

## **A Study on Health Status of Adolescent Girls of Dongria Kondh Tribe**

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### **Original Research Article**

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**Abstract:** Adolescent period ranges between 10-19 yrs of age. Orissa occupies a unique place in the tribal map of India for having the largest number of tribal communities and the state ranks 2<sup>nd</sup> in terms of tribal population. The adolescent tribal population is always neglected. To assess the general health status of the tribal adolescent girls of the Donghria Kondh tribe, to assess the different factors associated with the health status of these girls and different morbidities, to suggest remedial measures for integrated development of adolescent girls. The study was conducted in Bissam Cuttack block of Rayagada district of Odisha and 93 girls of the adolescent age group who have attained menarche were the study subjects. They were selected randomly in the study area. Out of 93 study subjects 18(19.4%) were in early adolescence and 75 (80.6%) were in late adolescence. 97% were illiterate. Majority had dating experience. Oral hygiene was poor in 93 study subjects. 72% had louse infestation and half of them were suffering from scabies. All of the study subjects were anaemic (Hb<12 gm %) and 39% of the girls had low BMI (<18.5). There is an urgent need to improve literacy status, anaemia, sanitation and use of ITBN. We should focus on sensitization of religious leaders on adolescent health.

**Keywords:** Adolescent, Dongria Kondh, Health status.

### **INTRODUCTION**

The adolescent period ranges between 10-19 years of age. (WHO) In many countries of the world adolescents comprise (20-25) % of the population. In India adolescents comprise 20% of the country's population of which 10% are adolescent girls.

A girl child who survives to grow to the age of adolescence may become a victim of discrimination, child labour, child marriage, sexual violence; criminal abortion. Discrimination against an adolescent girl deprives her of an opportunity to education, recreation and even adequate food, clothing and shelter. Hence for some girls, adolescence is a nightmare [1]. About half of the total population of the world's indigenous people (often referred to as tribal groups/ scheduled tribes) live in India [2].

Tribal groups are homogenous, culturally firm, having developed strong magico-cultural health care system and they wish to survive and live in their own style. Orissa occupies a unique place in tribal map of India for having largest number of communities in India (62). Tribal population constitute 22.21% of state total population and 10.84% of the country's tribal population (67.7 million)[3].

The adolescent tribal sector is another sector, which is always neglected but is of utmost importance [4]. The widespread poverty, illiteracy, malnutrition,

ignorance, lack of health services or inability to seek and use them is contributory factors for the deplorable condition prevailing among the tribal groups. Tribal girls have high incidence of anemia and malnutrition as girl children received less than the desired nutritional requirement [5].

### **MATERIALS AND METHODS**

The study was conducted in the adolescent girls of Bissam cuttack block of Rayagada district to assess the health status along with the knowledge, attitude and practice regarding their reproductive health. Adopting a tribe specific approach, the reproductive health profile of adolescent girls of one of the major tribes, 'Dongria Kondh' residing in Rayagada district of Odisha having its maximum concentration was studied extensively.

#### **Place of study**

The total population of Donghria Kondhs resides in 3 blocks, out of which Bisam Cuttack was randomly selected as the study area.

**Sampling**

Out of 3 blocks where the tribe resides, the Bissam Cuttack block was selected purposively as it has maximum population of Dongria Kondhs. The villages covered in the study were Kurli, Khambesi, Hundajali, Huthesi, Khajuri, Mundabali and Uppar Gardatalli.

**Determination of Sample Size**

The Donghria Kondh population in the 3 blocks was 8850. 10% comprises of adolescent girls population i.e. 885 adolescent girl. Out of 885 adolescent girls, 10% were conducted for the present study purpose.

Thus the minimum sample size was calculated to be  $88.5=89$  adolescent girl. However 4 extra girls because of their enthusiasm and interest were included as study subject and so final analysis was done with respect to 93 adolescent girls.

**Instrument and Format used**

- Schedule of general information of the family.

- Questionnaire comprising life style habits, menstrual history, current morbidity, past obstetric history.
- Schedule on general examination.
- Schedule cum questionnaire on KAP

**Collection of Data**

All available, willing cooperative adolescent girls who have attained menarche were included in the study. The local religion leader, community volunteers were also convinced about the activities which would be conducted. A camp as well as house to house approach was conducted. Implementation of questionnaire, physical examination, collection of blood for Hb estimation as well as for detection of malaria parasites was done by house to house approach. The girl who participated in the study was asked to follow up in a camp that was held in Khambesi PHC (N).

**RESULTS****Table-1: General characteristics of the Study Subjects**

Sl. No	Variable	(10-14) yrs		(15-19) yrs		Total	
		No	%	No	%	No	%
1	No. of Adolescent Girls	18	19.4	75	80.6	93	100
2.	Mean age (yrs) with S.D.	13.2 $\pm$ 1.2		17.4 $\pm$ 2.3		16.31 $\pm$ 0.23	
3.	Height in cm (mean Ht with S.D)	137.5 $\pm$ 3.9		153.4 $\pm$ 4.9		148.074 $\pm$ 5.68	
4.	Mean Wt (Kg) with S.D.	37.8 $\pm$ 3.8		44.1 $\pm$ 4.2		42.89 $\pm$ 5.43	
5	Marital Status						
a	Married	0	0	6	8	6	6.45
b	Unmarried	18	100	68	90.7	86	92.47
C	Widow	0	0	1	1.3	1	1.08
6	Education						
a	Illiterate	18	100	72	96	90	96.8
b	Literate	0	0	3	3	3	3.2
7	Occupation						
a	Mangos collection / Selling of Mangos / Seasonal fruits	7	38.9	12	16	19	20.4
b	Bringing water & cooking	0	0	0	0	0	0
C	Both	11	61.1	63	84	74	79.6
8	Type of Family						
a	Joint	1	5.6	13	17.3	14	18.7
b	Nuclear	17	94.4	62	82.7	79	81.3
9	Religion (Hindu)	18	100	75	100	93	100

**Table-2: Environment Sanitation around the place of residence of study subjects**

Sl. No	Variable	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Type of House (Kucha)	18	19.4	75	80.6	93	100
2.	Over crowding						
a	Physical over crowding	0	0	0	0	0	0
b	3 persons / room	3	16.6	0	8	9	9.68
c	$\geq$ 4 person / room	15	83.33	69	92	84	90.32
d	Sexual over crowding	18	19.40	75	80.40	93	100
3.	Source of Drinking Water Spring	18	19.40	75	80.40	93	100
4.	Place of Defecation Open field	18	19.40	75	80.40	93	100

**Table-3: Past Dating Experience with Age**

Sl. No	Age of Dating	Yes		No		Total	
		No.	%	No.	%	No.	%
1	10 – 14 Yrs	11	61.11	7	38.89	18	19.40
2	15 – 19 Yrs	69	92	6	8	75	80.60
3.	Total	80	86.02	13	13.98	93	100

**Table-4: Different Life Style Habits**

Sl. No	Different life style habits	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Irregular bowel habits	18	19.4	75	80.6	93	100
2.	No Exercise	18	19.4	75	80.6	93	100
3.	Adequate sleep	18	19.4	75	80.6	93	100
4.	Place of sleep floor	18	19.4	75	80.6	93	100
5.	Use of mosquito repellants / nets while sleeping	18	19.4	75	80.6	93	100
6.	Washing hands before taking foods	18	19.4	75	80.6	93	100
7.	Washing hands after defecation with plain water.	18	19.4	75	80.6	93	100
8.	Use of foot wear (No)	18	19.4	75	80.6	93	100
9.	Spending leisure time						
a	Gossiping	5	27.78	58	77.33	63	67.74
b	Stilting	3	16.67	6	8	9	9.68
c	Nothing	10	55.55	11	14.67	21	22.58

**Table-5: Personal Hygiene of the study subjects**

Sl. No	Parameters	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Nails not cut and unclean	18	19.4	75	80.6	93	100
2.	Nails cut and cleaned	0	0	0	0	0	0
3.	Bathing irregular	18	19.4	75	80.6	93	100
	Regular	0	0	0	0	0	0
4.	Toileting of private parts after urination						
	No	18	19.4	75	80.6	93	100
	Yes	0	0	0	0	0	0

**Table-6: Personal Hygiene Score of the study subjects**

Sl. No	Score	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Good	0	0	0	0	0	0
2	Satisfactory	0	0	0	0	0	0
3	Poor	18	19.4	75	80.6	93	100
4	Total	18	19.4	75	80.6	93	100

**Table-7: Blood Pressure of Adolescent Girls with Age**

BP	10 – 14 Yrs	15 – 19 Yrs	Total
Mean Systolic BP $\pm$ SD	104 mm Hg $\pm$ 6.9	117 mm Hg $\pm$ 9.2	111.91 mm Hg $\pm$ 8.086
Mean Diastolic BP $\pm$ SD	78 mm Hg $\pm$ 4.5	82 mm Hg $\pm$ 5.7	80.386 mm Hg $\pm$ 6.075

**Table-8: Different Types of Morbidities of Adolescent Girls**

Sl. No	Types of Morbidities	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Scabies	6	33.33	40	53.33	46	49.46
2	URTI	6	33.33	10	13.33	16	17.20
3	Fever	2	11.11	14	18.67	16	17.20
4	Diarrhoea	10	55.56	5	6.67	15	16.13
5	Menstrual abnormalities	1	5.56	3	4	4	4.3
6	Louse infestation	16	88.89	51	68	67	72.04
7	ASOM / CSOM	3	16.67	0	0	3	3.22
8	Angular stomatitis	3	16.67	7	9.33	10	10.75
9	Cheilosis	6	33.33	5	6.67	11	11.83
10	Splenomegaly	7	38.89	7	9.33	14	15.05
11	Anaemia	18	100	75	100	93	100
12	Liver enlargement	3	16.67	7	9.33	10	10.75
13	CNS Locomotor abnormality	0	0	2	2.67	2	2.15

**Table-9: BMI of the study subjects with Age**

Sl. No	BMI	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Normal BMI ( $\geq 18.5 - 24.99$ )	11	61.1	46	61.33	57	61.29
2	Lower BMI – marginal thinness (17 – 18.49)	3	16.7	19	25.33	22	23.66
3	Moderate thinness (16 – 16.99)	2	11.1	10	13.33	12	12.90
4	Severe thinness ( $<16$ )	2	11.1	0	0	2	2.15
	Total	18	19.4	75	80.6	93	100

**Table-10: Anaemia in Adolescent Girls**

Sl. No	Anaemia	(10-14) yrs		(15-19) yrs		Total	
		No.	%	No.	%	No.	%
1	Mild	4	22.2	13	17.3	17	18.3
2	Moderate	14	77.8	56	74.7	70	75.3
3	Severe	0	0	6	8	6	6.4
4	Absent	0	0	0	0	0	0
5	Total	18	19.40	75	80.60	93	100

p&gt;0.1

**Table-11: Malaria Positivity with Dengue of Anaemia**

Sl. No	Anemia	Malaria (+ve)		Malaria (-ve)		Total	
		No.	%	No.	%	No.	%
1	Mild	1	12.5	0	0	1	11.11
2	Moderate	6	75	1	100	7	77.78
3	Severe	1	12.5	0	0	1	11.11
	Total	8	88.89	1	11.11	9	100

## DISCUSSION

Table 1 shows the general characteristics of the study population. Out of 93 study subjects 18 (19.4%) were in early adolescence (10-14 yrs) and 75 (80.6%) were in late adolescence age group (15-19 yrs). Mean age was  $16.31 \pm 2.023$  yrs. The mean height and weight of the study subjects in all age groups were  $148.074\text{cm} \pm 5.68$  and  $42.89\text{kg} \pm 5.43$  respectively. Shah, K Vijay *et al.* in a study on semi urban Nepalese adolescent girls found the mean weight & height of all girls was  $42.89\text{kg} \pm 6.2\text{kg}$  and  $150.1 \pm 6.7\text{cm}$  respectively [6]. Murty in the Solinge tribe of Karnataka found mean age of marriage was 14.2 yrs which was very early [7].

Personal hygiene was considered to be poor. Accordingly the scores are divided as poor (09-12), average (13-16) and good (17-19) personal hygiene. All girls had poor score and were assessed using a scoring system taking variable in table-5. Ganguli *et al.* in a study in rural Pune found 6 (4.51%) girls to have poor grade of personal hygiene [8].

Blood Hb estimation was done by cyanamethemoglobin method. All the girls were anaemic. RMRC in a study conducted at Madhyapradesh revealed that the Birhor tribes had URTI in 11.2% and 56.9% in Sahariya tribes in children aged (5-14Yrs) [9]. Another study conducted by RMRC

Jabalpur observed that 0.1% population suffered from acute diarrhea [10]. In a study conducted by RMRC, BBSR 20.6% Bondo, 6.9% of Didayi, 10.7% of Juanga & 15% of Kutia Konda tribes were affected with scabies [11].

Chhotray G. P. *et al.* conducted a study on Bondo, Juanga & Didayi & Kuttia Konda primitive tribe & observed severe malnutrition in 16 %, 19%, 25.1% and 26.69% population respectively [12].

A prospective study conducted by Chhotray G. P showed SPR (Slide positive rate) of 14.2% in Bondo, 14.4% in Didayi, 10.5% in Kondha and 9.5% in Juanga primitive tribes [1].

### CONCLUSION

- 97% of adolescent girls were illiterate.
- Going to the Dongar, collecting & selling mangoes/seasonal fruits, bringing water and cooking food were the occupation of majority (80%) of the girls.
- Majority of girls (86%) had past dating experiences.
- All 7 married adolescent girls had married to their dating companion.
- Oral hygiene was poor in all 93 study subjects.
- 72% had louse infestation and half of study subjects were suffering from scabies.
- All the study subjects were found to be anemic (Hb<12gm %). Majority (75%) of them were moderately anemic (Hb : 8 - 10.9 gm%). About 6% girls were severely anemic (<8 gm/dl)
- About 39% of the girls had low BMI (<18.5). 11% of early adolescent girls had BMI <16 (Severe thinness)

### RECOMMENDATION

Tribal women in India had specific problem, some of them were built in problem of the tribal communities and some were imposed upon them. The following remedial measures were suggested for betterment.

- There is an urgent need to improve literacy status of tribal adolescent girls.
- Safe drinking water need to be provided in all villages.
- Steps to be taken for conduction of community Sulabh sauchalaya in the village.
- There is an urgent need to treat all the adolescent girls for anemia.
- Health education and counseling on use of safe drinking water, use of soap/ash & water for defecation, use of foot wear.
- Mass treatment for scabies.
- Clean environmental sanitation.
- Use of mosquito nets, IBTN
- Sensitization of religious leaders on adolescent health.

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