Research Article

Knowledge of women tea plantation workers of Assam on nutrition, health and hygiene

■ **JOGO TIMUNG, JULIANA SARMAH AND MANJU DUTTA DAS**

SUMMARY : The present research study entitled knowledge of women tea plantation workers of Assam on nutrition, health and hygiene was done with the objectives, to study the socio-personal characteristics of women tea plantation workers of Assam, to assess the existing knowledge of women tea plantation workers on nutrition, health and hygiene, to find out the relationship of women tea plantation workers knowledge with the selected independent variables on nutrition, health and hygiene. The study was carried out in four Tea Estates *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 totaling one hundred women tea plantation workers from all the selected tea gardens were the respondents of the present study. The findings show that the women tea plantation workers of Jorhat district had low level of knowledge on nutrition, health and hygiene.

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BACKGROUND AND OBJECTIVES

Nutrition, health and hygiene of an individual form an integral component of overall socio-economic development of any nation. The intake of appropriate and adequate food and their effective utilization by the human body is seen as the principal stone of human growth and development. Most of the people live in vulnerable areas like village, tea gardens, etc. where the sanitary conditions and nutrition knowledge are very poor. Spread of disease, suffering of deficiency disease, growth of harmful organisms due to improper disposal of sewage and refuse, lack of drainage system, habit of open-defecation by the people, lack of safe water, lack of poor nutritional practices, etc. are common problems prevalent in the society, especially in rural as well as tea garden areas, which contribute the poor quality of life.

Objectives:

– To study the socio-personal characteristics of women tea plantation workers of Assam.

– To assess the existing knowledge of women tea plantation workers on nutrition, health and hygiene.

– To find out the relationship of women tea plantation workers knowledge with selected independent variables on nutrition, health and hygiene.

RESOURCES AND 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 totaling one hundred women tea plantation workers from all the selected tea gardens were the respondents of the present study.

In the present study, knowledge of women tea plantation workers were considered as dependent variable and independent variables were age, educational qualification, family type,

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no. 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 *i.e.* distance of hospital/dispensary from respondent's houses.

Knowledge on nutrition indicated as the acquired information of women tea plantation workers regarding conservation of nutrient in food such as cereals, pulses, vegetables, fats, etc., while the knowledge on health and hygiene indicated as the acquired information or understanding of women tea plantation workers from different sources like radio, T.V., newspapers, banners, hoardings, posters, etc. regarding the state of being well and also the conductive condition of maintaining one's health.

The data was 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 is:

$$\text{Mean}(\overline{x}) = \frac{\Sigma fx}{N}$$

where, Sf(x) = Total score
N = Total number of respondents

Standard deviation:

The formula used for calculation of standard deviation is:

$$\text{S.D.} = \sigma = \sqrt{\frac{\Sigma\left(Xi - \overline{X}\right)^2}{N}}$$

where, Xi = Raw score
'X = Mean
N = Total respondent

Mean ± standard deviation (SD) criterion was used on the basis of their knowledge scores obtained to classify the respondents according to their existing knowledge level on nutrition, health and hygiene in the following procedure:

The scores less than mean - SD = Low level

The scores between mean - SD and mean + SD = Medium level

The scores more than mean + SD = High level

Correlation Co-efficient was also computed to see the relationship of independent variables with dependent variables such as knowledge adopted by the respondents.

Correlation co-efficient:

The formula used for calculation of correlation co-efficient is:

$$\frac{\Sigma xy - \dfrac{\Sigma x.\Sigma y}{N}}{\sqrt{\left[\Sigma x^2 - \dfrac{(\Sigma x)^2}{N}\right]\left[\Sigma y^2 - \dfrac{(\Sigma y)^2}{N}\right]}}$$

where, r = Correlation co-efficient
X = Independent variable
Y = Dependent variable
Sxy = Summation of total product of X and Y
N = Total number of respondents

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

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

where, r = Correlation co-efficient
n = Number of observation
d.f. = Degree of freedom

OBSERVATIONS AND ANALYSIS

The observations of the present study as well as relevant analysis have been summarized under the following 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 (Table 1). Regarding educational qualification, 72 per cent respondents were illiterate, 14 per cent respondents studied upto primary level and a negligible percentage of the respondent was HSLC passed. Majority of the respondents (62 %) had 4-6 numbers of children. A large majority of respondents (82 %) were from nuclear family. The monthly family income of the respondents (90 %) was Rs.1000-2000 per month. More than half of the respondents visited the urban area occasionally. Ninety eight per cent visited community recreational centre sometimes. Regarding mass media exposure, a higher percentage of respondents (51 %) 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.

Knowledge on nutrition, health and hygiene:

Majority of the respondents (58 %) had low level of nutrition knowledge regarding conservation of nutrients.

Majority of the respondents (53 %) had low level of

Table 1 : Distribution of respondents according to the socio-personal characteristics

Sr. No.	Characteristics	Kakojan (n=25)		Kothalgoorie (n=25)		Duflating (n=25)		Gotonga (n=25)		Total (n=100)	
		F	%	F	%	F	%	F	%	F	%
1.	**Age (years)**										
	25 – 35(young)	16	64	24	96	24	96	10	40	74	74
	35 – 45(Middle)	8	32	1	4	1	4	15	60	25	25
	45 and above(Old)	1	4	-	-	-	-	-	-	1	1
2.	**Educational qualification**										
	Illiterate	18	72	22	88	13	52	19	76	72	72
	Can read & write only	-	-	-	-	2	8	2	8	4	4
	Primary level	1	4	1	4	8	32	4	16	14	14
	High school level	5	20	2	8	2	8	-	-	9	9
	HSLC passed	1	4	-	-	-	-	-	-	1	1
3.	**No. of children**										
	1- 3 nos.	7	28	3	12	12	48	13	52	35	35
	4 – 6 nos.	17	68	22	88	13	52	10	40	62	62
	7 and above.	1	4	-	-	-	-	2	8	3	3
4.	**Family type**										
	Nuclear	18	72	22	88	21	84	21	84	82	82
	Joint	7	28	3	12	4	16	4	16	18	18
5.	**Monthly family income (in Rs.)**										
	1000 – 2000	23	92	22	88	20	80	25	100	90	90
	2001 – 3000	2	8	3	12	5	20	-	-	10	10
6.	**Organizational membership**										
	Labour Association	1	4	-	-	3	12	7	28	11	11
	No Membership	24	96	25	100	22	88	18	72	89	89

knowledge on health while a negligible percentage of the respondents belonged to high level of health knowledge (Table 3). A higher percentage of respondents (61 %) belonged to low level of hygiene knowledge (Table 4). It signifies that most of the women tea plantation workers of the selected areas had low level of knowledge on nutrition, health and hygiene. It might be due to the respondent's ignorance, lack of awareness and ill literacy, which would prevent them to learn or gather information on these aspects from any source.

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

There was no significant relationship of nutrition knowledge of the respondents with the selected independent variables such as age, educational qualification, family type, 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 highly positive significant relationship of health knowledge of the respondents with independent variables such as contact with welfare officer, mass media exposure and location of the residence (distance of hospital/ dispensary from residence). It means that the level of health knowledge of the respondents increased with the increase in the frequency of contact with welfare officer, more exposure to mass media and the nearness of hospital or dispensary from the respondent's house. It might be the fact that the respondents who scored better on health assessment, might discuss with the welfare officer/health staff on health aspect or the respondents might have collected information from the

Table 2 : Distribution of respondents according to their level of knowledge on nutrition

Knowledge level	Kakojan (n=25)		Kothalgoorie (n=25)		Duflating (n=25)		Gotonga (n=25)		Total (n=100)	
	F	%	F	%	F	%	F	%	F	%
Low	10	40	16	64	14	56	18	72	58	58
Medium	13	52	07	28	11	44	07	28	38	38
High	02	08	02	08	0	0	0	0	04	04

Table 3 : Distribution of respondents according to their level of knowledge of health

Knowledge level	Kakojan (n=25)		Kothalgoorie (n=25)		Duflating (n=25)		Gotonga (n=25)		Total (n=100)	
	F	%	F	%	F	%	F	%	F	%
Low	12	48	10	40	15	60	16	64	53	53
Medium	13	52	15	60	09	36	09	36	46	46
High	0	0	0	0	01	04	0	0	01	01

Table 4 : Distribution of respondents according to their level of knowledge of hygine

Knowledge level	Kakojan (n=25)		Kothalgoorie (n=25)		Duflating (n=25)		Gotonga (n=25)		Total (n=100)	
	F	%	F	%	F	%	F	%	F	%
Low	15	60	14	56	15	60	17	68	61	61
Medium	10	40	10	40	10	40	08	32	38	38
High	0	0	01	04	0	0	0	0	01	01

Table 5 : Relationship of health knowledge of respondents with selected independent variables

Variables	Correlation co-efficient ('r')	't' value
Age	-0.248*	2.534*
Educational qualification	-0.120	1.197
Family type	0.045	0.446
Monthly family income	-0.078	0.775
Organizational membership	0.061	0.605
Urban contact	0.133	1.328
Visiting community recreational centre	0.18	0.178
Contact with Welfare Officer	0.308**	3.205**
Mass media exposure	0.347**	3.663**
Location of the residence (Distance of hospital/ dispensary)	0.267**	0.327**

* and ** indicate significance of values at P=0.05 and 0.01, respectively

Table 6 : Relationship of hygiene knowledge of respondents with selected independent variables

Variables	Correlation co-efficient ('r')	't' value
Age	-0.142	1.420
Educational qualification	0.007	0.069
Family type	0.172	1.728
Monthly family income	0.016	0.158
Organizational membership	0.199	1.010
Urban contact	0.359**	3.808**
Visiting community recreational centre	0.126	1.257
Contact with Welfare Officer	0.241*	2.458*
Mass media exposure	-0.054	0.535
Location of the residence (Distance of hospital/ dispensary)	0.243*	2.480*

* and ** indicate significance of values at P=0.05 and 0.01, respectively

television or health centre on health. The nearness of hospital or dispensary from the respondent's house might also help the respondents to receive the information easily. Significant relationship of health knowledge with the age of the respondents also revealed that health knowledge of respondents increased along with the increase in respondent's age. Respondents with more age might have had more health knowledge due to their experience (Table 5).

There was highly significant relationship between urban contact and hygiene knowledge of respondents (Table 6). Respondent's hygiene knowledge increased with the frequency of their visit to urban area. The respondents might have collected more information on hygiene from different hoardings, posters etc. seen in urban areas while they visited the urban area. There was also significant relationship of respondent's hygiene knowledge with welfare officer and

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location of the residence (distance of hospital/dispensary). It means respondent's hygiene knowledge increased with the increases in frequency of contact with welfare officer and respondent's residence. Nearby respondents might have collected more information on hygiene from the welfare officer and experienced more than the other respondents.

Similarly Medhi *et al.* (2006) also studied health problems and nutritional status of tea garden population of Assam.

Conclusion:

The findings show that the women tea plantation workers of Jorhat district had low level of knowledge on nutrition, health and hygiene. Many studies reveal that nutritional and health status of tea plantation workers were not satisfactory. Illiteracy pertained in tea garden area is one of the major causes for respondents to make them less knowledgeable. As the women tea plantation worker's knowledge on nutrition, health and hygiene was not found satisfactory, organization of an intervention programmes on these three aspects would help the respondents to raise their nutrition and health status, to decrease their absenteeism in the work, to decrease respondent's morbidity profile, to enhance worker's physical work capacity which in turn help them to live in a healthy environment. This study also helps to create a conductive atmosphere for both the respondents and the management of the tea industry.

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