

KNOWLEDGE, ATTITUDE AND PRACTICES IN SUSTAINABLE NUTRITION AMONG WOMEN RESIDING IN JAIPUR

LODHA, K.*, RANAWAT, R., SEKHRI, A. and JAIN, H.

Department of Home Science, University of Rajasthan, Jaipur – 302007

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Sustainable nutrition involves making food choices that nourish people while reducing environmental impact and promoting social equity. It encourages plant-forward diets, conscious food consumption, reduced food waste, and support for local and seasonal food systems. With the rise of global concerns such as climate change, environmental degradation and food scarcity, sustainable dietary patterns are now being recognized as integral to addressing multiple environmental and public health crises (Myers *et al.*, 2017). These diets, which emphasize the consumption of locally sourced, seasonal and minimally processed foods, can help lower greenhouse gas emissions, conserve water and soil resources, and support ecosystem balance (Toromade *et al.*, 2024).

In many households, especially in developing countries, women are the primary decision-makers in food-related activities. They typically oversee the procurement, preparation, and consumption of food, thus exerting a significant influence on family and community dietary patterns. Their engagement in sustainable nutrition practices can help steer communities toward healthier and more environmentally friendly dietary habits. (Chamhuri *et al.*, (2024)). In addition to these barriers, socio-economic disparities and marketing targeted by the food industry also

pose challenges by increasing prevalence of processed and convenience foods in displacing traditional, home-cooked meals, thereby affecting the sustainability of food consumption patterns (Jereme *et al.*, 2021). To explore and understand these dynamics, Knowledge, Attitude, and Practice (KAP) studies provide a robust framework. These studies assess what people know about a topic, how they feel about it, and how they act in practice. KAP assessments have been widely used to guide health and nutrition interventions, providing critical insights into behavioral gaps and areas for awareness enhancement (Baungaard *et al.*, 2023).

Given the strong links between dietary patterns, health outcomes and environmental impacts highlighted by global modelling studies (Springmann *et al.*, 2018), the research aimed to assess women's knowledge of sustainable nutrition, examine their attitudes and motivations toward sustainable diets, and identify the practices and barriers shaping their current food-related behaviors. A total of 250 women residing in urban areas of Jaipur were initially contacted for participation in the study. All prospective participants were screened based on the predefined eligibility criteria, which included: being within the age group of 30–45 years, residing in Jaipur for a minimum of three years, serving as the primary household food

*Corresponding author email id: kritikalodha39@gmail.com

decision-maker, and being willing to provide informed consent for participation.

Out of the 250 women approached, 50 participants fulfilled all eligibility criteria and consented to participate in the study. Thus, the final sample size represents approximately 20 percent of the contacted individuals who met the inclusion requirements. These participants were selected through convenience sampling from various urban localities of Jaipur, including housing associations, self-help groups, and social clubs, ensuring representation from diverse urban settings within the city. Also looking at the time it took to gain consent of the subjects fulfilling the eligibility criteria and the subsequent time constraint, it was decided to limit the sample to 50 women. Data was collected using a structured interview schedule adapted from existing KAP assessment models. The tool was pre-tested in a small pilot study conducted with 10 women from the target group to check clarity and language suitability of the questionnaire consisting of four sections that include Demographic Information, Knowledge

Assessment, Attitude Assessment and Practices and Barriers and reviewed by nutrition experts to ensure reliability and clarity. Descriptive statistics summarized the data, while Pearson correlation tested links between demographics (education, income) and knowledge/practice scores. Thematic analysis of open-ended responses highlighted key barriers.

Majority (80%) participants were aged 30–40 years, a group typically involved in household food decisions. Nearly half (47%) were postgraduates and 37% were undergraduates, indicating a generally well-educated sample that is likely to have better awareness of sustainability concepts. A large proportion (78.1%) were employed, suggesting possible time constraints that could influence their daily food choices. These demographic characteristics help explain later patterns in knowledge, attitudes and practices, especially the gap between awareness and actual adoption.

Table 1. Demographic characteristics of the respondents

n=50

Characteristics	Categories	Percentage (%)
Age Group (years)	30-35	42
	36-40	38
	41-45	20
Educational Level	High School	16
	Undergraduate	37
	Postgraduate	47
Employment Status	Employed	78.1
	Homemaker	21.9
Family type	Nuclear	67.8
	Joint	32.2
Income	Low	24
	Medium	61
	High	15

Knowledge of the respondents with regard to Sustainable Nutrition

About half of the sample (52%) respondents showed moderate knowledge with fewer demonstrating high or low awareness. Understanding was stronger for general sustainability themes seasonal eating, meat-related environmental impact and food waste than for specific areas like local food systems and sustainable packaging. Women aged 30–35 years displayed slightly better awareness (36%), while those in the 41–45 group (12%) showed broader understanding but more gaps in detailed concepts. Income also influenced knowledge: medium-income women had more balanced awareness, low-income groups struggled with specialized topics like packaging and food-system impacts, and high-income respondents were more familiar with environmental issues than with local sourcing or packaging practices. Educational differences were clear, with postgraduates scoring highest. These trends mirror the observations of Weerasekara *et al.*, (2020), who reported uneven sustainability knowledge among women in South Asia. Sánchez-Sabate

and Sabaté (2019) similarly noted that general sustainability ideas are commonly understood, whereas knowledge of specific components often remains limited.

Attitude of the respondents with regard to Sustainable Nutrition

60% percent of the respondents displayed favorable attitudes toward sustainable nutrition, especially in relation to buying local foods and reducing household waste. Interest in organic products was comparatively lower, largely because of cost sensitivity. Age appeared to influence attitudes to some extent: women aged 30–35 years were generally more open to trying sustainable alternatives, whereas those in the 41–45 group expressed supportive views but were more cautious about higher-priced options due to greater household responsibilities. Income differences were also visible. Medium-income women tended to show balanced yet practical attitudes toward sustainability, while low-income participants were more hesitant about adopting costlier choices. In contrast, high-income respondents expressed enthusiasm but were selective about which sustainable behaviors they found convenient. Attitudes were strongest among postgraduate women, reinforcing the role of education in shaping perceptions of

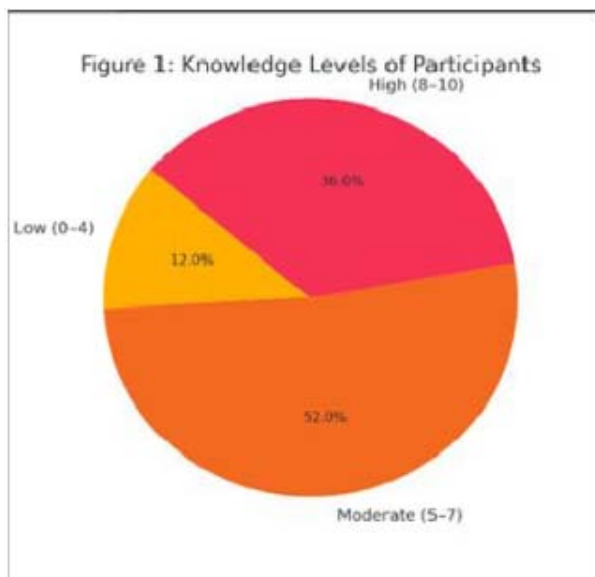


Fig. 1. Knowledge of the respondents with regard to Sustainable Nutrition

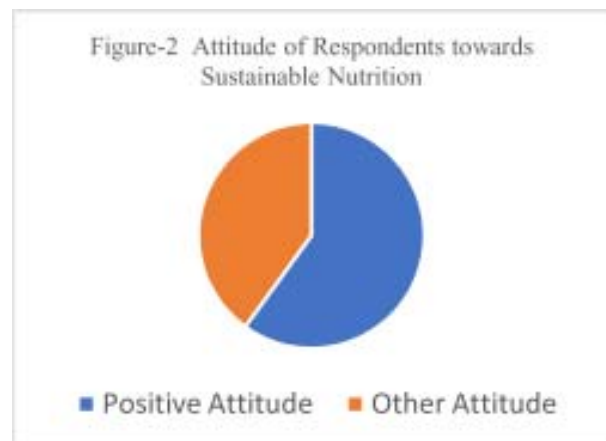


Fig.2. Attitude of the respondents with regard to Sustainable Nutrition

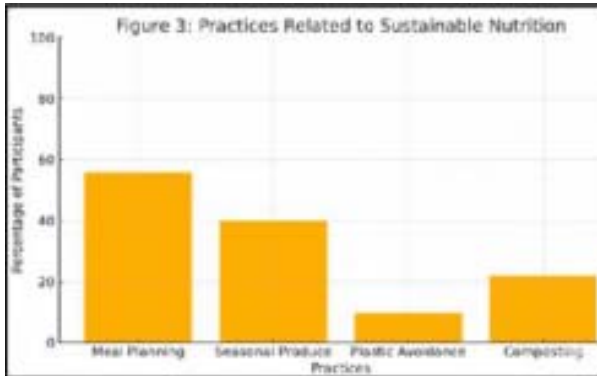


Fig.3.Practices followed by the respondents with regard to Sustainable Nutrition

sustainability. These trends are consistent with Rondoni & Grasso, (2021), who noted that consumers often value sustainable options but remain careful when such choices involve additional financial commitment.

Practices followed by the respondents with regard to Sustainable Nutrition

Despite supportive attitudes, actual sustainable practices were limited among respondents. While over half planned meals and 40% preferred seasonal or local foods, only a small number regularly composted or avoided plastic packaging. Younger women (30–35 years) were slightly more consistent in adopting such practices, whereas those aged 41–45 years reported lower adherence due to greater household responsibilities and time constraints. Income also played a role: medium-income women showed more steady engagement, low-income groups faced affordability barriers and high-income respondents often prioritized convenience. This intention–behavior gap reflects findings by Vermeir *et al.*, (2020), who noted that motivated consumers struggle to maintain sustainable habits because of limited time and accessibility. Hartmann and Siegrist (2017) similarly reported that practical constraints, especially cost and convenience,

often prevent individuals from turning positive attitudes into regular sustainable behaviors.

Barriers to following practices related to Sustainable Nutrition

High cost emerged as the most common barrier (72%), suggesting that many women perceive sustainable options such as organic foods or eco-friendly product as financially burdensome. Limited availability of seasonal or local produce (58%) further restricted their choices, indicating that access, not just awareness, shapes daily food decisions. Time constraints (46%) were especially relevant among employed women, who may find sustainable cooking and waste-management practices harder to maintain. Additionally, limited household support (34%) suggests that responsibility for sustainable actions often falls solely on women, making consistent practice difficult. Together, these barriers explain why positive attitudes did not translate into regular sustainable behaviors and highlight the need for better affordability, availability and shared household responsibilities.

Significant correlations were found between education and knowledge ($r = 0.48$), knowledge and practices ($r = 0.42$), and attitudes and practices ($r = 0.39$). This shows that higher education improves awareness, and greater understanding or positive attitudes can support better practices. However, the strength

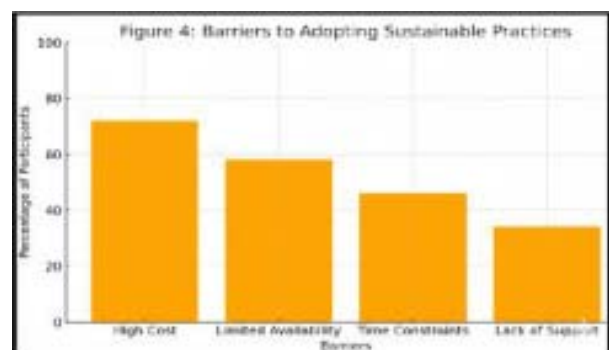


Fig.4.Barriers faced by the respondents to follow Sustainable Nutrition practices

Table 2. Relationship between Knowledge and Attitude with the practice of Sustainable Nutrition

Variables Compared	Correlation (r)	Significance (p-value)	Interpretation
Education & Knowledge	0.48	$p < 0.01$	Higher education is associated with better knowledge of sustainable nutrition.
Knowledge & Practices	0.42	$p < 0.05$	Greater understanding supports better practices, but not consistently.
Attitude & Practices	0.39	$p < 0.05$	Positive attitudes influence practice, though barriers still limit action.

of these relationships was moderate, suggesting that knowledge and attitude alone are not enough to ensure consistent sustainable behaviors. Socioeconomic factors, limited time and restricted market access continue to limit the translation of awareness into daily practice.

This study states that over two-thirds of participants possessed basic awareness of sustainable nutrition, yet this understanding rarely translated into consistent practice. Many continued relying on traditional or perceived “sustainable” habits rather than adopting evidence-based sustainable nutrition behaviors, revealing a clear gap between knowledge and action. These findings suggest that awareness alone is not enough; women require practical guidance, improved access to sustainable options and support to overcome everyday barriers. Targeted education, community programs and policy measures are needed to encourage the adoption of sustainable nutrition practices at a broader level.

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