

# Nutrition, health and hygienic practice of women tea plantation workers of Assam

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■ **ABSTRACT** : The present research study was taken up with the objectives to study the socio-personal characteristics of women tea plantation workers of Assam, to identify the existing practices of women tea plantation workers on selected areas of nutrition, health and hygiene, to find out the relationship of women tea plantation workers' practice on nutrition, health and hygiene with the selected independent variables. The study was carried out in four Tea Estate *i.e.* Kakojan T.E., Duflating T.E., Kothalgoorie T.E. and Gotonga T.E. of Jorhat district of Assam. Twenty five married permanent women tea plantation workers with atleast one child were selected from each garden totalling one hundred women tea plantation workers from all the selected tea gardens as the respondents of the present study.

■ **KEY WORDS** : Practice, Nutrition, Health, Hygiene

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**H**ealth is a state of complete physical, mental, social well-being of an individual. Good health is a pre-requisite to happiness. To be happy, it is necessary to be healthy. Nutrition, health and hygiene are synonymous to each other, but without good nutrition and proper hygiene, health cannot be at its best. Many studies pointed out that nutrition practice of the tea plantation workers are low, including the health practices. Available research studies indicate that the living condition of the women tea plantation workers were very unhygienic and poor.

## Objectives:

- To study the socio-personal characteristics of women tea plantation workers of Assam.
- To identify the existing practices of women tea plantation workers on selected areas of nutrition, health and hygiene.
- To find out the relationship of women tea plantation workers' practice with selected independent variables on nutrition, health and hygiene.

## ■ RESEARCH METHODS

The study was carried out in four tea estates of Jorhat

district of Assam *i.e.* Kakojan T.E., Duflating T.E., Kothalgoorie T.E. and Gotonga T.E. Twenty five married permanent women tea plantation workers with atleast one child were selected from each garden, totalling one hundred women tea plantation workers from all the selected tea gardens were the respondents of the present study.

In the present study, practice on nutrition, health and hygiene were the dependent variables which means the practice adopted by women tea plantation workers to apply their acquired knowledge on nutrition, health and hygiene in their day to day life situation.

The independent variables of the study were age, educational qualification, family type, number of children, monthly family income, organizational membership, urban contact, frequency of visit to community recreational centre, contact with welfare officer, mass media exposure and location of the residence (distance of hospital/dispensary from respondent's house).

The data were collected through personal interview method. After data collection, the gathered data were coded, tabulated and statistically analyzed by the following statistical methods :

**Frequency :**

Frequency and percentage were calculated to find out the socio-personal characteristics of the respondents.

**Mean :**

The formula used for calculation of mean :

$$\text{Mean } (\bar{X}) = \frac{\sum fx}{N}$$

where,  $\sum f(x)$  = Total score

N = Total number of respondents.

**Standard deviation :**

The formula used for calculation of standard deviation:

$$\text{S.D.} = \sqrt{\frac{\sum (Xi - \bar{X})^2}{N}}$$

where,  $X_i$  = Raw score

$\bar{X}$  = Mean

N = Total respondents.

Mean  $\pm$  Standard deviation (SD) criterion was used on the basis of their practice scores obtained to classify the respondents according to their practice level on nutrition, health and hygiene in the following procedure:

The scores less than Mean-SD = Poor practice

The scores between Mean- SD and Mean + SD = Moderate practice

The scores more than Mean + SD = Good practice.

**Correlation co-efficient :**

The formula used for calculation of correlation co-efficient :

$$r = \frac{\sum xy - \frac{\sum x \cdot \sum y}{N}}{\sqrt{\left[ \sum x^2 - \frac{(\sum x)^2}{N} \right] \left[ \sum y^2 - \frac{(\sum y)^2}{N} \right]}}$$

where,

r = Correlation co-efficient

X = Independent variable

Y = Dependent variable

$\sum xy$  = Summation of total product of X and Y

N = Total number of respondents.

In order to test the significance of correlation co-efficient, the Fisher 't' ratio was found out by using the following formula :

$$t = \frac{r\sqrt{n-2}}{1-r^2} \text{ with } (n-2) \text{ d.f.}$$

where,

r = Correlation co-efficient

n = Number of observation

d.f. = Degree of freedom

**RESEARCH FINDINGS AND DISCUSSION**

The results of the present study as well as relevant discussions have been presented under following sub heads:

**Socio-personal characteristics of respondents :**

A large majority of the respondents (74%) belonged to younger age group followed by 25 per cent of respondents in the middle age group. A negligible percentage of respondents belonged to the old age group.

Regarding educational qualification, 72 per cent respondents were illiterate, 14 per cent respondents studied upto primary level and a negligible percentage of the respondents was HSLC passed.

Majority of the respondents (62%) had 4-6 numbers of children.

A large majority of respondents (82%) were from nuclear family followed by 18 per cent belonged to joint family. Not a single extended family was found in the present study.

The monthly family income of the respondents (90 %) was Rs.1000-2000 per month.

A large majority of the respondents (89%) had no membership in any organization. 28 per cent respondents from Gotonga Tea Estate were found to be the member of labour association.

More than half of the respondents visited the urban area occasionally. Only a single number of respondent visited urban area frequently.

Almost all the respondents (98 per cent) visited community recreational centre sometimes.

Regarding mass media exposure, a higher percentage of respondents (51 per cent) watched T.V followed by radio (37%), banners, posters, (16%) and newspaper (3%).

Thirty one per cent respondents kept contact with welfare officer occasionally followed by 27 per cent rarely and 12 per cent regularly.

A large majority (76%) of the respondent's house were located within 1 km from the hospital/dispensary followed by 23 per cent respondents resided at a distance of 1-2 km. A very negligible percentage of respondent (1%) resided more than 2 km. from the hospital/dispensary.

**Practice on nutrition, health and hygiene :**

*Practice on nutrition :*

The level of practice on nutrition is shown in the Table 1. The findings revealed that a higher percentage of respondents (47%) belonged to 'poor' practice category.

*Practice on health :*

The level of practice on health is shown in the Table 2. It is interesting to note that only 11 per cent respondents adopted health practice correctly and belonged to 'good' category.

**Practice on hygiene :**

The level of practice on hygiene is shown in the Table 3. It is seen in the table that majority of the respondents (66%) belonged to 'poor' level of hygiene practice.

Statements which were not practiced by majority of the respondents on nutrition. It was found in the study that majority of the respondents did not practice the following activities:

- Consuming of parboiled rice.
- Washing of green leaves before chopping.
- Storing of vegetables in a basket with damp cloth.
- Excess water remaining in cooked vegetables used to prepare roti, chapatti.
- Using of same water where pulses soaked before cooking.
- Not consuming reheated food.
- Not reusing of the already cooked oil.
- Not frequently stirring food items during cooking.
- Scrapping of vegetables such as gourd or bottle gourd instead of peeling.
- Not throwing away the starch water (kanji).
- Washing of rice once or twice before cooking.
- Washing of vegetables before cutting into pieces.
- Peeling of vegetables thinly.
- Making the pieces of vegetables just before cooking.
- Chopping of vegetables in big pieces before cooking.

Statements which were not practiced by majority of the respondents on health :

- Never drink alcohol.
- Proper boiling of milk (scum formation).
- Getting of health checked up once in a year.

- Boiling water that are used for drinking (30 minutes).
- Taking medicine to increase blood in the body.
- Drinks ORS if one suffers from diarrhoea.
- Stop taking medicine according to doctor's advice when get recovered from a disease.
- Following the doctor's prescription strictly.
- Sterilization of utensils used for babies.
- Taking advice from doctor at the beginning stage of the disease.
- Drinking of more than 7 glasses of water in a day.
- Taking advice from doctor when suffers from illness.

Following are the statements which were not practiced by majority of the respondents on hygiene:

- Use of chappal to go for defecation.
- Use of long handled container to take out drinking water from big vessel.
- Proper drainage system around the house.
- Dumping garbage of the house in a pit.
- Mopping of house with cowdung mixed mud/ disinfectant.
- Washing of feet before entering into the house. - Covering edible items.
- Washing of hands properly with soap after defecation.
- Washing of hands properly before eating.
- Drying the washed utensils in the sun.

**Relationship of women tea plantation workers' practice with selected independent variables on nutrition, health and hygiene :**

There was no significant relationship between the

**Table 1: Distribution of respondents according to their level of practice on nutrition**

Practice level	(Kakojan) (n=25)		(Kothalgoorie) (n=25)		(Duflating) (n=25)		(Gotonga) (n=25)		Total (n=100)	
	F	%	F	%	F	%	F	%	F	%
Poor	9	36	11	44	12	48	15	60	47	47
Moderate	10	40	11	44	10	40	9	36	40	40
Good	6	24	3	12	3	12	1	4	13	13

**Table 2 : Distribution of respondents according to their level of practice on health**

Practice level	(Kakojan) (n=25)		(Kothalgoorie) (n=25)		(Duflating) (n=25)		(Gotonga) (n=25)		Total (n=100)	
	F	%	F	%	F	%	F	%	F	%
Poor	10	40	11	44	11	44	12	48	44	44
Moderate	13	52	13	52	9	36	10	40	45	45
Good	2	8	1	4	5	20	3	12	11	11

**Table 3: Distribution of respondents according to their level of practice on hygiene**

Practice level	(Kakojan) (n=25)		(Kothalgoorie) (n=25)		(Duflating) (n=25)		(Gotonga) (n=25)		Total (n=100)	
	F	%	F	%	F	%	F	%	F	%
Poor	18	72	15	60	13	52	20	80	66	66
Moderate	4	16	8	32	11	44	5	20	28	28
Good	3	12	2	8	1	4	0	0	6	6

nutrition practice and the selected independent variables such as age of the respondents, educational qualification, family type, number of children, family income, organizational membership, urban contact, visiting community recreational centre, contact with Welfare Officer, mass media exposure and location of the residence (distance of hospital/ dispensary).

There was also no significant relationship with health practice of respondents and the any of the selected independent variables such as age, educational qualification, family type, number of children, family income, organizational membership, urban contact, visiting community recreational centre, contact with Welfare Officer, mass-media exposure and location of the residence (distance of hospital/ dispensary).

There was significant relationship of hygiene practice of the respondents with educational qualification of respondents as well as their contact with Welfare Officer.

It is revealed from Table 4 that there was significant relationship of hygiene practice score of the respondents with educational qualification of respondents as well as their contact with Welfare Officer. It means that hygiene knowledge of respondents increased with the increase in educational qualification and frequency of Welfare Officer's contact with respondents. The respondents with more educational qualification might get enough scope for acquiring correct hygiene practice from any source. The respondents with good score in hygiene practice might have discussed with Welfare Officer regarding cleanliness, hygiene etc. Therefore, the Null hypothesis that there is no significant relationship of hygiene practice adopted by the respondents with the selected independent variables such as

educational qualification of the respondents and contact with Welfare Officer was rejected. Similar type of study was conducted by Kaur and Sehgal (1995), Bora (1994) Buttar and Goyal (1989) and Deori (2005).

**Conclusion :**

The study revealed that the women tea plantation workers of Jorhat district had low practice level on nutrition, health and hygiene. Many studies also revealed that nutritional and health status of tea plantation workers were not satisfactory. Considering all these facts, an intervention programmes on these three aspects can be organized to improve the nutritional and health condition of the tea plantation workers specially the women tea plantation workers of Assam.

As the tea industry of Assam is a big resource of Assam's economic development, and the work force is the workers of the estate, their nutritional, health and hygienic condition have to be improved to develop the working condition of the industry.

The absenteeism in the work due to the worker's ill health can be reduced if the assessment of existing nutrition, health and hygiene practice is done time to time and on the basis of which it will be easier to organize an intervention programme on those aspects where they showed low practice level.

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**REFERENCES**

**Bell, A.C., Amosa, H. and Swinburn, B.A.** (1997). Nutrition knowledge and practices of Samoans in Auckland. *J. New Zealand Dietetic Assoc.*, **49**(1): 14-16.

**Bharali, R. and Sarmah, J.** (2004). A scale to measure the knowledge of rural women on conservation of nutrient. *J. Agric. Sci. Soc. North East India*, **17**.

**Bora, M.M.** (1994). A study on the health habits and sanitary practices of the housewives of cattle farmers in Kamrup district of Assam. Ph.D. Thesis, Assam Agricultural University, Jorhat, ASSAM (INDIA).

**Buttar, K. and Goyal, G.** (1989). Knowledge, attitude and practices related to nutrition of rural homemakers of selected villages in Ludhiana Block. *Indian J. Extn. Edu.*, **25** (1-2): 40-43.

**Deori, N.** (2005). A study on nutrition knowledge and practices of rural women of Jorhat district under ICDS project. M.Sc. Thesis, Assam Agricultural University, Jorhat, ASSAM (INDIA).

**Kaur, Y. and Sehgal, S.** (1995). Impact of nutrition education on knowledge and practices of rural women. *Indian J. Extn. Edu.*, **31** (1-4): 80-83.

**Table 4: Relationship of hygiene practice of respondents with selected independent variables**

Variables	Correlation coefficient ('r')	't' value
Age	0.117	1.166
Educational qualification	0.256*	2.622*
Family type	0.073	0.725
No. of children	-0.067	0.665
Monthly family income	0.021	0.207
Organizational membership	-0.021	0.208
Urban contact	0.045	0.446
Visiting community recreational centre	0.209	1.116
Contact with Welfare Officer	0.221*	2.243*
Mass media exposure	0.094	0.935
Location of the residence (Distance of hospital/ dispensary)	0.051	0.506

\* Indicate significance of value at P=0.05

