary and informed participation, each respondent was provided with an information sheet outlining the objectives of the study prior to giving consent.

The KAP variables were analyzed using descriptive statistics such as means, frequencies, and percentages. Cross-tabulations were employed to examine associations between KAP indicators and selected socioeconomic characteristics. The Chi-square test was applied to determine the relationship between dietary practices and media exposure. Further analysis explored the interconnections among knowledge, attitudes, and practices.

Ethical approval for the study was obtained from the institutional review board. Participants were assured of the confidentiality of their information and the protection of their privacy in reporting the findings.

III. RESULT AND DISCUSSION

Of the 100 responders, 10% were between the ages of 25 and 30, 25% were between the ages of 31 and 35, 20% were between the ages of 36 and 40, 25% were between the ages of 41 and 45, and 20% were between the ages of 46 and 50.

Age of respondents

Age (in years)	N=100	%
25-30	10	10.0%
31-35	25	25.0%
36-40	20	20.0%
41-45	25	25.0%
46-50	20	20.0%

Table 1.1 -Age of the respondents

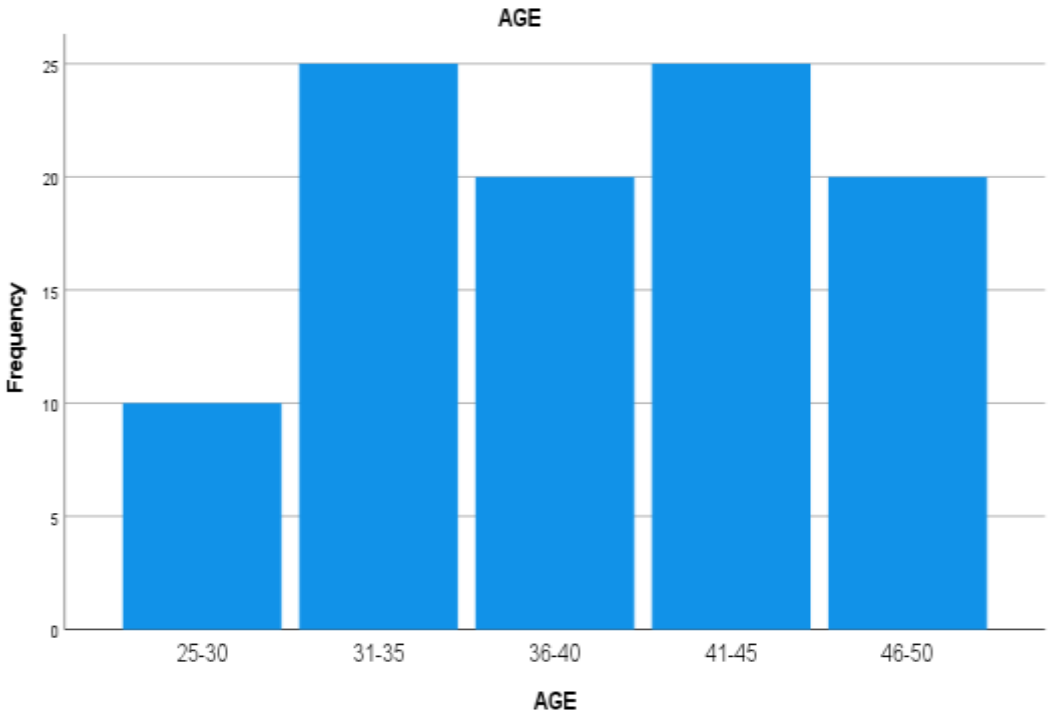

Fig1.1 Age of the respondents

MARITAL STATUS

MARITAL STATUS	N= 100	%
Married	97	97.0%
Unmarried	3	3.0%

Of the 100 people who responded, 3% were single and 97% were married.

Table 1.2. – Marital status of the respondents

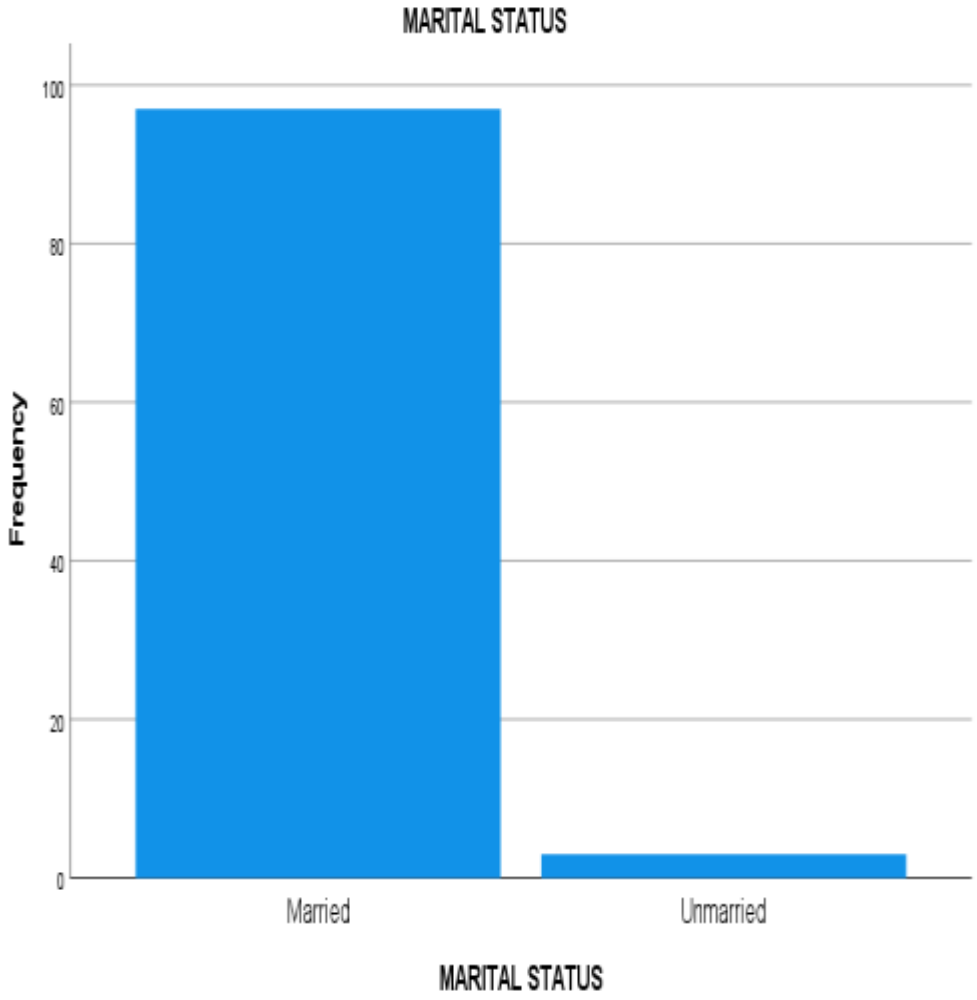

Fig. 1.2. – Marital status of the respondents

Of the 100 people who responded, 6% were Christians, 1% were Muslims, and 93% were Hindus.

RELIGION

RELIGION	N=100	%
Hindu	93	93.0%
Muslim	1	1.0%
Christian	6	6.0%

Table 1.3 – Religion of the respondents

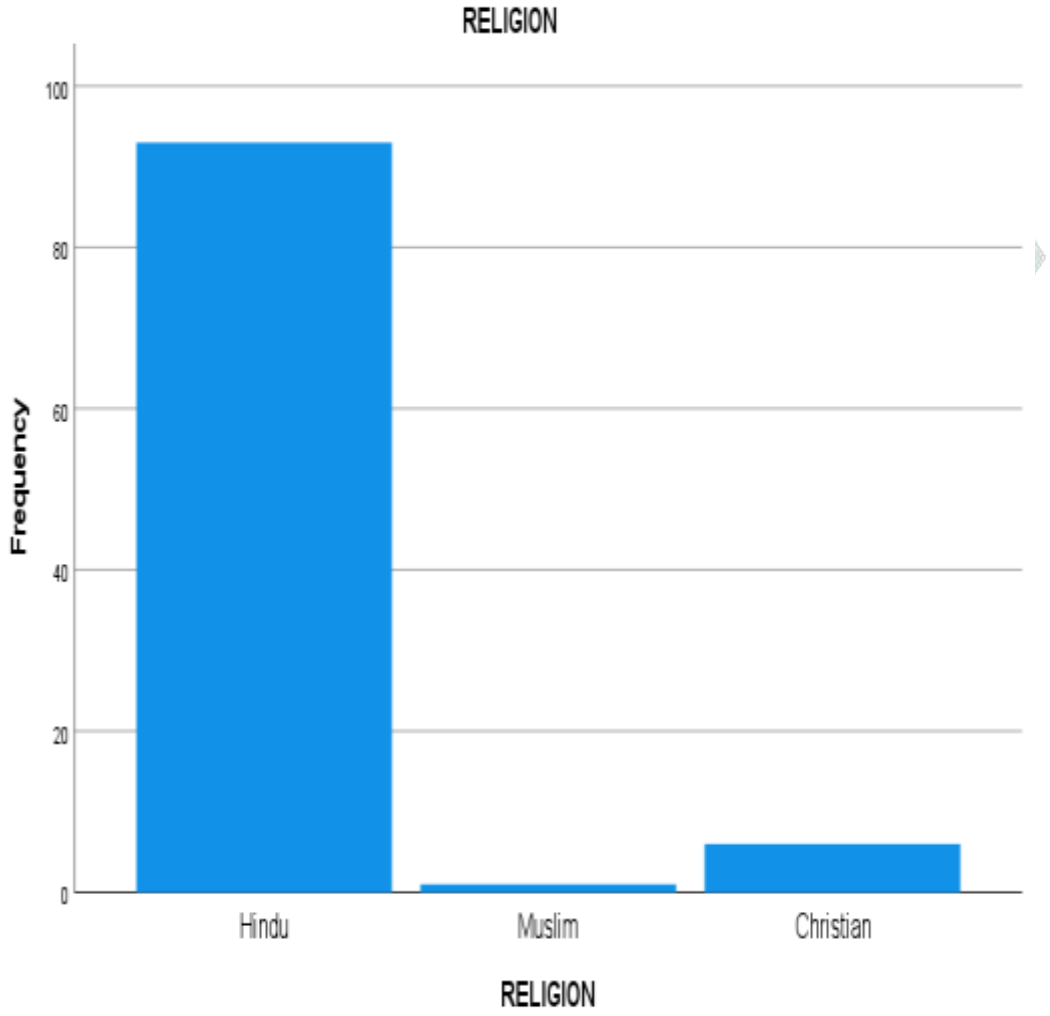

Fig 1.3 – Marital status of the respondents

Among the 100 respondents, 10% had a BMI of less than 18.5, 45% had a BMI between 18.5 and 24.9, 40% had a BMI between 25 and 29.9, and 5% had a BMI over 30.

BMI

BMI	N=100	%
>18.5	10	10.0%
18.5-24.9	45	45.0%
25-29.9	40	40.0%
30<	5	5.0%

Table 1.4. – BMI of the respondents

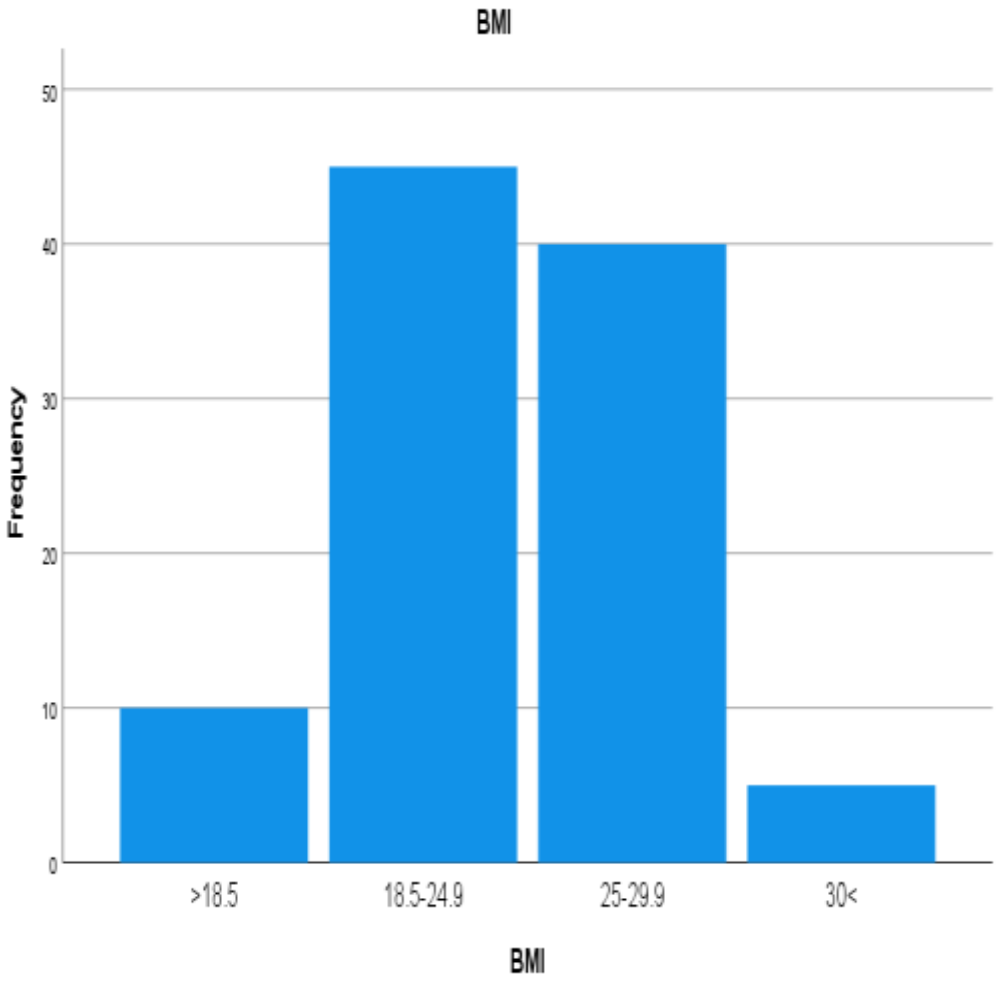

Fig.1.4 BMI of the respondents

Among the respondents, 14% engaged in walking, 32% practiced yoga, 29% participated in running, and 25% performed gym workouts.

PHYSICAL ACTIVITY

PHYSICAL ACTIVITY	N	%
walking	14	14.0%
yoga	32	32.0%
running	29	29.0%
gym workout	25	25.0%

Table 1.5 – Physical activity of the respondents

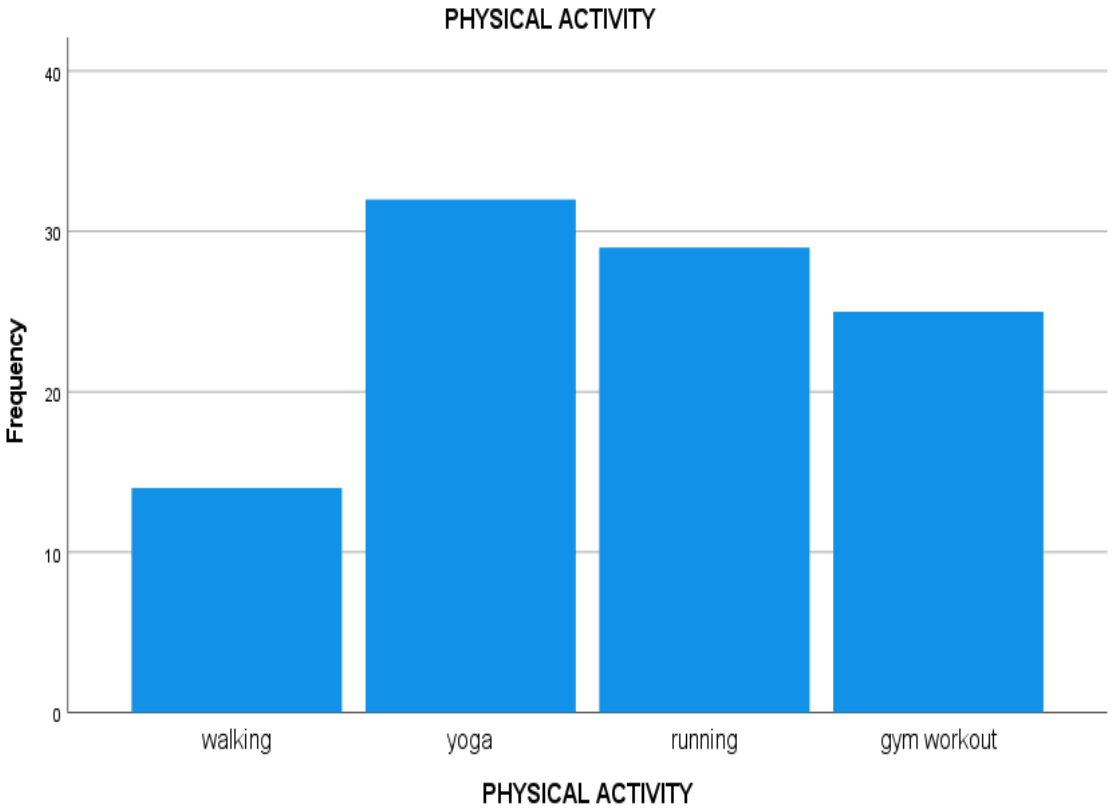

Fig. 1.5 Physical activity of the respondents

Of the 100 respondents, 13% had a matric-level education, 30% had completed intermediate education, 45% were graduates, 9% had a postgraduate degree, and 3% were PhD.

EDUCATION

EDUCATION	N=100	%
Matric	13	13.0%
Intermediate	30	30.0%
Graduation	45	45.0%
Postgraduation	9	9.0%
PhD	3	3.0%

Table 1.6- Education of the respondents

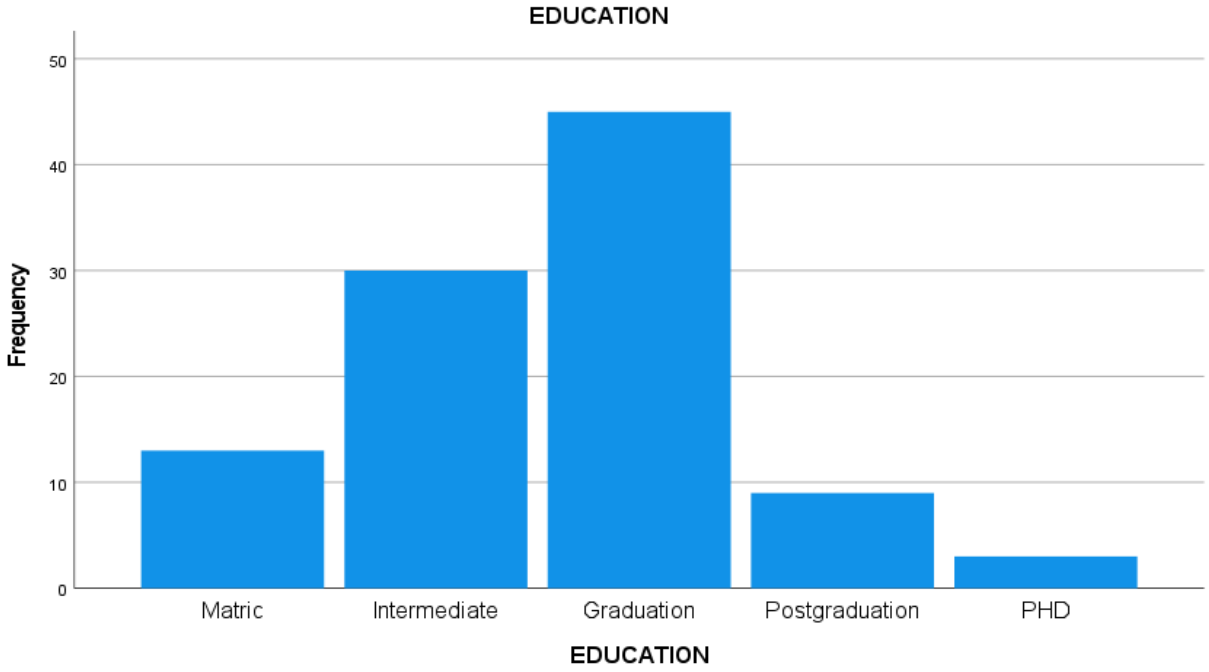

Fig.1.6 – Education of the respondents

KNOWLEDGE RESPONSES OF THE RESPONDENTS

The graphical data indicate that most respondents possess a sound level of knowledge regarding key nutrients, particularly calcium and iron. A large proportion (89%) correctly identified milk and green leafy vegetables as rich sources of calcium, while 97% recognized the importance of iron in hemoglobin formation and the maintenance of healthy blood. Awareness of Vitamin A was also relatively high, with 79% acknowledging yellow and orange fruits and vegetables as primary sources, and 70% understanding its role in maintaining healthy vision.

In contrast, knowledge concerning the role of calcium in bone and dental health (59%) and the consequences of calcium deficiency (58%) was only moderate. Awareness of Vitamin C showed mixed results: 62% of respondents were aware that citrus fruits are a major source, yet only 49% knew its role in preventing scurvy, while 51% admitted to having no knowledge.

The weakest area of knowledge was observed in relation to anemia. Only 44% correctly identified weakness as a symptom, another 44% stated it was not, and 12% were uncertain.

In summary, while participants demonstrated a good understanding of nutrients such as calcium, iron, and Vitamin A, considerable gaps remain regarding Vitamin C and the recognition of anemia symptoms. These findings highlight the need for targeted health education initiatives to address specific deficiencies in nutritional awareness.

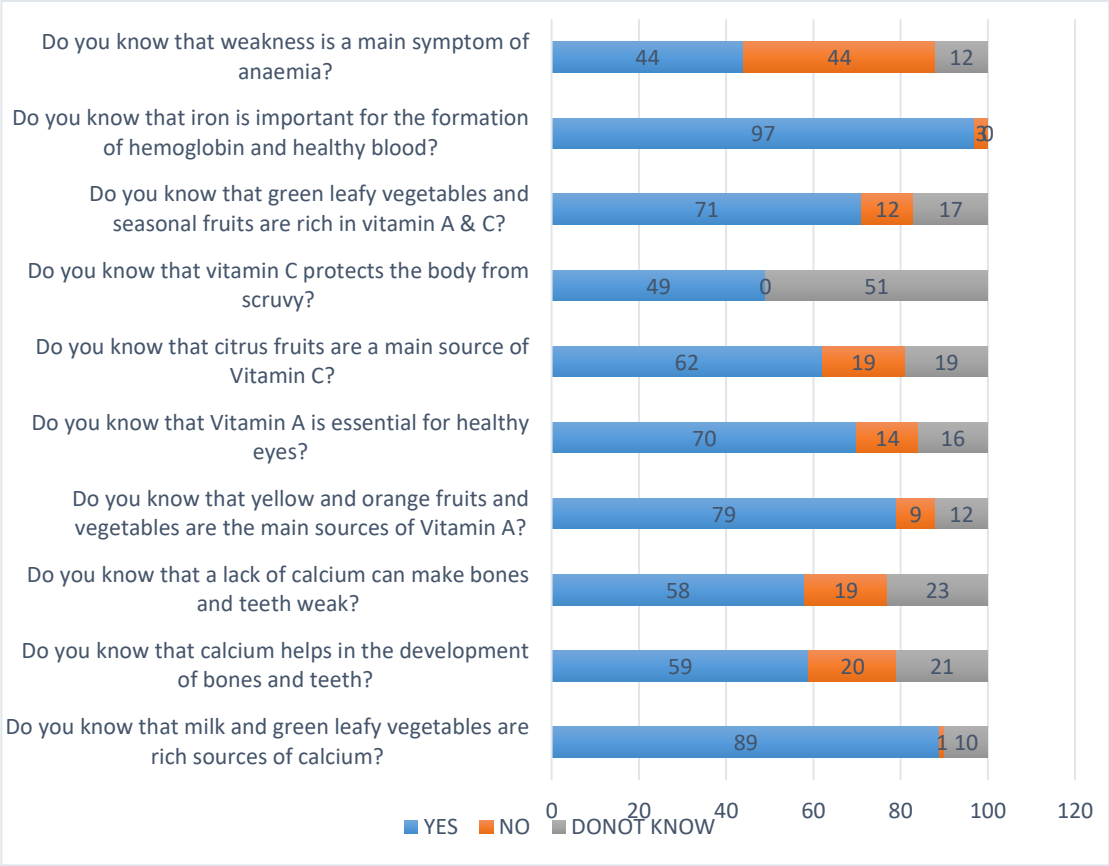

Fig. 1.7 Knowledge response of the respondents

ATTITUDE RESPONSE OF THE RESPONDENTS

The attitudinal responses of participants indicate an overall positive perspective toward health, hygiene, and nutrition, though certain gaps remain. A majority (77%) agreed that adequate nutrient intake supports overall health, while 73% believed that personal hygiene contributes to disease prevention. Likewise, 74% acknowledged that covering cooked food and cut fruits before consumption is important for maintaining hygiene, reflecting strong awareness and favorable attitudes toward food safety practices.

With regard to dietary behaviors, 70% of respondents felt that limited consumption of junk food can reduce health risks, and 67% recognized fruits and vegetables as vital sources of micronutrients. Additionally, 52% emphasized the importance of milk and milk products as sources of essential nutrients, and 53% agreed that restricting junk food intake contributes to good health.

Despite these positive tendencies, some concerning patterns emerged. Fewer than half of the respondents (49%) affirmed that regular consumption of fruits and vegetables promotes good health, and an equal proportion recognized the benefits of seasonal produce. Moreover, a notable proportion of participants expressed uncertainty or disagreement regarding the advantages of daily fruit and vegetable consumption.

In summary, while attitudes toward hygiene and balanced nutrition are broadly favorable, the findings suggest the need for greater emphasis on fostering stronger, more consistent attitudes toward fruit and vegetable consumption as part of long-term healthy dietary practices.

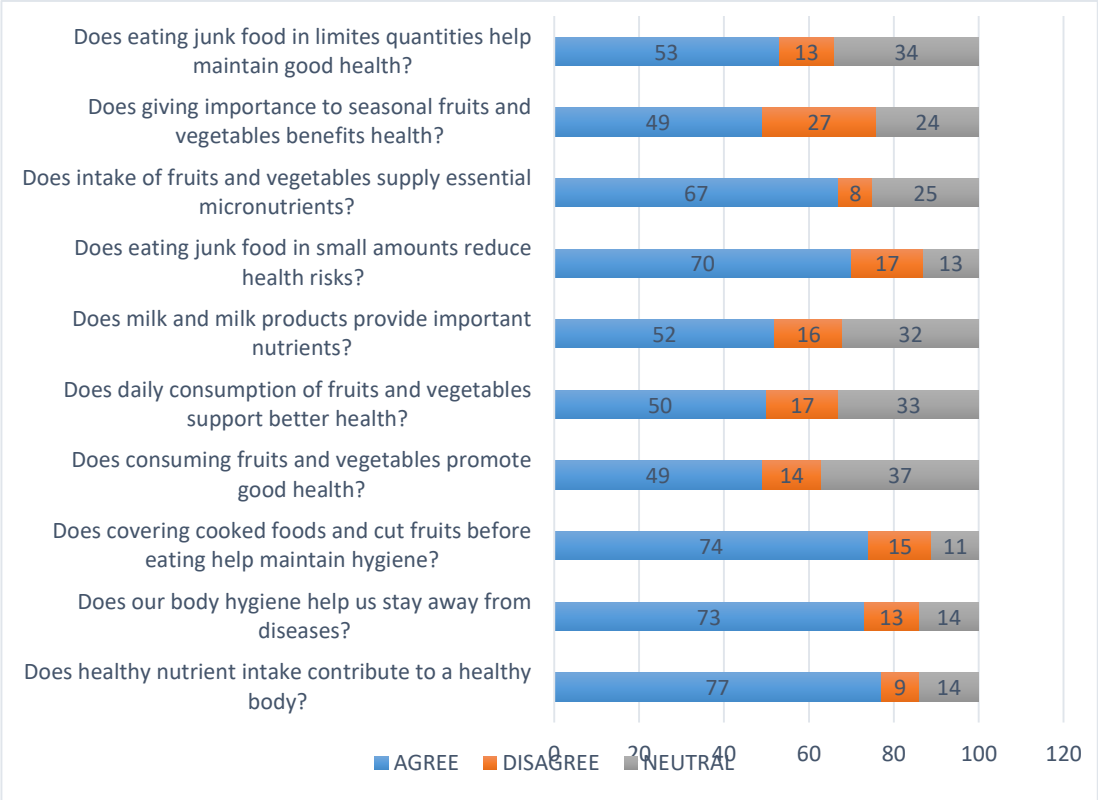

Fig.1.8 Attitude response of the respondents

PRACTICE RESPONSES OF THE RESPONDENTS

The consumption patterns of sweets and fruits among respondents demonstrated diverse dietary preferences. For chocolates, the majority (70%) reported occasional consumption, whereas 20% consumed them regularly and 10% abstained completely. In the case of mithai (traditional Indian sweets), 26% reported frequent consumption, 15% occasional, and 59% never. Kheer was consumed occasionally by a large proportion (80%), while 9% reported regular intake and 11% did not consume it at all. Overall, 73% indicated that they never consumed items from the sweets category, while 14% did so regularly and 13% occasionally.

Fruit consumption patterns presented a different trend. Only 19% reported eating fruits consistently each week, 21% consumed them occasionally, while a considerable 60% reported never doing so. Green leafy vegetables, however, showed greater inclusion in diets, with 39% consuming them regularly, 40% occasionally, and 21% never.

Preferences between whole and processed fruits were also evident. A majority (63%) favored whole fruits, 17% did so occasionally, and 20% not at all. Conversely, fruit juice as a substitute for whole fruits was rarely consumed—77% reported never consuming it, 23% did so occasionally, and none reported daily intake. Similarly, fruit salad was preferred by 61% of respondents, 24% consumed it sometimes, and 15% avoided it altogether. Notably, 41% reported consistently avoiding fruits, 48% avoided them occasionally, and only 11% indicated they never avoided fruit consumption.

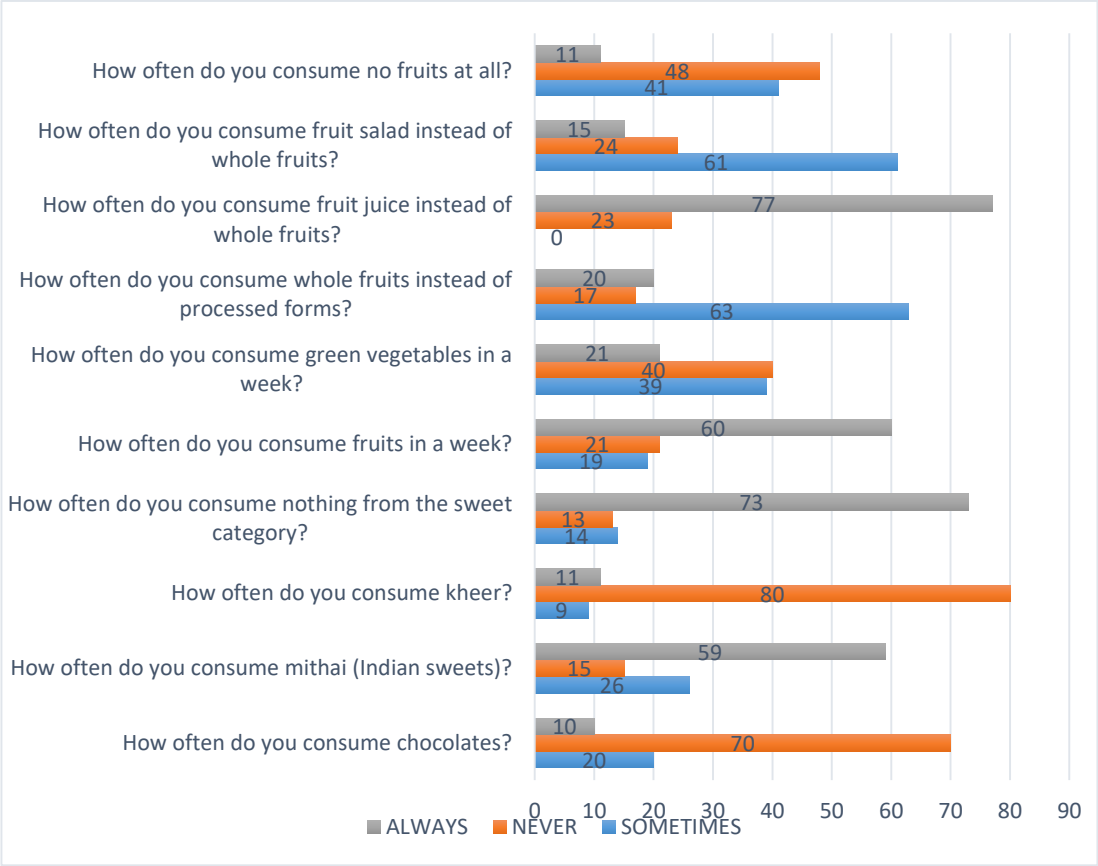

Fig.1.9 Practice responses of the respondents

The analysis of respondents' age in relation to their nutritional knowledge showed that only two variables demonstrated significant associations. Awareness that calcium contributes to the development of bones and teeth ($\chi^2 = 17.458$, $p = 0.026$) and knowledge that yellow and orange fruits and vegetables are major sources of Vitamin A ($\chi^2 = 15.617$, $p = 0.048$) varied significantly across age groups. By contrast, knowledge of milk and green leafy vegetables as calcium sources ($\chi^2 = 7.104$, $p = 0.525$), the effects of calcium deficiency ($\chi^2 = 2.686$, $p = 0.952$), the role of Vitamin A in maintaining vision ($\chi^2 = 7.339$, $p = 0.501$), citrus fruits as sources of Vitamin C ($\chi^2 = 4.772$, $p = 0.782$), Vitamin C's role in preventing scurvy ($\chi^2 = 1.881$, $p = 0.758$), vitamin content of leafy greens and seasonal fruits ($\chi^2 = 8.011$, $p = 0.432$), iron's contribution to hemoglobin ($\chi^2 = 3.780$, $p = 0.437$), and weakness as a symptom of anemia ($\chi^2 = 3.530$, $p = 0.897$) did not differ significantly by age. Overall, age appeared to influence awareness of only selected nutritional facts, while general knowledge remained relatively uniform across groups.

The relationship between educational attainment (10th, 12th, BSc, PG, PhD) and nutritional perceptions showed a combination of significant and non-significant associations. Belief that adequate nutrient intake contributes to a healthy body was not significantly related to education level ($\chi^2 = 10.027$, $p = 0.263$). Similarly, the perception that covering cooked foods and cut fruits helps maintain hygiene yielded a marginally non-significant result ($\chi^2 = 13.912$, $p = 0.084$), and the view that small amounts of junk food reduce health risks was also not significant ($\chi^2 = 14.792$, $p = 0.063$).

In contrast, significant associations were observed for several other items: belief that personal hygiene helps prevent disease ($\chi^2 = 15.729$, $p = 0.046$), recognition that fruits and vegetables promote good health ($p \leq 0.000$), acknowledgment that daily consumption of fruits and vegetables supports health ($p \leq 0.000$), awareness that milk and milk products provide key nutrients ($p \leq 0.000$), understanding that fruits and vegetables supply essential micronutrients ($p \leq 0.000$), appreciation of the benefits of seasonal fruits and vegetables ($p \leq 0.000$), and the perception that limiting junk food intake contributes to good health ($p \leq 0.000$).

Taken together, these findings suggest that higher education is strongly associated with more favorable health and nutrition attitudes, particularly regarding the value of fruits, vegetables, and milk products. However, some fundamental beliefs, such as the general role of nutrient intake in maintaining health or the

effect of limited junk food consumption, were found to be relatively uniform across different educational levels.

CONCLUSION

This study emphasizes the considerable influence of both modern and traditional media on the nutritional knowledge, attitudes, and practices of working women in Patna. The results indicate that although most participants demonstrated a reasonable understanding of essential nutrients such as calcium, iron, and vitamin A, notable gaps persist in their awareness of vitamin C and the clinical manifestations of deficiencies, particularly anemia. While participants generally displayed positive attitudes toward health and hygiene, inconsistent recognition of the importance of daily fruit and vegetable consumption highlights the need for reinforcing healthier dietary behaviors.

Educational attainment emerged as a key determinant of nutritional perceptions and practices, with higher education levels being strongly associated with favorable attitudes toward the intake of fruits, vegetables, and dairy products. In contrast, age exerted only a limited influence, affecting knowledge of calcium's role in bone and teeth development ($\chi^2 = 17.458$, $p = 0.026$) and the recognition of yellow and orange fruits and vegetables as primary sources of vitamin A ($\chi^2 = 15.617$, $p = 0.048$), while no significant age-related differences were observed in other nutritional domains ($p > 0.4$).

Education was significantly correlated with perceptions regarding the role of personal hygiene in disease prevention ($\chi^2 = 15.729$, $p = 0.046$), the health benefits of consuming fruits and vegetables ($p \leq 0.000$), the nutritional value of milk and milk products ($p \leq 0.000$), and the contribution of limited junk food intake to better health ($p \leq 0.000$). However, certain beliefs—including the view that general nutrient intake supports a healthy body ($\chi^2 = 10.027$, $p = 0.263$), that covering cooked foods maintains hygiene ($\chi^2 = 13.912$, $p = 0.084$), and that small amounts of junk food reduce health risks ($\chi^2 = 14.792$, $p = 0.063$)—were not significantly linked to education level.

Despite adequate knowledge and broadly favorable attitudes, dietary practices, particularly fruit consumption, were suboptimal, revealing a disconnect between awareness and behavior. Media—including television, newspapers, and digital platforms—remains a primary channel for health information and holds substantial potential to reinforce healthier lifestyle choices among working women.

In conclusion, targeted media-based health education campaigns are needed to bridge existing knowledge gaps and translate positive attitudes into sustained dietary improvements. Providing accessible, credible, and engaging nutritional information can empower working women, thereby improving health outcomes and reducing the risk of diet-related chronic diseases in this population.

PARTICIPANT CONSENT: Verbal informed consent was obtained from the participants.
AUTHOR`S CONTRIBUTION: Sukriti and Rupam originally developed this study. Shalinee collected the data under Pragati's supervision. The final manuscript was read and approved by both authors.

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