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## Assessment Of Food Habits And Dietary Intake Of Rural Women In Koraput District ,Odisha.

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### Abstract

Women's health has become a crucial topic of discussion in recent years, particularly due to high maternal and infant mortality rates. The field of women's health is multifaceted, encompassing various aspects such as providing access to nutritious food for growing girls and expectant mothers, educating them about their bodily changes throughout life, offering guidance on personal hygiene, pregnancy, and childbirth, and prioritizing preventative measures over treatment. Reproductive health constitutes a vital dimension of women's overall well-being, encompassing the proper functioning of the reproductive system, sexual health, maternal health, and access to healthcare services. However, women globally, including those belonging to tribal communities, grapple with numerous challenges related to reproductive health, such as limited healthcare access, cultural and social taboos, and insufficient knowledge and awareness. To foster reproductive health, women require comprehensive reproductive healthcare services, sex education, awareness initiatives, and access to family planning and safe abortion services. Tribal women residing in Odisha's Koraput district, confront diverse reproductive health challenges, including restricted access to healthcare services, entrenched traditional beliefs and practices, and challenging socioeconomic circumstances. Early marriage and childbearing practices among tribal women further contribute to elevated maternal and infant mortality rates in the region.

### INTRODUCTION

#### 1.1.BACKDROPS

Although men and women are deemed to be equal, the reality is uneven power and wealth distribution in spite that progress made by humanity has greatly reduced gender equality. Still today women have been subjected to a lower status than men across various aspects of life, particularly in terms of their economic and health conditions. Given biological disparities, men and women have distinct health requirements and necessities. It is worth emphasizing that a country's health is a crucial component of its development, essential for economic growth and internal stability. Thus, ensuring that the populace receives basic healthcare services is imperative for the development process of any nation.

## 1.2.NEED AND IMPORTANCE OF THE STUDY:

Women's health has become a crucial topic of discussion in recent years, particularly due to the government's efforts to reduce maternal and infant mortality rates. The field of women's health is multifaceted, encompassing various aspects such as providing access to nutritious food for growing girls and expectant mothers, educating them about their bodily changes throughout life, offering guidance on personal hygiene, pregnancy, and childbirth, and prioritizing preventative measures over treatment. Numerous researchers and scholars have conducted studies on different elements of women's health, including family planning, maternal mortality, infant mortality, the health status of women, childhood immunization, the impact of the National Rural Health Mission on maternal health, and reproductive and child health in diverse parts of the world.. A comprehensive diet survey focusing on women's reproductive health in Koraput district is imperative to raise awareness and inform policy interventions. The significance of such a study stem from the increasing recognition of women's health as a critical area of concern, particularly in the context of governmental efforts to mitigate maternal and infant mortality rates. The landscape of women's health is multifaceted, encompassing various dimensions such as ensuring access to nutritious food for adolescent girls and expectant mothers, providing education on bodily changes across the lifespan, promoting personal hygiene practices, offering guidance on pregnancy and childbirth, and emphasizing preventive measures over treatment.

## METHODOLOGY

**The major part of the study was conducted in Koraput district of Odisha from where we have collected the primary data. We have conducted both descriptive and exploratory research which is nothing but** a valuable tool for gaining a preliminary understanding of a topic or problem. The research methods used in exploratory studies include literature reviews, observations, interviews, focus groups, and case studies. We have adopted exploratory research due to its flexibility and adaptable, allowing the us to adjust our approach as new insights emerge. Descriptive research is a research design that aims to document or describe a particular phenomenon, situation, or group, without manipulating any variables. Descriptive research is used by us to gain a better understanding of complex issues. As the purpose of the study wasto investigate the sexual and reproductive health issues experienced by tribal women in the Koraput district of Odisha, including their level of knowledge and perceptions of such matters, as well as the availability and utilization of health services. The study likely aimed to identify the unique challenges and barriers faced by tribal women in accessing sexual and reproductive healthcare and explore potential solutions to enhance health outcomes for this population using both descriptive and explorative research.

## REVIEW OF LITERATURE

### Nutritional Status of Women in Odisha

Section 2.4.2, "Nutritional Status of Women in Odisha," explores the dietary habits, nutritional deficiencies, and overall nutritional well-being of women within the region. It delves into research and studies that assess factors contributing to malnutrition, micronutrient deficiencies, and food insecurity among women in Odisha. The section aims to provide insights into the nutritional challenges faced by women, particularly in vulnerable communities, and to identify opportunities for interventions and policies aimed at improving the nutritional status and overall health outcomes of women in Odisha.

The research conducted in the Nabarangpur district of Orissa investigated the nutritional status of indigenous mothers. The study revealed that the dietary practices of the tribal community, along with other non-food factors, had a significant impact on their nutritional well-being. The objective of the study was to gain insight into the nutritional status of this susceptible group, which could assist in developing effective measures to enhance their nutritional status. The results of this study could also provide useful information for government initiatives related to nutrition supplementation in the region. Overall, this research underscores the importance of comprehending the distinct cultural and environmental factors that affect the nutritional status of vulnerable populations, in order to create effective policies and interventions aimed at addressing malnutrition by Seth, N., & Sahoo, D. (2018).

**Table 1. Mean macronutrient consumption of tribal women of different age groups**

Variables	Tribe 12-35years	Tribe 36-46years
Dietary	Last 3 days	Last 3 days
Energy	2049.56	2087.8
Mean±SD	279.85	256.68
Maximum	2799	2759
Minimum	1433	1539
F Value (P value)	0.59 (0.56)	32.96 (0.00)
Protein	33.43	33.99
Mean±SD	10.08	9.60
Maximum	57.24	55.46
Minimum	16.28	17.89
F Value (P value)	0.30 (0.743)	46.43 (0.000)
Fat	29.96	28.86

Mean±SD	6.07	5.94
Maximum	45.26	46.23
Minimum	21.4	20.35
F Value (P value)	0.52 (0.59)	63.24 (0.000)
Source: Primary data		

The given data in table 1 pertains to two different age groups within a tribal population in Koraput. The first group consists of 50 women aged between 12 and 35 years, while the second group comprises 50 women aged between 36 and 46 years. The data focuses on their dietary intake over the last three days and includes information on energy, protein, and fat. Table No-4.21 presents the mean macronutrient consumption patterns among tribal women belonging to different age groups, namely Tribe 12-35 years and Tribe 36-46 years. The table displays the mean values along with standard deviations (SD) for energy, protein, and fat intake recorded over the last three days for each age group. Additionally, maximum and minimum intake levels are provided for each macronutrient category. The F values and corresponding p-values indicate the outcomes of the analysis of variance (ANOVA) tests, assessing differences in macronutrient consumption between the two age groups. While energy and fat intake do not significantly differ between the two age groups ( $p > 0.05$ ), there are notable differences in protein intake ( $p < 0.001$ ). Specifically, the 36-46 age group demonstrates significantly higher protein consumption compared to the 12-35 age group. This data provides insights into the dietary patterns and potential nutritional needs among tribal women across different age brackets.

**Table 1.1 One Way ANOVA on the clinical symptoms of anemia**

One way ANOVA on Anemia Symptoms	Tribe (Group I) 12-20Y	Tribe (Group II) 21-31Y	Tribe (Group III) 32-42Y	Tribe (Group IV) 42-49Y
F Value	P value	F Value	P value	F Value
0.02	0.98	79.72	0.01	0.00
Source: Primary data				

Table 1.1 displays the results of a one-way ANOVA conducted to assess clinical symptoms of anaemia across different age groups within tribal populations. The table categorizes the tribes into four groups based on age brackets: Group I (12-20 years), Group II (21-31 years), Group III (32-42 years), and Group IV (42-49 years). For each age group, the F value and corresponding p-value are reported. The analysis indicates that there are no significant differences in anaemia symptoms among the tribes aged 12-20 years ( $F = 0.02$ ,  $p = 0.98$ ). However, substantial differences are observed in tribes aged 21-31 years ( $F = 79.72$ ,  $p = 0.01$ ) and 32-42 years ( $F = 0.00$ ,  $p < 0.01$ ), suggesting variations in anaemia symptoms within these age groups. The data underscores potential age-related disparities in the prevalence and manifestation of anemia symptoms among tribal populations, which could inform targeted healthcare interventions and strategies.

**Table 6.15 Correlation between Knowledge, Attitude and Practice on reproductive health among the selected tribal age groups**

Statistical analysis	Tribe (Group I) 21-31	Tribe (Group II) 31-41	Tribe (Group III) 41-51
karlPearson's correlation	P value	karlPearsoncorrelation	P value
Knowledge and Attitude	0.722	0.001	0.515
Attitude and Practice	0.686	0.008	0.522
Knowledge and Practice	0.636	0.002	0.419
Source: Primary data			

Table 1.1 presents the correlation analysis between knowledge, attitude, and practice regarding reproductive health among selected tribal age groups. The tribes are categorized into three groups: Group I (21-31 years), Group II (31-41 years), and Group III (41-51 years). The table displays Carl Pearson correlation coefficients and corresponding p-values for each pair of variables. The analysis reveals significant positive correlations between knowledge and attitude ( $r = 0.722$ ,  $p = 0.001$ ), attitude and practice ( $r = 0.686$ ,  $p = 0.008$ ), as well as knowledge and practice ( $r = 0.636$ ,  $p = 0.002$ ) among Group I. Similarly, in Group II and Group III, there are positive correlations between knowledge and attitude, attitude and practice, and knowledge and practice, although with varying correlation coefficients and p-values. These findings suggest that higher levels of knowledge are associated with more positive attitudes and better reproductive health practices among tribal populations, underscoring the importance of education and awareness programs in promoting reproductive health in these communities.

**Table 6.16 Frequency of food consumption among tribal**

<b>Food Group</b>	<b>Daily (%)</b>	<b>4-5 times (Weekly) (%)</b>	<b>2-3 times (Weekly) (%)</b>	<b>Rarely (%)</b>	<b>Never (%)</b>
Cereals	225 (75)	-	-	-	-
Pulses	42 (14)	64 (21)	86 (29)	76 (25)	32 (11)
Green Leafy Vegetables (GLV)	-	171 (57)	240 (80)	39 (13)	-
Other Vegetables (OV)	60 (20)	87 (29)	159 (53)	144 (48)	-
Roots and Tubers (R & T)	-	-	234 (78)	165 (55)	51 (17)
Oil/fat	195 (65)	99 (33)	6 (2)	-	-
Fruits	-	69 (23)	246 (82)	135 (45)	-
Eggs	-	-	228 (76)	195 (65)	27 (9)
Meats/fish	54 (18)	144 (48)	111 (37)	15 (5)	6 (2)
Sugar	225 (75)	-	-	-	-
Source: Primary data					

In Table 6.16 depicting the frequency of food consumption among tribal communities, cereals are consumed daily by 75%, while pulses are consumed 4-5 times weekly by 21%, 2-3 times weekly by 29%, rarely by 25%, and never by 11% of the respondents. Green leafy vegetables are eaten 4-5 times weekly by 57%, 2-3 times weekly by 80%, rarely by 13%, and never by any of the participants. Other vegetables are consumed 4-5 times weekly by 29%, 2-3 times weekly by 53%, rarely by 48%, and never by any of the respondents. Roots and tubers are eaten 2-3 times weekly by 78%, rarely by 55%, and never by 17% of the participants. Oil/fat is consumed daily by 65%, 4-5 times weekly by 33%, and 2-3 times weekly by 2% of the respondents. Fruits are eaten 4-5 times weekly by 23%, 2-3 times weekly by 82%, rarely by 45%, and never by any of the participants. Eggs are consumed 2-3 times weekly by 76%, rarely by 65%, and never by 9% of the respondents. Meats/fish are eaten 4-5 times weekly by 48%, 2-3 times weekly by 37%, rarely by 5%, and never by 2% of the participants. Lastly, sugar is consumed daily by 75% of the respondents.

**Table 6.17 Reasons for the inclusion of food items**

<b>Food Included</b>	<b>Reason for Inclusion</b>	<b>Unmarried tribal</b>	<b>Married Tribal</b>
Fenugreek (boiled)	Pain reliever	Yes	Yes
Ajwain seeds (boiled)	Relief from gastric discomforts	Yes	No
Cumin seed (boiled)	Pain reliever/ gastric discomforts	Yes	No
Cardamom	Refresher	Yes	No
Clove	Refresher	Yes	No
Balsam leaves (boiled)	Pain reliever/ Muscle relaxer	Yes	Yes
Black coffee (with/without ginger)	Headache reliever/ Abdominal comforter	Yes	No
Black tea	Headache reliever/ Abdominal comforter	Yes	No
Alcohol/Wine	Abdominal cramp reliever/ Whole body menstrual cramp reliever	Yes	Yes
Sources: Field Survey			

The details provided in table 6.17 seem to be a list of various food items and their reported benefits for unmarried and married tribal women, specifically from the Koraput tribe. Here's a breakdown of the mentioned food items and their reported reasons for inclusion:

**Fenugreek (boiled):** Reported as a pain reliever. It is included in the diet of both unmarried and married tribal women.

**Ajwain seeds (boiled):** Known for providing relief from gastric discomforts. It is included in the diet of unmarried tribal women but not married tribal women.

**Cumin seed (boiled):** Considered a pain reliever and helpful for gastric discomforts. It is included in the diet of unmarried tribal women but not married tribal women.

**Cardamom:** Regarded as a refresher. It is included in the diet of unmarried tribal women but not married tribal women.

**Clove:** Also considered a refresher. It is included in the diet of unmarried tribal women but not married tribal women.

**Balsam leaves (boiled):** Known as a pain reliever and muscle relaxer. It is included in the diet of both unmarried and married tribal women.

**Black coffee (with/without ginger):** Reported to relieve headaches and provide abdominal comfort. It is included in the diet of unmarried tribal women but not married tribal women.

**Black tea:** Similar to black coffee, it is believed to relieve headaches and provide abdominal comfort. It is included in the diet of unmarried tribal women but not married tribal women.

**Alcohol/Wine:** Claimed to relieve abdominal cramps and whole-body menstrual cramps. It is included in the diet of both unmarried and married tribal women.

It's important to note that these reported benefits may be based on traditional beliefs or cultural practices within the Koraput tribe. While some of these food items may have scientifically supported benefits, it's always recommended to consult with healthcare professionals for accurate medical advice.

**Table 6.18 Reasons for the exclusion of food items**

<b>Food Excluded</b>	<b>Reason for Exclusion</b>	<b>Unmarried tribe</b>	<b>Married Tribal women</b>
Pineapple	Leads to abortion in future	Yes	Yes
Lemon/citrus fruit	Initiator for bleeding	Yes	Yes
Mango (and other fruits with sour taste)	Leads to excess bleeding	Yes	Yes
Papaya	Leads to abortion in future	Yes	Yes
Tapioca	Produces gastritis and leads to excess abdominal cramps	Yes	Yes
Potato	Produces gastritis and leads to excess abdominal cramps	Yes	Yes
Dal/pulses	Produces gastritis and leads to excess abdominal cramps	Yes	Yes



Meat/fish/egg	Difficult to digest/Part of traditional rituals (fear of tribal Gods and their curse)	Yes	Yes
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In the tribe of Koraput, both married and unmarried women have dietary exclusions based on specific reasons. These exclusions are observed to maintain their health and well-being. For both groups, certain fruits like pineapple, lemon/citrus fruits, and mango (along with other sour-tasting fruits) are avoided due to concerns about excessive bleeding and the potential risk of abortion in the future. Papaya is also excluded for the same reason. Additionally, foods like tapioca, potato, and dal/pulses are avoided as they are believed to cause gastritis and lead to excess abdominal cramps. Meat, fish, and eggs are excluded from their diets due to difficulties in digestion and cultural or religious beliefs associated with traditional rituals, often driven by a fear of tribal Gods and their curses. These dietary practices are followed by both married and unmarried women of the Koraput tribe to ensure their overall health and maintain cultural traditions.

This is observed from the above that there is limited awareness among tribal women regarding reproductive health, issues, problems and the provisions available for them. Further it is observed that the reproductive health complications are also very high leading to various health and reproductive health problems among the tribal women. The dietary habits also influencing their reproductive health status and therefore proper awareness is required for better health outcomes among the tribal women.

## CONCLUSION

To study on the reproductive health status of tribal women in the study area we have employed a comprehensive research approach, incorporating both primary and secondary data sources. Through meticulous analysis, the research unearthed a myriad of insights into the diverse profiles of tribal women. Among the major findings, it was observed that access to reproductive healthcare services varied significantly among different demographic segments. Factors such as geographical location, socioeconomic status, and educational background emerged as critical determinants influencing women's reproductive health outcomes. Moreover, disparities in the utilization of family planning methods and maternal healthcare services were evident across various tribal communities. The study also highlighted the importance of culturally sensitive interventions tailored to the unique needs and traditions of tribal populations to address existing gaps in reproductive health care delivery. To enhance our comprehension of women's reproductive status, our research initially centered on India, with a particular focus on Odisha. Eventually, we narrowed our investigation to Koraput, a district predominantly inhabited by Southern tribal communities.

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