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TO STUDY ON EPIDEMIOLOGY OF MALNUTRITION AND NUTRITIONAL AWARENESS OF WOMEN

Jyoti Gupta
Research Scholar
Department of Home science
C.M.J.University, Shilong, Meghalaya

Dr. Priya Gupta
Lecturer
Devta College, Morna, Bijnore, Uttar pardesh

ABSTRACT

Great health is only possible with the intake of supplement food and a well-balanced eating routine. It's also important to consider the number of sugars, vitamins, and proteins in the foods we eat on a regular basis. Individuals' wellbeing is influenced by a variety of factors, including heredity, environment, social proclivities, nutrition, skilled health administration, and the risk of illness and misfortune. In light of the fact that nutrition plays such an important role in our daily lives, our health and vitality are all dependent on our eating habits, we may discuss proper nutrition here. Eating a well-balanced diet is an essential life action. Both wellbeing and nourishment are two sides of the same coin; when there is sustenance, there is wellbeing, and where there is wellbeing, it is only due to sustenance. Sustenance is the study of the body that supports it. Nourishment is a broad phrase that refers to any nutritive material, solid or liquid, that is ingested into the human body. It offers you energy, protects you from infections, and helps your body's metabolic processes. Supplements are not considered to be nourishments collected by living creatures.

Key Words: *Good Health, Women's, Malnutrition, epidemiology, health care, balanced diet.*

1.1 INTRODUCTION

The quality and type of food that an individual chooses to eat has an impact on his or her health. Nutrition plays a role in promoting health and preventing disease. Sustenance foods have a direct impact on the body's resistance force. In all parts of the world, a lack of proper nutrition is a public health issue (counting India). India's hunger and malnutrition problems persist, and a shortage of nutritious food remains a key issue even as the country improves. About two-thirds of India's population is malnourished. This is a direct result of a lack of food, and a large portion of our population is undernourished as a result of the fact that the food consumed is out of balance and of poor quality (Kishore, 1993; Das Gupta and Mari Bhat, 1997; Caldwell and Caldwell, 1990).

Women's health has only recently been a priority in India, following the International Conference on Population and Development in Cairo, Egypt in September 1994 and the Fourth World Conference on Women in Beijing, China in September 1995. The importance of women's health, empowerment, and reproductive rights was emphasized during both of these conferences. Without diminishing the importance of men's health requirements and status, the truth remains that women's health is typically lower than men's over the course of their lives. Furthermore, many health issues are more common in women than in males, and some health issues are unique to women/affect women differently than men.

There can be no child if there is no mother. Their responsibilities are reciprocal, and if one side fails to perform them, the other will be neglected. This quote is particularly relevant to the topic of proper nourishment for women. The concept that a woman should eat better and more foods is as old as time itself, and it has been maintained by both laypeople and scientists. However, there has been a disconnect between idea and action.

Indian civilization, like most cultures around the world, is dominated by patriarchal norms and ideals. Patriarchy exists in the public and private areas of women's lives in the country, determining their "life chances" and resulting in their qualitatively inferior status in many socio-economic spheres. Due to their gendered existences, women's lived experiences are comparable. As women advance through the life cycle, new demands emerge. Women's health is such a complicated topic that it poses a hurdle. (Merchant and Kurz, 1992. Pradhan et al, 2008). Throughout their lives, women are more likely than males to suffer from malnutrition due to societal and biological factors. Womens are discriminated against in various regions of the world when it comes to health care, food, and education, among other things. They have a higher chance of early pregnancy and growth retardation than boys as teenagers. Women in their reproductive years are subjected to a variety of challenges that have an impact on their health and well-being. In many communities, elderly women are also marginalized. As a result, there is an intergenerational cycle of female growth failure.

1.1 Nutrition and Health

The concept of happiness is exceedingly difficult to grasp. When we say that a person is healthy, we mean that he or she is performing his or her workouts regularly and is not sick.

"The state of being free of disorder, harm, or infection, real conditions, something demonstrating high real condition," according to the Oxford word reference

Galen says “There is symmetry in segments and congruity in procedure inside of an assortment of sound individuals,".

"Wellbeing" is defined by William as "personal satisfaction that encourages a person to live most fully and serve most effectively."

1.1.2 Status of Women

Women are often both caregivers and recipients of health care; therefore, they play a crucial role in defining the community's health. As a result, women's health practitioners must place a greater emphasis on comprehending a woman's health care requirements (Hill and mullet, 2005). The demographics and socioeconomic status of a community, the sorts of health care services accessible, the quality and types of health care practitioners, medical technology, and health knowledge available all have an impact on the population's health (Abbasi, 1999, Kaplan et. al., 2005). Women's health care is a critical worldwide health requirement. Providing comprehensive women's health services across the life span of women, on the other hand, poses a problem for health systems in both developed and developing countries. Women's age, education, socioeconomic background, culture, health practices, and existing health care options all influence the desire for tailored treatments. (Raymond et. al., 2005)

Women's empowerment is linked to quality of life and human rights, according to the World Health Organization (WHO 2006). As a result, enhancing women's health by giving them more control over health determinants and allowing them to make decisions that are compatible with their personal beliefs and preferences has a major positive impact on their well-being. Women's contributions to the local economy can be improved by ensuring adequate health care services, according to the WHO and the World Bank (WHO, 2007). Women's standing in traditional Indian society can be measured by their

decision-making autonomy and degree of access to the outside world. Indian women, particularly those in the north, fare poorly by these standards. Womens are frequently married as adolescents and removed from their birth households to live with their husbands, but their new in laws, particularly the elder ones, discriminate in the delegation of household resources such as food and inaccessibility to health care and education. When a husband dies, a woman's household income plummets, she becomes socially marginalized, and her health and nutrition deteriorate. The majority of rural women live in poverty, both financially and in terms of information. In India's national economy, rural women are crucial and productive employees. The underestimation of the importance of rural women in development is statistically biased. Despite the fact that women work longer hours than males and contribute significantly to household income, they are not considered productive workers. (Arokiasamy et al., 2010).

1.1.3 Nutritional Status of Women

Nutrition is a factor that influences one's health. A well-balanced diet boosts the body's resistance to infection, protecting it from a variety of infections while also aiding the body's fight against current infections. Nutrition refers to a dynamic process in which the food we eat is used to nourish our bodies. Organic and inorganic complexes found in food are known as nutrients. There are around 50 distinct nutrients that humans get from the food we eat. Each vitamin serves a distinct purpose in the body. Women are recognized as the family's and society's nerve center. The most significant control of human fetal growth is maternal nutrition and health. A healthy woman will give birth to a healthy child. Pregnancy is a moment of dynamic transformation for a mother that necessitates a great deal of attention. During this time, the mother feeds the fetus directly through the placenta. During pregnancy, a woman's usual dietary requirements rise to satisfy the needs of the growing fetus and the maternal tissues linked with pregnancy (Lisa, 2009). Low-weight infants are more likely to be born to women who have poor health and nutrition. They are also less likely to be able to feed and care for their children adequately. Finally, a woman's health has an impact on the household's financial well-being, as a woman in poor health is less productive in the workplace. While malnutrition affects people of all ages, it affects women from the time they are children and continues throughout their lives. (Ventura 2008).

Pregnancy is an anabolic process, and a woman's typical nutritional requirements rise to meet the needs of the growing fetus and the maternal tissues that come with it. Because the nutritional state of the expectant woman is one of the most important determinants of pregnancy outcomes, good maternal nutrition is critical for women's health and reproductive performance, as well as their children's health, survival, and development. A study of a pregnant mother's nutritional intake found that maintaining her pregnancy requires a correct dietary balance to provide appropriate energy and nutrient intake for the fetus's growth without emptying maternal stockpiles or harming the mother's own tissues. Sufficient nutrition intake during pregnancy has a huge potential for improving the mothers and children nutritional health. Malnutrition caused by insufficient food intake is linked to growth failure and the development of protein-energy malnutrition, particularly during pregnancy (Kathleen and Drora, 2010).

1.2 OBJECTIVES OF THE STUDY

1. To determine the prevalence of malnutrition (Over nutrition & under nutrition) among the age group 18–40-year women of Bareilly District.
2. To determine the nutrient intake and food consumption pattern of selected women age group 18–40-year.

1.3 RESEARCH METHODOLOGY

Study Area

When we look into the history of Bareilly District, we discover that it was known as 'Panchala' throughout the Vedic time. The eagerness of the time can be seen in the fourt of Ahicchattra seen in the Bareilly District. Panchala was split into two sections. Northern and southern panchal are the first two. Northern Panchal's capital was Ahicchattra. Which is now located in Ramnagar, Bareilly District's Aonla. Kample was another name for Kampilya. Southern Panchala's capital, Kample, is currently in the Farukhabad district.

Sampling of study

It was planned to collect data from institutions in Bareilly, where the bulk of the women's were from the middle and lower classes. Because nutritional insufficiency disorder is quite widespread in this age group all over the world, the study focused specifically on womens in the age category of 18 to 40 years. The samples are chosen using the purposive random sampling approach and range in age from 18 to 40 years women. Based on this, a total of 400 samples could only choose between the ages of 18 and 40.

Sample size of the study

400 women between the ages of 18 to 40who were chosen at random from and served as the study's subjects.

Tool used for data collection

The study's major tool was an interview schedule, which was created following two pre-tests. It consists of a series of inquiries that are logically related to the subject under investigation. Because a structured interview was employed, the investigator visited each sample in person and gathered data after conducting a face-to-face interview. Anthropometry, Biochemistry, Clinical, and Diet survey methodologies were used to determine the nutritional status of the samples. The Letter cancellation test and the Immediate Recall Memory test were used to assess the students' academic performance. Breakfast eating habits were also determined using a questionnaire routine. Another technique employed in the study to determine the nutritional quality of samples was observation.

1.4 Data Analysis

The data was analyzed using SPSS 11.5 (Statistical Package for Social Science). For the psychological factors, descriptive statistics such as Mean and SD were produced. The ANOVA with Post-Hoc test for multiple comparisons was used to examine the means of immediate recall memory, letter cancellation test, and scholastic performance between study groups. The best collection of factors (socioeconomic status, nutritional status, and breakfast eating pattern) was utilized to track the variation in the dependent variables using regressions (psychological variables).

1.5 RESULTS AND DISCUSSION

A total of 380 women were studied in this study, all of them were chosen at random. 42.1 percent of the participants had completed their 18- 25 years, 34.2 Percent had completed their 25- 30 years, and 13.1 percent had completed their 30- 35 years and remaining 10.5 percent completed their 35- 40 years.

Dietary pattern of Women

Nutrition and diet are connected with good health. They offer the necessary nutrients for life, such as energy, development, and the maintenance of metabolic activities and repair processes. Corrective nutrition's role as a preventative measure is always changing (Cerrito et.al, 2002). Dietary patterns and socioeconomic factors are well-known indices for judging a society's nutritional state (Murugkar and Pal, 2004).

Table: 1.1
Dietary habits of women

S.No	Food Habits	Percentage
1.	Vegetarian	50 (13.15)
2.	Non-Vegetarian	295 (77.63)
3.	Ova- Vegetarian	34 (8.94)
4.	Total	380 (100)

(Figures in parentheses indicate numbers studied)

Graph :1.1
Dietary habits of women

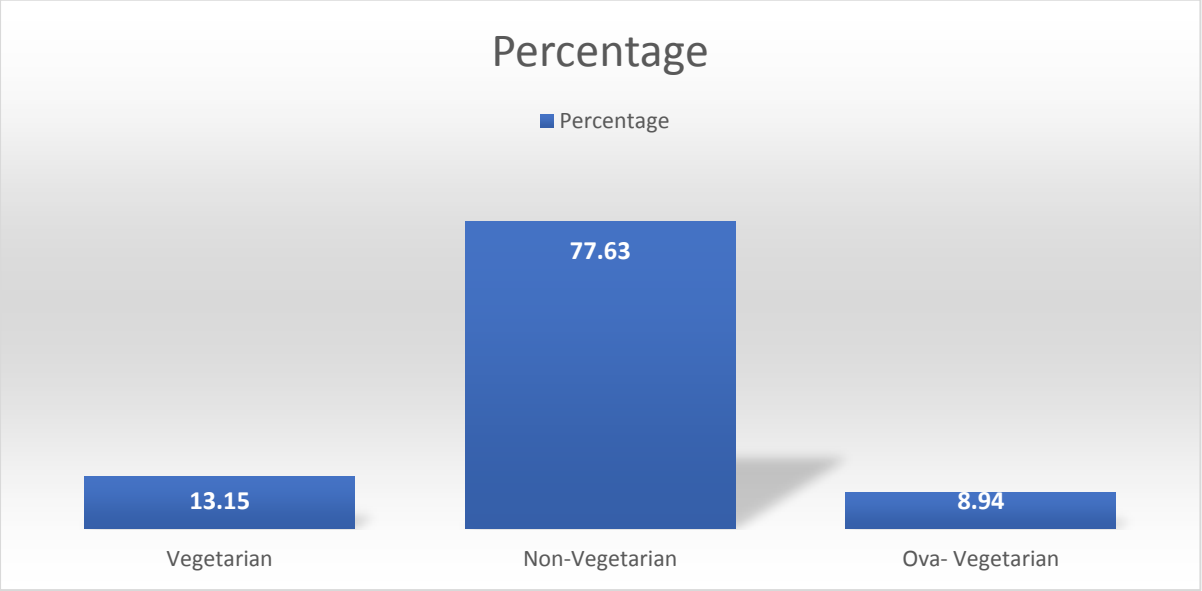
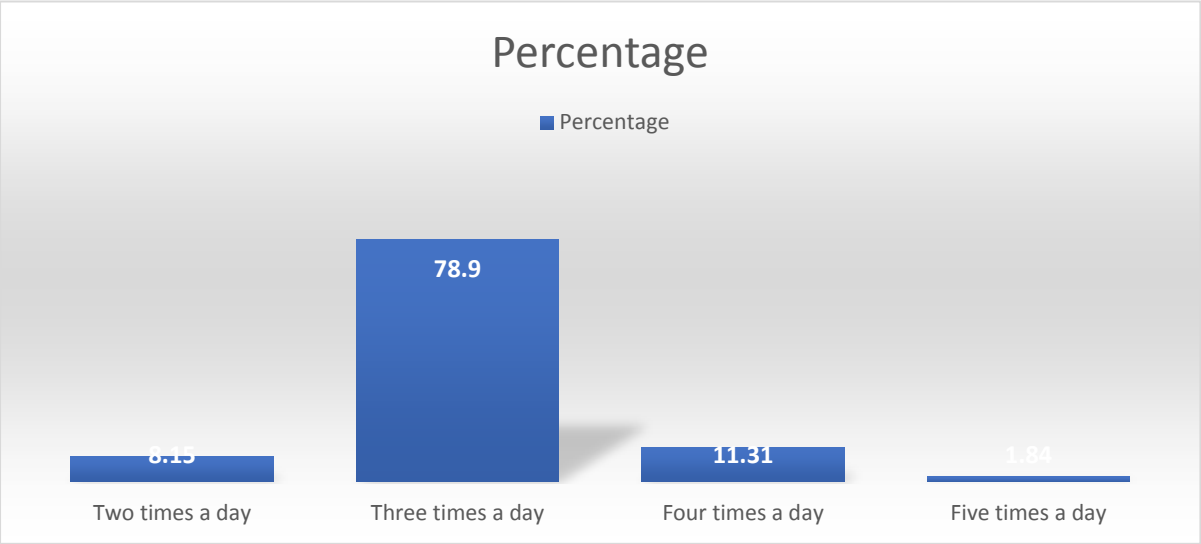


Table. 1.2.
Frequency of meal intake by the subjects

S.No	Frequency of meal intake per day	Percentage
1.	Two times a day	31 (8.15)
2.	Three times a day	300(78.9
3.	Four times a day	43(11.31)
4.	Five times a day	7(1.84)
	Total	**380(100)**

(Figures in parentheses indicate numbers studied)

Graph-1.2.
Frequency of meal intake by the subjects



Tables 1.1 and 1.2 show that 77.63% of the selected adolescent females consumed three times per day, consisting of breakfast, lunch, and dinner, 8.15 % consumed two times per day, and 11% consumed more than three times per day. The majority of them (77.63 %) are non-vegetarian. In a similar study, Savitha and Narayanan (2007) discovered that the majority of the females in their study (81%) eat three main meals every day.

Mean food and nutrient intake of the selected women

Table-1.3 shows the mean food intake of the selected sample as assessed by the twenty-four-hour recall method.

The average food intake pattern of chosen adolescents is shown in Table-3. The study's benchmark is the dietary intake advised by Swaminathan (1990) for women between the ages of 16 and 18 at a modest cost.

Table-3 shows that cereals and pulses are ingested at a rate of 2.40 and 23 % higher than the RDA for teenage girls, respectively. The amount of green leafy vegetables consumed is less than 84.2 percent of the RDA. Other vegetables, fats, and oils are consumed in excess of the RDA by 10.5% and 15.26 percent, respectively. Fruits, milk, fleshy foods, sugar, and jaggery consumption fell short of the RDA by 40, 75, 14.2, and 30.2 percent, respectively.

Table 1.3.

Mean food and RDA intake in a day of the selected women

S. No.	Food Groups	RDA g / day	Adolescent Mean intake g / day	Percent deficit (or) excess
1.	Cereals	41	40	+2.40
2.	Pulses	20	25	+23
3.	Green leafy vegetables	60	15	-84.2
4.	Other vegetables	45	50	+10.5

5.	Fruits	55	30	-40
6.	Milk and milk products	69	85	-75
7.	Fats and oils	25	35	+15.26
8.	Meat, fish and poultry	45	90	-14.2
9.	Sugar and Jaggery	20	10	-30.2

Fruits and vegetables, according to Reddy (1999), contain vitamin, mineral, and fiber. Fruit and vegetable eating has been demonstrated to reduce the risk of some kinds of anemia and enhance RBC levels. Because of the importance of fruits and vegetables in teenagers' diets, a daily intake of 400 grams of fruits and vegetables has been recommended. According to a dietary survey, only cabbage is included in the menu pattern as a green leafy vegetable. The fleshy meals are delivered once a week, and the poultry is provided three times a week. On alternating days, banana fruits are offered.

Mean nutrient intake and NAR percent of the selected sample.

Table-1.4 depicts the adequacy of several nutrients, showing that intake of all nutrients was determined to be lower than the recommended dietary limits (RDA). The average daily energy consumption was 1661.91 kcal, or 53.27 percent of the required dietary requirements. Only 91 percent of the RDA was met in terms of protein.

The average fat intake is 29.31 grams per day, with the RDA being 27.5 grams, however they are ingesting 6.58 percent more than the RDA for the day. The average calcium and iron consumption was 386.02 and 23.25, respectively, representing 55.15 and 98.94 percent of the RDA. The average intake of fat-soluble vitamins was 1232.8 mg for vitamin A and 37.3 mg for ascorbic acid, respectively. Which was 25.67 percent of RDA and 93.25 percent of RDA, respectively .Protein, iron, and vitamin C are all consumed in a minimally acceptable amount. Energy and calcium levels are marginally inadequate, while Vitamin A is in short supply. However, the one and only nutrient has taken in a suitable level that exceeds the RDA by 100%.

To meet the demands of rapid growth, the adolescent's dietary requirements for iron, calcium, and B-complex vitamins increased dramatically. Many families do not consume enough green leafy vegetables and nutritious nutrients (Leela, 1990).

Table 1.4.
Mean nutrient intake and NAR percent of selected samples

S. No.	Nutrients	RDA (ICMR 2010)	Adolescent Mean intake	NAR Percent* and Adequacy Rate
1.	Energy (Kcal)	45	55	51.25 marginally in adequate
2.	Protein (g)	25	15	93.88 marginally adequate
3.	Fat (g)	70	65	103.5 adequate
4.	Calcium (mg)	55	45	52.17 in adequate
5.	Iron (mg)	20	30	95.91 marginally adequate
6.	Vitamin A (µg)	90	100	23.65 in adequate

7.	Vitamin C (mg)	75	70	90.28 marginally adequate

* Nutrient Adequacy Ratio Percent

The consumption of food and non-foods by various household members can be directly assessed to determine intra-household bias in consumption. Alternatively, the variation in the consumption of products exclusively consumed by adults across different household arrangements can be used to quantify intra-household bias in consumption. Aside from apparent issues about equity, evaluating intra-household food distribution is important for the design of targeted interventions, such as deciding whether to target at the household or individual level. Appropriate targeting guarantees that the intervention is not just cost-effective, but also that disadvantaged populations are not left out. Varied household groups have different levels of intra-household inequality (Carnia and Stewart 1992; Haddad and Zeller 1996).

In the family of present study samples, no substantial gender bias was discovered. This contradicts Shaw's (1998) conclusion that girls skip breakfast more than three times as often as males, but Shaw's study focused on teens, who are more concerned with body image and diets. Many research did not provide gender information. One probable reason for the lack of gender reporting in most research is that gender was not significant and hence was not reported.

The women were discriminated against in terms of meeting energy, beta carotene, riboflavin, and vitamin C requirements (late position in serving order, channeling of specific items, lower overall food consumption), while there was no sex difference in small children (Gittelsohn,1991). According to age-sex RDAs, men and young boys looked to be getting more than their "fair share" of food, while women and girls over the age of 11 received less (Bull, 1991). In food distribution, upper/middle caste groups favor sons more than lower status groups and tribal tribes (Warrier, 1992).

Nutritional status was significantly influenced by maternal education. Malnutrition is a severe health risk for Indian women, according to several research (Chatterjee 1990). It puts their own and their children's lives in jeopardy. The negative effects of malnutrition among women are compounded by heavy work demands, by poverty, by child bearing and rearing and by special nutritional needs of women, resulting in increased susceptibility to illness and consequently higher morbidity. A recent study (Dharmalingam et.al.2009) indicated that the impact of Nutritional Status of mother is more pervasive than the impact of other factors on birth weight. Rural pregnant women's nutritional consumption was below the recommended amount (Jood et.al, 2002).

The findings of this study demonstrated insufficient nutritional intake, particularly concealed hunger, among college girls during their adolescent years, which will have an impact on their academic performance and scholastic attainment. Because of the significant differences in culture, religion, and development levels throughout Indian states, it's not unexpected that women's health differs greatly as well. The study emphasizes the importance of taking the appropriate steps to increase community engagement in various developmental projects aimed at alleviating poverty and improving female literacy rates. Health and nutrition education must be strengthened through the Department of Health and ICDS in order to raise awareness and encourage behavioral change for better health and nutrition practices in women, who will all go on to be good future mothers, determining the health status of our country. For gender disparities to be narrowed, specific policy focus is required for each of the Millennium Development Indicators.

1.5 CONCLUSION

Nutrition and diet are connected with good health. They offer the necessary nutrients for life, such as energy, development, and the maintenance of metabolic activities and repair processes. Corrective nutrition's role as a preventative measure is always changing (Cerrito et.al, 2002). Dietary patterns and socioeconomic factors are well-known indices for judging a society's

nutritional state (Murugkar and Pal, 2004). Several changes occur in the bodies of women at this time. Growth assessment is used to determine an individual's health and nutritional state during adolescence. Adolescent growth is seen as an excellent measure of a community's health and nutritional quality. Inequity, fueled by extreme poverty, affects both men and women in developing countries. Females, on the other hand, are marginalised by cultural customs, restricted economic resources, and limited possibilities. An individual's nutritional status is heavily influenced by his or her socioeconomic standing. Food availability and choices are influenced by the ethnic origin and educational level of the family members. The diet is also influenced by income levels (Rolfes et.al., 1998).

A total of 380 women were studied in this study, all of them were chosen at random. 42.1 percent of the participants had completed their 18- 25 years, 34.2 Percent had completed their 25- 30 years, and 13.1 percent had completed their 30- 35 years and remaining 10.5 percent completed their 35- 40 years. To determine gender bias, questions were asked in a Yes/No format about quantity, quality, food choice, school, college, and course choice, treatment seeking, freedom of thought and action, restriction to go out with friends, freedom to speak and tell their opinion, possession of a vehicle for personal use, allowed to eat whenever they felt hungry, order of food intake that is after the male members only, food restrictions during menstruation, and permission for exclusion were asked.

The results reveal that gender bias exists at the household level. When compared to male family members, it is 3.2 percent in food amount, 5% in food quality, and 3.1 percent in food choice. When it comes to seeking treatment for illnesses, particularly diarrhea, there is a 14 percent gender bias when compared to male brothers of the family. They were treated with home remedies and told to wait for recovery; if the disease worsened, they were only taken to the hospital, whereas male siblings were taken to the hospital as soon as they were ill. However, there is just 1% prejudice in the selection of schools, colleges, and courses.

In this study, we discovered that gender prejudice is prevalent in just a small number of households in this study region, with the exception of treatment seeking, which is likewise a small percentage. There is a sense of thought and action freedom (76 percent). These findings support P. Food is not restricted (in 97 percent of cases) during menstruation, and they are free to eat whenever they are hungry (86 percent). Seventeen percent of the samples are only permitted to eat after the male members have eaten, or if a particular amount of food has been set aside for them. We can deduct from these findings that there is some gender bias in households, but it is statistically negligible.

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